Impact of Formal and Informal Authoritarian Institutions on the Rule of Law

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INTRODUCTION

Dictatorships can be very different[1]. Even though the word "dictatorship" itself has a clearly negative connotation and is normally associated with underdevelopment and backwardness, some dictatorships manage to attract a lot of foreign investments, provide conditions for stable economic growth, ensure low levels of corruption and high quality of governance, and even respect human rights. Sometimes, dictatorship perform both in terms of economic performance and in terms of human rights protection even to a better extent than many advanced Western democracies.

If that sounds hard to believe, take the example of Singapore. This country is clearly not a democracy: its ruling party, People Action Party (PAP), has been governing the country unilaterally since its independence in 1965. Although political opponents are not imprisoned (at least since the late 1980s) and although there are even no obvious irregularities on electoral day, the country is infamous for the use of defamation laws against the independent media, putting pressure on voters (Rodan 1998), manipulating electoral law (Tan 2013), and other practices which make it very hard for the opposition to get even a single seat in the parliament and makes it completely impossible to get the majority. PAP vote share never dropped below 60% while their share of seats in the parliament had always been 100% or very close to it. However, contrary to what one would expect from a dictatorship, by absence of corruption, contemporary Singapore is ranked the 3rd in the world (according to Corruption Perception Index, Transparency International 2019), together with Finland, Sweden, and Switzerland and it is superseded only by Denmark and New Zealand; so Singapore shows a much better result in terms of control of corruption than many old democracies, like the United Kingdom, United States, Canada, and many others. Its per capita GDP is also impressive: with outstanding $85500 (PPP. constant 2011 international dollars), it is ranked the 4th among world economies, overtaken only by Luxembourg, Macao (calculated separately from mainland China), and Qatar, even though the country does not have any natural resources. Another example of good autocratic performance is China: although the Chinese regime is still repressive and has a bad record of human rights violation, the country's economic performance is exceptional. According the World

[1]Here and further on, I use the terms «dictatorship», «autocracy» and«authoritarian regime» interchangeably, and by them, I mean any regime in which the power is acquired and lost by any means other than competitive elections. More on conceptualization of democracy and autocracy can be found in Chapter II.

Bank data, Chinese GDP per capita (PPP, constant 2011 international dollars) in 1990 was slightly below than that of democratic India (around $1500 vs. $1700 respectively; I took India as an example so that the country size and population is comparable); in 2017, it more than doubles Indian GDP per capita (around $15300 vs. $6500 respectively), even though India also experienced robust growth during all these years.

Most dictatorships, however, perform exceptionally badly and correspond much more to the "classical" image of dictatorships. Among the most recent examples of economic disasters which happened under autocratic rule, one could think of a contemporary Venezuela (as of 2019), which, in spite of having enormous oil reserves and oil exports, has been experiencing economic disaster since 2014, with GDP falling at the rate of around 15% annually, inflation reaching, estimatedly, 10,000,000% by the end of 2018, 3 million people having fled from the country, and the government using lethal violence to deal with protesters (Parish Flannery 2018, Phillips 2018, Melimopolous 2019)

Equally disastrous was the economic situation in Zimbabwe under Mugabe's rule: because of Zimbabwean military involvement in the Second Congolese War and especially because of state-sponsored seizures of land from previous owners (Richardson 2005), the country was in acute crisis economic, with hyperinflation peaking in November, 2008 reaching, estimatedly, 79,600,000,000% *monthly* (Hanke & Kwok 2009), and with GDP declining during the entire period of 2002-2008 (the biggest drops happened in 2002 and 2008, with the rates of -17% and -18%[2] respectively).

It is not possible to explain these differences if one considers all dictatorships to be equally bad. A classical view within political science that, overall, democracy is more beneficial for a country performance than dictatorship (see, for example, Olson 1993 for theoretical model of why this should be the case) cannot explain why some dictatorship are much better than most democracies, while other dictatorships are much worse than even the the worst democracy. A closer look is thus in order to explain differences in the performance of autocratic regimes.

One explanation of differences among dictatorships is that some dictators are more "enlightened" than others, or that motives of some dictators are less selfish than the motives of the others; in other words, it is possible to study dictators' preferences

[2]Source: World Bank.

directly. Clearly, there is evidence that some dictators are genuinely committed to making their country a better place, while others (perhaps the majority) care mostly about their personal interest. For example, tremendous success of Singapore can be, to a certain extent, attributed to personal commitment of Lee Kuan Yew, who has been in charge of the ruling party party and the country since its independence in 1965 till 1990 (and who remained involved in politics for another 20 years), to eradicating corruption. He is famous for his quote, *"Start with putting three of your friends to jail. You definitely know what for, and people will believe you"* (Lee Kuan Yew 2000), and he genuinely followed his own advice, imprisoning several high-rank officials charged with corruption. This can be compared to an extremely relaxed attitude towards corruption expressed by L.Brezhnev, C.P.S.U. Secretary General and de facto head of the U.S.S.R. in 1964-1982 who reportedly said, "*No one lives on wages alone. I remember in my youth we earned money by unloading freight cars. So what did we do? Three crates or bags unloaded and one for ourselves. That's how everybody lives*" (Treml 1990, cit. in Nelson et al. 1997).

It is possible to study dictators' personalities in biographic studies. To quote some examples of this kind of scholarship, Barr (2000) condicted a biographic study of above-mentioned Lee Kuan Yew, while Decalo (1989) conducted a biographical study of three most violent African dictators, namely, Idi Amin (Uganda), Jean-Bedel Bokassa (Democratic Republic of Kongo) and Francisco Macías Nguema (Equatorial Guinea). In the field of Political Psychology, Schmitt & Winter (2008) go beyond single cases, analyzing and comparing instead the motives of four Soviet leaders (Stalin, Khruschev, Brezhnev, Gorbachev) based on official party reports, and also comparing motives of each leader with societal motives of the Soviet society at times of their rule. Similarly, Hermann (1980) who also worked in a field of political psychology used content analysis of official speeches to study personality of 20 members of Soviet Politburo (the governing body of the Communist party). This demonstrates that it is possible to directly study leaders' motives in comparative studies. Yet if the goal is to draw conclusions which would be generalizable beyond a small group of leaders or countries, it becomes close to impossible to find a quantitative indicator of dictators' motives applicable to most countries in the world. It would be incorrect to ascertain about whether the dictators are benevolent or enlightened by outcomes of their rule if the dependent variable of interest in is precisely the dictatorial outcomes; otherwise, it becomes a circular argument (i.e. "dictator's performance is good because he [3] is benevolent, and we know he is

[3] As Gandhi & Przeworski (2006) pointed out, "[t]he gender is not accidental. Except for women

benevolent because his performance is good"). One can approximate dictators' "enlightenment" by some facts from dictators' background, for example, by experience of education in democratic countries, which is, while definitely not the best indicator, is at least directly measurable and is not outcome-based. One would assume that, if a dictator used to study in an advanced democracy, he would value human rights more and would also understand better how a country's economy should be managed. However, although (to the best of my knowledge) there have not been systematic studies about an impact of dictators' background on policies, some anecdotal evidence suggests that the relation is, at best, weak. It is well-known that some of the most violent and/or the least economically successful dictators got their education or used to live and study in the West. For example, Pol Pot, dictator of Cambodia who killed millions of people during his short rule, used to study in Paris (although he did not get a degree); Kim Jong Un, current dictator of North Korea, whose domestic and foreign policies are not at all different from the policies of his father and grandfather, used to study in Switzerland incognito for several years at school up to 2001 (according to multiple journalists [4]), while Bashar al-Assad, dictator of Syria under whom the country has been going through a civil war for 8 years, studied for a year in the U. K. as an ophthalmologist. This list of exceptionally bad dictators with some form of education in democratic countries is not exclusive. So, it does not seem to be that being "enlightened" (at least if one associates living and studying in a developed democratic country with "enlightenment") guarantees any good performance.

Another possibility is to study authoritarian *institutions.* There institutions can be *formal*, such as parties, parliaments, and elections, but can be also *informal*, meaning de facto rules which determine how dictator is selected and what dictator can and cannot do. Both dictators' preferences and institutions within which they operate matter for the overall performance of authoritarian regime, especially given that authoritarian institutions are much more affected by dictators' will than democratic ones. However, I believe studying institutions is more fruitful for systematically understanding the difference between dictatorships directly. Apart from practical difficulties of studying dictators' preferences directly within the framework of large-N study, there are two reasons which make studying authoitarian institutions more reasonable for this project. First, dictators themselves do not come from nowhere, and the way they are chosen is often determined by

who served as interim leaders – Queens Dzeliwe and Ntombi in Swaziland during the early 1980s, Ertha Pascal-Trouillot in Haiti in 1990 and Ruth Perry in Liberia in 1996 – dictators are men".

[4]Source: https://www.bbc.com/news/world-asia-pacific-11388628 .

institutions in which they operate. In some cases dictators come to power during coups, revolutions, or transform into autocrats after being democratically elected, in which case dictators' background can be treated as exogenous variable. However, many dictatorships, like the U.S.S.R, Mexico until 2000, as well as currently existing regimes in China, Vietnam, Middle Eastern monarchies, witnessed many changes of dictators without collapsing; in this case, dictators' degree of "enlightenment" directly depends on institutions which determine selection of a new dictator – in which case dictators' individual characteristics themselves can be treated, at least partially, as product of institutions. To put it simply, it is not random that some authoritarian countries get better dictators than others. Secondly, it is possible to indirectly account for dictators' preferences within the framework of institutional study. Authoritarian institutions can be regarded not just as exogenous constraints to dictators but also as a product of preferences of multiple actors. The literature on rational choice institutionalism (overviewed in Schepsle 2008) which is widely used in authoriarin studies treats institutions as outcomes or interaction rationally behaving actors who shape institutions according to their preferences. In case of authoritarian institutions, these actors are the dictator himself, the ruling group, and the opposition. Relative strength of these groups affects the configuration of institutions. From that, it is possible to identify structural factors which affect the relative strength of actors and to insert these factors in the regression model for analysis. Even if in these case, dictators' preferences are *assumed* rather than identified empirically, rational choice institutionalism often allows to make reasonable assumptions about those preferences.

In addition to modelling dictators' preferences using rational choice institutionalist framework, there is also a method to indirectly account for unobserved factors influencing dictators' preferences in a quantitative study (even if those factors cannot be accounted by rational choice paradigm, for example, "enlighenment"). The method which allows to do so is called *tho-stage Heckman model*, which is a statistical method that allows to deal with self-selection bias. A self-selection bias in studying authoritarian institutions occurs because authoritarian institutions are often purposefully selected by dictators and not distributed randomly. Without going into technical details at this stage[5], this method allows to model systematic factors affecting selection of authoritarian insititutions and then to use the error terms of that model as a proxy for unobserved factors affecting selection of institutions - among which there are dictators' tutelary motives. Using both assumptions derived

[5] A detailed description of this method is provided in Chapter IV

from rational choice institutionalism at the theoretical level and two-staged Heckman model at the methodological level, dictators' motives and preferences can be taken into consideration in the study, even if they are not studied directly.

The literature about the impact of authoritarian institutions on regime performance is already abundant. In has been demonstrated that formal and informal authoritarian institutions, contrary to conventional wisdom, are not just window-dressing. They are shown to have a systematic impact on economic growth, foreign investments, social development, and probability of regime collapse (as well as on issues not related to regime performance, such as post-exit faith of dictators). The contribution of this dissertation is to go from the level of outcomes of authoritarian regimes to the level of institutions which make these outcomes possible. What is not quite clear in the existing literature is *how* authoritarian institutions make good outcomes possible.

In this thesis, I concentrate on the impact of authoritarian institutions on the *rule of law*. The rule of law in this thesis is defined in a narrow sense, primarily following Kaufman et al. (2009). According to Kaufman et al., , the rule of law is "the extent to which agents have confidence and abide by the rules of society, and in particular the quality of contract enforcement, the police and the courts, as well as the likelihood of crime or violence". As one can see, general absence of crime and violence are included to this definition of the rule of law; however, I do not include any requirements for the rule-making process in the definition. The reason for choosing this particular definition over more extended ones is that the literature on institutional econimics which demonstrates the importance of the rule of law focuses not on the way the laws are made but on security of property rights protection and predictability of rules implementation, which are the main conditions under which economic actors can be certain that their property and their profits cannot be expropriated by the state or destroyed by private actors. The importance of the rule of law (in this narrow sense) for economic development has has been initially theorized by North (1989), and, further on, multiple scholars find empirical evidence in favor of that. Among the most promiment ones, one can mention Rodrik et al. (2004) who demonstrated primacy of the rule of law for economic developement in a large-N, cross-country study while also dealing with potential endogeneity between the rule of law and economic development. One must also mention a seminal work of Acemoglu & Robinson (2012) who introduced a distinction between extractive and inclusive institutios (both political and economic). By inclusive economic in-

stitutions, they meant precisely the definition of the rule of law I mentioned above. Further on, in a series of case studies, they demonstrated that the difference in economic development between countries which are otherwise very similar can be solely attributed to presence or absence of inclusive institutions. Thus, excluding any requirements for the law-making process from the definition of the rule of law is in line with existing literature on institutional economics. Furthermore, given that this thesis is focused on authoritarian regimes, any extended definitions of the rule of law (for example, the ones which require that the laws are passed according to democratic norms) would be inapplicable.

After analyzing the impact of authoritarian institutions on the rule of law in general, I will unpack the rule of law in order to investigate the impact of authoritarian institutions on property rights protection and human rights protection respectively. While historically, in Western Europe, property rights protection and human rights protection evolved simultaneously, today, in many non-democratic countries, strong property rights protection coexists with widespread human rights abuse, and vice versa, thus, these two aspects of the rule of law can be studied separately.

Current study covers most autocratic country-years (excluding small countries, for the absence of some key data on authoritarian institutions for them) for the time period of 1992-2008. This is the time period after the end of the Cold War, when the Soviet Union could no longer support friendly Communist autocracies and the U. S. also no longer needed to support friendly non-Communist autocracies (like the military regimes of Latin America). Since 1992, it is possible to assume presence of Western efforts in democracy promotion globally. On the other hand, ending the dataset in 2008 allows to exclude the past decade in which the autocracy promotion by China or Russia became visible and effective (Obydenkova & Libman 2014) In this way, limiting the time frame of the research allows to avoid controlling for international pro-democratic and pro-autocratic pressures.

This research is warranted for two reasons. First, as I will discuss in greater length in Chapter I, the literature in institutional economics largely claims the rule of law, and especially property rights protection, to be one of the key institutions for attracting investments and fostering economic growth – a realtionship which has been modeled theoretically and proved empirically. Thus, it is logical to suggest that authoritarian institutions lead to better (or worse) economic performance by the way they affect the state of the rule of law in the country; if this is confirmed, this

study will get closer to identifying the causal mechanism which links authoritarian institutions and their economic performance (even though, within the framework of a quantitative cross-country study, it is not possible to trace an actual causal mechanism). Second, the rule of law, as well as property rights protection and human rights protection (which I consider the main sub-components of the rule of law and will study separately) are important in their own right, even regardless of their effect on economic performance, and it is relevant to understand which institutions make some authoritarian regimes more repressive or more prone to violating property rights than others.

Throougout the study, I demonstrate empirically that both formal and informal authoritarian institutuions genuinely matter for the state of the rule of law. Moreover, I demonstrate that the effect of formal institutuons is mediated by the degree of informal constraints. I show that regimes which are both formally institutionalized and informally constrained perform significantly better that the others, even though the relation betweem formal institutions and informal constraints does not exactly correspond to initial theoretical expectations. I also find evidence that the impact of institutions is higher for property rights protection than for human rights protection.

The rest of the dissertation proceeds as follows. In Chapter I, I review existing literature on both authoritarian institutions and the rule of law. Chapter II is devoted to conceptualization and operationalization of authoritarian regimes and authoritarian institutions which are used in this project. In the same chapter, I thoroughly review some of the most populat conceptualizations and operationalizations of authoritarianism and authoritarian institutions in order to explain why I use some of them and not others. Chapter III formalizes the research question and hypothesis and describes the research methodology. Chapter IV provides the empirical test of the impact of authoritarian institutions on the rule of law, while Chapter V tests the impact on the two components of the rule of law, namely, property rights protection and human rights protection. In the conclusions, I summarize the findings, discuss their limitations and propose some avenues for future scholarship.

CHAPTER I. LITERATURE REVIEW

Authoritarian institutions

In the chapter, I review the literature on authoritarian institutions. In particular, I start my review from Geddes' influential typology of authoritarian regimes which is based on the nature of the ruling group effective constraints imposed on the autocrat. Second, I review the literature on formal authoritarian institutions such as parties, parliaments, and elections. Third, I review the works combining the two above-mentioned streams of literature. Finally, I draw some conclusions about what is already known about of varieties of authoritarian rule and their impact, as well about what is not know yet[6].

a) Informal authoritarian institutions: typology of authoritarian regimes by Barbaba Geddes

A crucial point of the literature on authoritarian regime types and their performance is the work by Barbara Geddes (1999). Trying to answer the question of why the results of studies on authoritarian regimes and on their modes of transition reached mixed and indecisive conclusions, Geddes asserted that authoritarian regimes cannot be treated as a homogeneous category. In fact, she claims, authoritarian regimes differ from each other no less than they are different from democracies, and this heterogeneity accounts for the differences among autocracies.

Geddes originally distinguished between military, single-party, and personal regimes, as well as mixtures of pure types, based on the institution which constraints the dictator and the channel of leadership and political elite selection. She created a time-series dataset on the types of regimes, based on these categories, which also included the mode of their breakdown (both transition to democracy and transition to another autocracy). It has been constantly amended and updated, the last version of this dataset is presented in Geddes et al. (2014) in the supplementary material. In the updated version, Geddes and her co-authors decided to introduce monarchies as a separate category (meaning monarchies where the monarch is a de facto ruler, like Jordan, Saudi Arabia, or Morocco) which was previously excluded because of their relative rarity. The temporal coverage of the dataset is 1946-2010,

[6]In what follows, I focus mostly on the effects of formal and informal authoritarian institutions on economy-related issues In doing so, I not review a set of literature which studies the impact of these institutions on other issues, such as, for example, political violence (Wilson & Piazza 2013) or the mode of regime transition and post-exit fate of the dictators (Geddes 1999, 2014). This choice is based on the fact that the initial puzzle of this research, outlined in the introduction, is why some autocracies perform better than other in terms of economic and social development.

and the spacial coverage is all countries in the world with population exceeding 1 million people for 2010 or for the last year of their existence.

In military and single-party regimes, the leader, constrained and can be removed by, respectively, the military officers and the ruling party. In personalist regimes and monarchies, the dictator is unconstrained in his decision-making. As for the selection of the leader and top officials, for military and single-party regimes this process goes through, respectively, party and military hierarchy. In personalist regimes the top officials and the next leader are selected from a personal network of the dictator. In monarchies, selection of the next leader works through the royal family.

Importantly, the mere fact that dictator has a military backgound or creates his own party is not enough to classify the regime as military or single-party, in other words, it is not the formal institutions which is the basis of classifications. It is *de facto* constraints imposed on the leader by the military officers or by party leadership that represent a distinguishing feature of military and single-party regimes. The judgment on whether in a given country the ruling party or the military leadership matter for leadership selection and actually constrain the dictator is based on expert evaluation, as it is rarely possible to judge about these constraints only by formal rules. In authoritarian regimes, it is not always a formal head of state of a head of government who is the actual dictator[7], neither do the formal rules of leadership selection correspond correspond to actual ones.

Geddes' main theoretical puzzle is the question of regime change. Although this is different from my research, it is still useful to make an overview of her arguments on regime longevity, as it might have an impact on economic performance as well[8].

Geddes et al. (2014) claims that the focus of political scientists on democratization hides the fact that there are not just transitions from autocracy to democracy (or backwards) but also transitions from one autocracy to another, like a revolution in Cuba in 1959 (from a personalist to a single-party regime, when dictatorship of

[7]For example, in the U.S.S.R., a formal head of state was the Chairman of the Presidium of the Supreme Council, and a formal head of government was the Chairman of the Government; however, since the death of Lenin, in was always the C.P.S.U. Secretary-General (or, in Khruschev's times, the C.P.S.U. First Secretary) who was an actual ruler. In China of 1980s, it was even more complicated as Deng Xiaoping, who was a de-facto ruler, formally assumed just some secondary offices withing the Chinese state and the Communist party.

[8]Some studies which I review below, such as Wright (2008) take into account the time horizon of the dictator (operationalized as predicted probability of the regime to collapse in a given year, taking into account the current regime type and economic conditions) as one of the variables which influence growth and investment.

Fulgencio Batista was replaced by dictatorship of the communist party led by Fidel Castro), when the leadership and power relations changed completely but the countries remained autocratic[9]. For example, after WWII, a breakdown of autocracy is followed by a subsequent autocracy more frequently than by democracy. A failure to identify these autocracy-to-autocracy transitions may lead to overestimation of longevity and resilience of authoritarian regimes.

Geddes (1999) develops a game-theoretical model of regime transition for each type of the regime which attempts to explain the diversity in regime longevity, and it can be summarized as follows.

While personalist regimes, single-party regimes, and monarchies have the only goal to stay in power (as it is normally assumed by scholars studying authoritarian regimes), the military regimes are different: according to Geddes, the military is mostly preoccupied with its corporate interests, namely, by its autonomy from the civilian institutions and its sufficient funding, while politics itself may be not interesting for the military. So they intervene in politics only when they perceive threat for their interests from the politicians. Moreover, they are preoccupied with the unity of the military and try to do everything in order to avoid fractions inside the military. Thus, for the military it is more preferable to be either "together in barracks" or "together in power" rather then to split among themselves over the question whether to stay in power or not, since clashes within the military may result in civil war. This model helps to explain the empirical observation that the military coups most of the time occur only after long informal negotiations among different groups of the military about future power-sharing and that, once in power, the military are normally willing to return power to the democratic governments when the conflicts within the military become too intense. This is the way all military regimes which existed in South America in the 1970s-1980s (Brazil, Argentina, Chile[10], Colombia, Paraguay, Uruguay) collapsed before the 1990s.

For other regimes, the assumption about willingness to stay in power as long as possible holds true. However, personalist regimes tend to perish when the dictator is dead as in personalist regimes (unlike in single party regimes or monarchies)

[9] Transition from one autocratic regime to another one of the similar type also counts as a regime transition, in case if the group whose interests are represented by a constraining body changes: for example, if a *junta* dominated by one ethnic group is changed by another one, dominated by a different ethnic group, it also counts as a regime change. However, a simple change of a dictator without a change of a ruling group does not count as a regime change.

[10] According to Geddes et al. (2014), Chile was a military-personal hybrid rather than a pure military regime.

power transfer to another dictator is complicated. It does not happen frequently that a current dictator in a personalist regime manages to appoint the successor before death – and there are no formal or informal institutions which would be able to do so after the dictator's death. Also, during their rule, personalist dictators tend to remove all potential challengers to their power in one way or another, in a way that, when the dictator is dead, there are no capable people among political elites anymore to take over; so, even if someone becomes a next personalist dictator, this is normally a weak person incapable of ruling the country (Geddes 1999)[11]. In monarchies, the power is transferred to another member of the royal family, and in singe-party regimes, selection of a new leader is done by the party establishment. In both cases, there are clear rules how that should be done.

The difference between Geddes' regime types are summarized in Table 1.

[11] One of the contemporary examples of that is Nicolàs Maduro, current president of Venezuela who used to be a bus driver and never got higher education; the only reason he took power was his personal loyalty to Ugo Chàvez, who, dying from cancer, made Maduro acting president and supported his candidacy for presidential elections; his disastrous economic performance is described in the introduction.

Table 1: **Regime type classification**

	Mechanism of leader and political elite selection	**Constraining institution**	**Motivation**	**Longevity**
to be impossible **Military**	Through the military hierarchy	*Junta (collective body consisting of of top-level army officers)*	Keeping the unity of the army, avoiding internal struggles	Low (collapse as soon as the unity of the army is no longer maintained).
Single-party	Through the party hierarchy	*Politburo* (collective body consisting of top-level party officials)	Staying in power infinitely	High (due to institutionalized rules of power transfer).
Personalist	Through a personal network of the dictator	None	Staying in power infinitely	Medium (normally, correspond to dictator's lifetime due to an absence of institutionalized ways of power transfer).
Monarchy	Through the royal family	None	Staying in power infinitely	High (due to institutionalized rules of power transfer).

Source: own elaboration based on Geddes (1999), Geddes et al. (2014).

Some regimes are coded as amalgamic types (such as military-personal or party-personal) if in a given regime the ruling party of the military retain some autonomy but cannot control the dictator as effectively as in "pure" regime types. For example, the regime of Pinochet in Chile is considered to be military-personal as Pinochet quickly concentrated power in his hands after the coup but the *junta* did not become entirely irrelevant. For a similar reason, the regime in North Korea is coded as party-personal. "Indirect military" regime refers to the situation in which the military exercise control either over key decision making or over the list of candidates who can run for public offices, while the elections themselves are reasonably free and fair (this was the case of some Latin American countries in the 1960s and 1970s). "Oligarchy" refers to a regime in which elections are free and fair but in which some racial or ethnic groups are excluded from the electoral process (like in South Africa during apartheid). Their notion of "oligarchy" is very close to the concept of "racial democracy" by Linz (1975). Iran since 1979 is not coded anyhow, due to peculiarity of this authoritarian regime[12], however, in the article which introduces the dataset, Geddes et al. (2014) call it "theocratic" and in the codebook to the dataset they recommend to merge it, if necessary, with single-party.

The difference between a single-party regime and a personalist regime with a party (or, similarly, the difference between a military regime and a personalist regime of a "military strongman") might seem overly theoretical and difficult to grasp in practice. To give a real-world example of the difference between a personalist regime with a party and a single-party regime, political regime of the U.S.S.R. up to late 1980s and the one of contemporary Russia (as of 2017) are compared below.

The U.S.S.R. was a single-party regime: although the Secretary General of the Communist Party of the Soviet Union (C.P.S.U.) was a de facto ruler of the country, it was not him alone who took the decision but the collective body called Politburo(a collective decision-making body of the C.P.S.U. consisting of up to 25 members). An attempt of Khrushchev to take decisions unilaterally and to undermine the role of the C.P.S.U. in early 1960s led to his ousting in 1964 by his fellow party members. The main reason for this removal was the introduction of rotation of 1/3 of the members in each party committee on every election, including the Central Committee and Politburo, which was undermining the influence of prominent party figures

[12]In Iran, there is a meaningful competition for the presidential office and for the parliamentary majority; however, it is the Supreme Leader who is the head of state (both formally and in pracice) and who can decide who is allowed to compete. The Supreme Leader is not elected by popular vote, he is formally appointed by the Council of Experts for 8 years and can be re-elected unlimited amount of times, however, he is claimed to be essentially independent on them, and both Supreme Leaders of Iran since 1979 ruled till their death.

other than Khrushchev. After ousting of Khrushchev, three consecutive Secretary-Generals (Leonid Brezhnev, Yurij Andropov, Konstantin Chernenko) managed to stay in power till their death, but de facto decision-making process remained collective, and if there was no consensus among Politburo members on certain policies, taking a decision was postponed (an extensive discussion on coalition formation within Soviet Politburo can be found in Ross 1980). The party elite was also in charge of selecting a new Secretary General (both de jure and de facto), and all Secretary Generals started their political career from within the party had been high rank party officials before their appointment[13]. Recruitment to the governmental offices was also made through the party hierarchy, and the members of Politburo of C.P.S.U. combined top-level party office with prominent offices in state institutions (the government, the parliament, important ministries, security services).

Current Russia (as of 2019) is a personalist regime. According to Geddes, this is the case since 1994 when Yelstin unilaterally abolished the previous Constitution in October 1993 by his decree and dissolved the Parliament without having a legal power to do so, crashed the resistance of the Parliament two weeks later using tanks, and then managed to impose a new Constitution with extended presidential powers through the referendum of 12 December 1993[14] (a democratic interlude between two dictatorships in Russia took just two years, 1992-1993)[15]. Although a stable incumbent party (called "United Russia") exists since early 2000s and repeatedly gains an absolute majority in federal and regional legislatures, it has an impact neither on decision-making, nor on Putin himself. In 2008-2012, Putin was a President of the party without even being its member (the party statute was amended to make that possible). The party is also not a way to recruit a new elite. Most of the members of the government, heads of publicly-owned companies, and other prominent members of the establishment are recruited not through the party channels but through personal connections with Putin. Most of them are his former colleagues from KGB,

[13]Khrushchev had beed head of the Central Committee of the Communist Party in Ukraine in 1938-1947 and a member of *politburo* in Moscow since 1938 onwards; Brezhnev used to be in different top party offices in Ukraine, Moldova, and Kazakhstan; Gorbachev used to be a head of Stavropol' brunch of C.P.S.U. (southern Russia).

[14]Interestingly, this referendum was conducted on the same day as elections to the first State Duma – which was the the parliament according to the draft of the new Constitution (which had yet to be approved) but not according to the old one. This suggests that Yeltsin himself considered the results of this referendum to be pre-determined. Some more concrete evidence of manipulations during that referendum are presented in Myagkov et al. (2009).

[15]Defining Yeltsin's regime as autocratic is not uncontroversial, as in 1990s Russia was characterized by quite competitive legislative elections on the federal level on which the pro-presidential parties got less than 15% of seats in 1993 and 1995 elections; also, the opposition routinely took power on the regional level. However, presidential elections of 1996 were strongly manipulated through the media to achieve Yeltsin's victory; more details can be found in Levitsky & Way (2010)

however, it has been pointed out by both Russian and Western media that the members of "Ozero" ("Lake") country house cooperative which Putin was a part of since 1996, became prominent people in the Russian establishment in 2000s[16], and the same goes for many of his friends from his early years[17]. The above-mentioned facts clearly show that the ruling party does not have anything to do with recruiting the political elite. As for the leadership selection in this regime, Putin himself was de facto appointed by Yeltsin who resigned from his presidential office on the 31st of December, 1999, and made it clear that he sees Putin as his successor, by making him an acting president before new elections (technically, he had been appointed prime minister several months before the resignation, and, by the Constitution, he became an acting president after Yeltsin resigned); this decision to resign and to transfer power to Putin was made by Yeltsin personally, and the pro-presidential party at the time called "Yedinstvo" ("Unity") was not involved in this decision at all; in fact, it was completely unexpected and shocking to everyone [18] [19].

From these two cases it is clear that, although there is a dominant pro-incumbent party in both cases, it is only in the case of the Soviet Union that the party was really influential and constraining to the dictator. This allows to classify the Soviet Union as a single-party regime and contemporary Russia as a personalist one.

I will further refer to these regime types as "informal institutions" (as it is precisely informal rules of behavior of the dictator which is the basis of classification) or, interchangeably, "informal constraints", as opposed to formal authoritarian institutions (such as parliaments, parties, and elections) discussed below.

To the best of my knowledge, no systematic research has been carried out thus far that explicitly deals with the impact of Geddes' regime types per se on economic performance or on the rule of law. Existing works deal with impact of Geddes's regime type on regime longevity, on modes of regime transition, or on post-exit faith of dictators (Geddes 1999, Geddes et al. 2014), on their resilience when faced

[16] For example: Vladimir Yakunin became a long-time head of public ralway company "RZD"(until 2015); Andrei Fursenko became a minister of education; Yurij Kovalchuk became a billionnaire with big shares of public companies with a big state share, such as "Gazprombank", see Petrova & Shirokov 2011

[17] For example: Vyatcheslav Zolotov became a head of the National Guard; Rotenberg brothers became billionaires as the main government contractors; Gennadij Timchenko became a billionnaire as an exclusive oil trader of "Rosneft", an oil company with major public shareholding, see Galeotti (2014)

[18] Yeltsin (2000) in his memories claims that, apart from him and Putin, no one, not even members of Yeltsin's family, knew about his decision until the day he actually signed a decree about his resignation. family

[19] In this respect, Russian personalist regime is quite exceptional as, normally, in personalist regimes, the dictator rules till his death and does not appoint a successor or appoints a weak one who does not manage to hold power for long.

sanctions (for the latter, see Wright & Escribà-Folch 2010). Other studies, however, study the impact of regime types on economic performance in interaction with formal authoritarian institutions. I turn on these works later in this chapter.

b) Formal authoritarian institutions

Other insights about the difference between authoritarian regimes come from the literature on formal authoritarian institutions, such as legislatures, parties, and elections.

An important piece of theory-building about the role of formal authoritarian institutions is Gandhi & Przeworski (2006). They reject the usual understanding of authoritarian institutions as mere "window-dressing", claiming that if it was true, these institutions simply would not be necessary. They also reject the understanding of authoritarian institutions as arenas for redistribution of spoils as, they claim, money and privileges can be redistributed without any institutions.

Part of the explanation for why authoritarian regimes have formally democratic institutions is a Western pressure to have them. This is the main argument of Levitsky & Way (2010) who introduce the notions of Western leverage (the ability of the West to influence a given country) and links to the West (socioeconomic and cultural ties of a given country with the West, which affects the probability that the West will implement its leverage to push a given country towards democratization). They claim that this became relevant after the end of the Cold War when the West lost any incentives to support friendly dictatorships (as it often did during the Cold War) and when it lost the main competitor, the USSR, who was the main supported of Communist, non-democratic regimes. In the same book, they do a series of small case studies, analyzing how different degrees of Western leverage and links to the West affect the process of democratization in different countries. From a quantitative side, some papers, like Escribà-Folch (2009), show that there is a statistically significant impact of the amount of democracies in the world on the likelihood of institutionalization of authoritarian regimes. In other words, there is indeed evidence that spreading democracies in the world increases the need for the dictators to imitate democracies by introducing seemingly democratic institutions in order to maintain their domestic and international legitimacy.

However, the need to satisfy the West is definitely not the entire explanation for the existence of authoritarian institutions. No one in the West is treating North

Korea or China as democracies in spite of the fact that these countries have parliaments, parties (formally, there are even several parties different from the Communist one in both countries, even though they never get a single seat in the legislature), and elections. Moreover, in these two countries, parliaments, parties, and elections existed long before the end of the Cold War when the Western pressure to democratize could have any effect in that part of the world[20].

Gandhi & Przeworski (2006) offer their own model of formal institutions under dictatorships, which is repeated in Gandhi (2008a) and which can be summarized as the following.

Any dictatorship has a two-fold tasks. First, it needs to prevent rebellion by the elites by rewarding and punishing them. Second, it needs to foster popular support and cooperation (since even dictators need public support in order to stay in power and to rule the country). Solving these tasks can be accomplished by redistributing spoils (such as money and privileges) in exchange for loyalty. However, in order to be able to provide these spoils, the dictator needs some cooperation with the society (to put it simply, he needs to collect taxes), and the need for cooperation with the society varies depending on how much dictator's revenues depend on society. Also, just redistributing spoils may not be enough; opposition may demand policy concessions, and in some cases it may be sufficiently strong to obtain them.

If the need for cooperation with the society is high and/or the opposition is strong, policy concessions become inevitable. While redistributing spoils can happen on an ad hoc basis, without any institutions, policy concessions can be accomplished only through institutions to make them at least somewhat credible and also to reduce transaction costs of making concessions, compared to ad hoc bargaining with the opposition. So, authoritarian legislatures and parties help dictators to make concessions to the elites or to certain groups of population without risking their own power.

Gandhi & Przeworski (2006) construct a formal model of authoritarian institutions based on the above-mentioned criteria, from which it follows that the need for institutions in authoritarian regimes depends on four factors. First, it depends on the need for cooperation with the society, which is lower if a dictator has sources

[20]Even if I suggest that having a parliament, parties, and elections in China is a product of a Soviet influence, this still does not explain why the Soviet Union, which, because of its military and economic power, was immune from almost any external pressures, also had these institutions.

of income independent from society (such as income from oil, gas, or mineral export) and does not need society in order to raise funds. Second, it depends on the chances of the opposition to overthrow the dictator, with higher chances requiring more policy concessions (and, thus, more institutions). Third, it depends on the risks of the opposition in case of failure of the rebellion, higher risks resulting in lesser concessions. And forth, it depends on the degree of polarization between the dictator and the opposition, lower polarization resulting in higher willingness of the dictator to make concessions, as if the preferences of the dictator and the oppositions diverge too much, concessions become more costly for the dictator.

In that article Gandhi & Przeworski (2006) also conduct empirical analysis, providing some preliminary operationalizations of the four factors determining the need for authoritarian institutions mentioned above: the need for cooperation witht the society, chances and risks of the opposition, and degree of polarization between the opposition and the dictator. Gandhi & Przeworski (2006) indeed find statistically significant relations between the proxies of the four factors relevant for their theoretical framework and the measurements of the institutionalization of the regime.

Another interpretation of the role of authoritarian parties and elections, which implies a different causal mechanism behind their creation (but which is not incompatible with the previous one) was suggested by Geddes (2006). Rather than seeing formal authoritarian institutions as arenas of policy concessions to potential opposition, she theorizes the following.

As far as parties are concerned, a party is an organization which is able to redistribute different material benefits among its members (such as good salaries for party officials, privileged access to public offices through the party, and so on[21]), which makes a broader share of population personally interested in preserving the regime. It does not matter that much whether the party manages to redistribute benefits among a large share of population or just among high-rank party members; in any of the two cases, the party creates a certain amount of people who have stakes at preserving the current regime (but, of course, if a number of people who benefit from the ruling party is higher, the support base of dictatorship is stronger). This helps to deter potential rivals, mostly form the military and security services,

[21] For example, Matthews (2013)[1978] provides a good account of a list of various privileges that Soviet party officials enjoyed. Even though the wage difference between party officials and ordinary people was not high, party *nomenklatura* had access to goods and services (like access to special shops, access to better accommodation, higher availability of foreign and domestic travel) which other people could not get access anyhow, even if they had money.

from rebellion, as they become aware that, in case they attempt a coup, the party will mobilize a lot of people for supporting the dictator[22] The reason why this can deter potential military rivals is that the military officers are normally unwilling to order to shoot at civilians as some of the military may disobey or even join the people.

As for elections, Geddes (2006) theorizes that their primary goals to demonstrate potential rivals (in this case, mostly civilian ones) the overwhelming resource imbalance between the incumbent and potential rivals, and the overwhelmingly high figures of support for the incumbent, which is supposed to discourage them from defecting from the incumbents and joining the opposition. This explains why many authoritarian regimes, in spite of all their control they have over electoral process and absence of any real chances of victory for the opposition, still invest a lot in campaigning. Wright (2011) studies the patterns of spending for dictatorships and finds evidence that, in pre-electoral period, short-term spending increases in all dictatorships (while long-term spending increases only in personalist regimes), exactly the same way as it often happens in democracies[23]. This finding shows that dictatorships which confront elections indeed take them seriously and struggle to win with as bigger margin of victory as possible. This can also explain why "honest" victory during authoritarian elections (in a sense that there is no obvious electoral fraud but rather more subtle pre-electoral manipulations and domination in the media) is preferable to electoral fraud, since in case of more "honest" elections potential rivals treat an overwhelming electoral support as a more genuine indicator of capacities of the incumbent[24] (Geddes 2006).

Neither parties nor elections are cost-free for dictators. Parties are costly because they need resources to redistribute which could have otherwise been appropriated by the dictator; furthermore, if the party becomes developed enough, it may become constraining for the dictator and even empower itself to a degree that it will be able to remove the dictator. Elections are risky because, even given all the existing advantages of the incumbent in financial resources, media coverage, its control over

[22] That could have been the case during an attempted coup in Turkey in 2016 when a lot of activists from Erdogan's Justice and Development Party went to the streets to oppose the military (of course, assuming that the coup itself was genuine and not orchestrated by Erdogan himself).

[23] A meta-analysis of scholarship about political budget cycles can be found in Cazals & Mandon (2016) who claim that spending does increase in pre-electoral periods, although the magnitude of this phenomenon are often overestimated by scholars.

[24] As an illustration: Russian parliamentary elections of 2011 were so obviously fraudulent and the result of the ruling party was so unconvincing (49%) that it led to the biggest anti-governmental protests in a decade; for presidential elections of 2012, Putin allowed multiple observers to monitor the electoral process and even to install web cameras in polling stations – just to demonstrate that he is capable of winning elections even without open electoral fraud.

electoral authorities, and others – authoritarian elections still may, in rare cases, lead to an unexpected failure or to the need to openly cheat – which may cause popular uprising and eventually a regime collapse (that was what happened with the regime of Eduard Shevarnadze in Georgia in 2003 or with the regime of Askar Akayev in 2005 in Kyrgyzstan, which is commonly referred to as "color revolutions"). For these reasons, not all dictators choose have parties and elections. However, it is shown empirically that, on average, both parties and elections prolong the existence of authoritarian regimes (Geddes 2006).

Geddes (2006) does not entirely reject the account by Gandhi & Przeworski (2006); however, she claims, it does not happen that frequently that authoritarian parties or legislatures have a genuine impact on policy-making. She claims, based on qualitative evidence, that in many autocracies the parliaments and parties just rubber-stamp dictators' decisions (exactly as conventional wisdom suggests). Thus, one should be careful to assert that authoritarian institutions represent (even somewhat) credible commitments in all autocracies. I will get back to this insight later, discussing the interplay between formal and informal authoritarian institutions.

As for the outcomes of authoritarian institutions, they are expected to have implications for economic development (Gandhi 2008, 2008a): although authoritarian institutions are not as credible as democratic, they still lower uncertainty about the rules of the game, decrease the probability of protest events, and improve the flows of information between dictator and population, all of which is important to investments and to economic development in general. Gandhi (2008, 2008a) tests the impact of authoritarian institutions on economic performance using panel data analysis and finds out that there is indeed statistically significant relation between higher degree of institutionalization of authoritarian regime[25] and higher rates of economic growth. She also tests whether the same relation holds for social spending but does not find a significant relation – which, as she claims, may be not necessarily the fault of the theory but a question of poor data sources and suboptimal proxies.

Gandhi & Przeworski (2006), Gandhi (2008, 2008a) are important works in terms of providing the theoretical framework for authoritarian institutions, showing the potential systematic reasons why these institutions exist in some authoritarian regimes and not in others. Some other authors confirmed expectations of the

[25] These studies normally operationalize the degree of institutionalization of authoritarian regime as an ordinary variable, coded as 0 if there is no legislature and no parties, as 1 if there is a legislature with no parties or a legislature with single party, and 2 if there is a legislature and multiple parties in the parliament

theoretical framework of Gandhi and Przeworski, using even more more rigorous methodology that Gandhi and Przeworski did. For example Escribà-Folch (2009) confirms a negative link between having oil as primary export commodity and being more institutionalized, using multinomial and ordered logit models, also correcting for self-selection of institutions by autocrats. He further finds that there is statistically significant difference between the share of tax and non-tax revenues in non-institutionalized and institutionalized regimes. More institutionalized regimes tend to rely more on tax revenues. The two findings provide additional evidence that authoritarian institutions are needed in order to foster cooperation with the population.

Other studies aslo show that higher degree of institutionalization of authoritarian regime does indeed lead to better outcomes in terms of decreasing economic inequality (Hanson 2013), decreasing infant mortality, increasing investments in education and health care (Miller 2015)[26].

c) Interaction between formal and informal institutions in authoritarian regimes

Although Gandhi (2008a) references Geddes (1999) and uses part of her framework (for example, in what concerns the motivation of the military rulers versus all the others), she does not use her typology explicitly, as the two authors study different issues: while Gandhi & Przeworski (2006), Gandhi (2008, 2008a) focus on the outcomes of formal institutions under authoritarianism, typology of Geddes (1999) operationalizes informal, de-facto constraints on dictators.

Another difference between the two approaches is that Gandhi and Przeworski focus on *dictators* as actors, and their strategic use of formal institutions as a means to hold in power while Geddes focuses on *regimes* as sets of informal institutions within which dictators operate. A death or removal of a *dictator* does not necessarily mean the end of the *regime*: China survived multiple power transitions since the 1950s[27] without any change of basic rules of leadership and elite recruitment, as well as constraints imposed on the leader. All the establishment is still recruited exclusively through the party channels, and key decisions are made collectively by *politburo*, and, since Deng Xiaoping, rotation of leadership on all level every 10 years

[26]To be more precise, Miller (2015) used not the Gandhi operationalization of institutionalization of autocratic regimes but the notion of electoral authoritarianism by Levitsky & Way(2010); however, substantially, electoral authoritarianism and highly institutionalized authoritarianism are very close; it is discussed in Chapter II why the concept of electoral authoritarianism is not used in this work

[27]Consecutively: Mao Zedong, Deng Xiaoping, Jiang Zemin, Hu Jintao, Xi Jinping.

(including the leader himself) is a routinized practice[28]. The difference between a change of a dictator and a regime change is even more evident in case of monarchies (Morocco, Jordan, Saudi Arabia).

These two approaches differ substantially. Gandhi and Przeworski look at authoritarian institutions as outcomes of strategic choices of dictators. Geddes treats informal authoritarian institutions more like external constraints to dictators; it is not exclusively (or at all) a dictator's choice to have a constraining military or a constraining single party but more an outcome of the strength of the military or the party in a given country. Moreover, informal authoritarian institutions, according to Geddes et al. (2014), also define the way in which dictators are selected and removed. From this point of view, as it was mentioned in the introduction, it is possible to treat even dictators themselves (at least to some extent) as products of these informal institutions. To put it in a broader theoretical context, Gandhi and Przeworski's theory can be classified as rational choice institutionalist theory, as institutions are perceived not as exogenously given and immutable but as purposefully created depending on dictator's preferences and strength of potential opposition[29]. In contrast, Geddes' approach can be treated as classical institutionalist, as she perceives their regime types as mostly exogenous, and theorize more about the outcomes of these institutions rather than about their origins. Geddes et al. (2014) mention that the regime type is an outcome of strength of representation of specific interests by certain societal groups, military and party being the most frequent and the most well-organized of these groups. However, Geddes and her co-authors do not develop further on conditions under which these groups are (or are not) strong enough to constrain the dictator and to influence leadership selection, remaining agnostic about the origins of these institutions.

Although these two approaches belong to different types of institutionalism, there does not have to be a contradiction between the two frameworks because, as mentioned before, they do not apply to the same institutions. It is plausible that formal authoritarian institutions (parties, parliaments, elections) can be established, changed, and abolished by a dictator at his will while informal institutions are relatively rigid and cannot be manipulated by the dictator so easily. It is also logical to suggest that the function of authoritarian institutions may be dependent

[28] It has to be pointed out that in 2018, the rule that made leader replacement obligatory was removed, and Xi Jinping is likely to stay in power even after his second 5-year term is over. It is mentioned in multiple sources that Xi Jinping has been consolidating his personal power in recent years (see, for example, Chen 2018).

[29] An overview of rational choice institutionalism can be found in Shepsle (2008).

on informal constraints. In other words, it can be that in some autocracies the role of formal authoritarian institutions is to make partial concessions to the opposition and to ensure cooperation from the citizens (as described by Gandhi & Przeworski 2006, Gandhi 2008, 2008a) while in others it is just to make people personally interested in regime survival and to demonstrate overwhelming advantage of the incumbent (as described by Geddes 2006). Indeed, there are some studies that try to combine the two streams of literature, building and testing a common theoretical framework for formal and informal authoritarian institutions.

For example, Wright (2008) studied conditions under which authoritarian parliaments are established in different types of authoritarian regime as well as an impact of regime types and of authoritarian parliaments on GDP growth and FDI influx. In this article, he combines the typology of Geddes with the literature on formal authoritarian institutions. Focusing on authoritarian parliaments, Wright theorizes that functions of legislative bodies is not the same for all dictatorships. Namely, parliaments genuinely help to further constrain the dictators in military and single-party regimes and foster cooperation with the population, but in personalist regimes and monarchies, a parliament is just a means by which dictator can reward and punish political elites, and does not bind the dictator.

Wright (2008) deals with several questions. First, he analyses the conditions under which different regime types occur. Second, he analyses conditions under which autocrats in different regimes decide to introduce parliaments. Finally, he identifies the effect of having a parliament on GDP per capita growth and FDI influx in different types of authoritarianism.

Wright's conclusions are the following. To start with, he finds out that personalist regimes are more likely to occur in countries with larger oil reserves, lesser domestic investments, and smaller populations (in other words, in situations when a dictator needs only minimal cooperation with the society in order to get revenues and stay in power). Secondly, Wright observes that military and single-party regimes tend to establish legislatures when they have less oil reserves, when they are richer and more stable while personalist regimes tend to establish legislatures when they are most endangered[30] (suggesting that in personalist regimes and monarchies

[30]To operationalize this, Wright uses a predicted probability of failure of a given dictatorship in a given year, based on the existing statistical models of regime failures and assuming that dictators estimate their probability of getting ousted in the same way as researchers. Although this assumption looks overly strong and unrealistic, Wright claims that all the other existing proxies for regime fragility are even worse.

parliaments are used only as a short-term strategy in order to survive). Finally, his findings show that parliaments improve GDP per capita growth and FDI influx only in the former types of regimes, which is consistent with the theoretical proposition that parliaments bind the dictator (and thus decrease uncertainty about the rules of the game) only in non-personalist regimes.

In addition to the studies on ecnomic performance, other works have investigated interaction between formal authoritarian institutions and regime types in non-economic areas. For example, Wright & Escribà-Folch (2011) study the impact of authoritarian legislatures and parties on the likelihood of democratic and autocratic transitions. They find out that legislatures generally decrease the likelihood of both democratic and autocratic transition of a given regime while parties increase this likelihood – but this mostly works for non-personalist regimes in which parties and legislatures are not just tools for the dictators.While this finding is not directly related to economic performance, it is another piece of evidence that the same formal institutions may matter differently depending on informal ones.

d) Moving forward

Thus, from the literature on varieties of authoritarianism, the main conclusions can be the following. First, not all authoritarian regimes are the same, they differ by the degree of constraints imposed by the dictator as well as by the type of actors who constrain the dictator. Second, formal authoritarian institutions like legislatures and parties are not just window-dressing, they serve either a purpose of fostering cooperation with the citizens and preventing rebellion or a purpose of making people engaged in maintaining regime stability and demonstrating overwhelming resource advantage of the incumbent. Third, formal authoritarian institutions matter differently in different types of authoritarianism, as in some regimes these institutions help to constrain the dictator while in others they serve as a tool to actually empower the dictator. Finally, the type of authoritarian regime, formal authoritarian institutions, and their interaction play a significant role for regime longevity and for many aspects of economic performance, including economic growth, investments, and social development.

However, *how* some types of regimes do manage to attract investments and foster growth is still an understudies question. In particular, work is needed to theoretically model and empirically test the relationship between authoritarian institutions and economic development.

While this particular questions seems to be understudied from the perspectve of the literature on autocratic institutions, the investigation of the institutional determinants of economic growth is a long-established research question that has already been explored extensively, especially in the literature on institutional economics. Below, the literature on institutional determinants of economic growth is reviewed with the view to find what can be the missing link between authoritarian institutions and their economic outcomes.

Rule of law as the main driver of economic growth

Following from North's seminal works (1987, 1989), there is now substantial evidence that economic growth is profoundly related to institutional factors. North was the first to introduce institutions in the economic analysis. Unlike neoclassical economists who believed that transaction costs are non-existent or at least are neutral and inconsequential to economic development (which is more or less a fair assumption if it is applied to advanced Western economies), North insists that these transaction costs are, first of all, important enough to be taken seriously, and, secondly, vary a lot and depend mostly not on technologies but on institutions.

North distinguishes between forth types of transaction costs: costs of measuring the attributes of goods and services, costs of making contracts, costs of enforcing contracts, and costs of ideological attitudes (the latter define how likely is it that a person will engage in opportunistic behavior if it is potentially profitable). These costs do not exist in small scale personal exchange which took place in small societies with strong interpersonal ties; however, as the scale of production and trade increases and as specialization and division of labor develops, they increase and become obstacles for economic development unless they are decreased by the strong third party, which is the state. According to North, having the functional state is necessary but not sufficient condition for economic development: in order to enable the state to decrease transaction costs, it must be characterized by stability of property rights, both in terms of legal definition of property rights and contract obligations and in terms of enforcement of these rights and obligations.

North also found that, historically, it was very infrequent and exceptional rather than normal for states to create and enforce efficient system of property rights as for the interests of the rulers it might be much more profitable to design and implement

rules which serve only the interests of themselves and their constituencies, not of the population as a whole. It is only a very particular set of context-specific conditions in some Western countries which led to creation of efficient institutions...

From the empirical side, Rodrik et al. (2004) review the literature about determinants of economic development in a long-term perspective, and distinguish between three types of explanations: geographical explanations (related to the impact of climate on agricultural productivity), explanations related to international trade openness, and explanations related to the quality of institutions (the latter being represented by North, whose theory is reviewed above). To test the role of the institutional factors, Rodrik and his co-authors use two-staged regression analysis with instrumental variables, which allow them to deal with the problem of endogeneity which are relevant in all institutionalist studies[31]. They show that, if to look at simple correlations, all the three types of explanations look plausible, as the measurements of trade openness, measurements of institutional quality (they use the WGI Rule of Law index by the World Bank), and several measurements of geographic conditions are all correlated with GDP per capita. However, once all the variables are introduced in the regression model, institutional variable trumps all the others, and the impact of the other variables becomes either substantially or even statistically insignificant. It means that, even if the role of non-institutional factors in long-term economic growth is non-negligible, institutional factors are clearly dominant.

This point to one of the institutions whose impact on economic growth is proven and shown to be crucial, namely, the rule of law. Indeed, the rule of law guarantees property rights, which is the key factor that determines the investors' decision on whether to invest or not. Rodrik et al. (2004) also point out that it is not specific legal definition of property rights which is important but their actual implementation. They illustrate it by the example of China and Russia, pointing out that while Russian legal definition of property rights is much stronger and much closer to the Western one than the one in China (Chinese legal definition of property rights still bears socialist legacy), it is in China that the property rights are protected better in practice.

[31] The problem of endogeneity is caused by potential reversed causality or simultaneous relation between institutions and economic development: it is possible that it is economic development that shapes institutions (rather than the other way around), or that specific institutions and economic development mutually influence each other. The use of instrumental variables which are directly linked to the independent variable but not to the dependent one allows to deal with this problem and to show that there is a direct link between institutions and economic development (although it cannot exclude the presence of a reversed causal link at the same time).

The importance of secure property rights, the rule of law, public services, and the freedom contract is further ascertained in Acemoglu & Robinson's (2012) seminal book. They distinguish between extractive economic institutions aimed at extracting revenues from the majority of the population in favor of the minority groups, and inclusive economic institutions which allow a majority of the population to participate in economic activities and gain profit. Inclusive economic institutions mean exactly secure property rights, the rule of law, public services, and the freedom contract, as only these institutions provide incentives for the people to become more productive and to develop their abilities, which ultimately leads to innovations in the economy. Acemoglu & Robinson recognize that extractive institutions can produce short-term growth if the ruling elites move resources to the sectors of economy which are productive and which they themselves can benefit from. They quote Stalin's industrialization of 1930s as an example of that. However, such growth is not sustainable and does not involve technological change.

An important contribution of the Acemoglu & Robinson book is the link between economic and political institutions (which is definitely not a new idea, however, their contribution is thick description of cases which give convincing evidence in favor of their point). The authors claim that, most of the time, extractive economic institutions are underpinned by extractive political institutions which concentrate power in the hands of the narrow minority, and inclusive economic institutions are underpinned by inclusive political institutions which distribute power broadly in the society. Importantly, according to them, inclusive institutions require not just political pluralism but also a centralized state, as political pluralism without centralization means not a democracy but anarchy, like in Somalia. Acemoglu & Robinson claim that combinations of extractive and inclusive institutions are generally unstable, as they tend to challenge each other, although they mention some examples in which extractive political institutions coexisted with inclusive economic institutions (such as South Korea in the 1970-1980s, and, with a lot of reservations they make, current China).

Acemoglu & Robinson also recognize that the inclusiveness of both political and economic institutions is not a dichotomous variable but rather a scale. They claim that, although Chinese political and economic institutions in general remain extractive, their economic institutions nowadays are much more inclusive than they used to be before Deng Xiaoping reforms which took place in 1980s and early 1990s (which gradually created free market in China and opened the country to foreign

investments). They also do not simply equate inclusive political institutions with electoral democracy: for example, they label political institutions of many democratic countries of Latin America as extractive as they provide few constraints to the executive; moreover, an ongoing rebel violence leads to unlawful destruction or appropriation of property, which is as bad for businesses as expropriations by the state (they go even so far as to characterize political institutions of Southern states of the U.S. before the Civil Rights Movement as extractive as it was systematically discriminated against Black people). However, they do not seem to make a distinction between autocracies, treating all of them as exclusively extractive.

Acemoglu & Robinson prove their thesis about criticality of institutions for economic development qualitatively, using what can be called the most similar systems design, although they do not this term themselves: they pick countries located within the same geographic area and sharing the same culture but diverging radically in terms of economic development (such as North Korea and South Korea, Botswana and Zimbabwe, Southern U.S. states and Northern states of Mexico), and they further demonstrate that the only cause for this is the difference in institutions.

In short, the importance of institutions such as a rule of law and property rights protection are backed both by qualitative and by quantitative evidence.

Acemoglu & Robinson's seminal book makes an important theoretical and empirical contribution to scientific understanding of the interplay between political economic institutions. It also provides rich empirical evidence of how economic institutions make a crucial difference for countries' economic performance, other things being equal. However, for the purposes of the current study, Acemoglu & Robinson's framework needs some refinement to make it more applicable to studying the variety of authoritarian institutions, as Acemoglu & Robinson's analysis, even though it demonstrates that some countries with extractive political institutions can develop more inclusive economic institutions, does not tease out systematic causes of these developments.

When the authors describe how China managed to turn from extractive to semi-inclusive economic institutions, they portray it as a completely contingent event, namely, as a fortunate outcome of a power struggle between elite groups within the Communist party after the death of Mao Zedong. The same holds for their account of South Korean institutions in 1960-1980s (when the country was a military dictatorship), which combined extractive political institutions and inclusive

economic institutions. Yet, according to the literature on authoritarian types and institutions, the difference between autocracies of different kind on economic and social development is statistically significant even after controlling for all standard socioeconomic variables. If economic institutions in each authoritarian country were dependent only on contingent, context-specific factors and if one assumes that these economic institutions have a crucial impact on economic performance (which has been extensively shown above), then a difference in economic performance between dictatorships of with different institutions would not be statistically significant when examined. Since, in reality, multiple studies did find evidence that significant difference exists, it is plausible to hypothesize that there may be a significant difference in economic institutions between dictatorships of different types.

If the rule of law and property rights protection are indeed crucial for economic development at least in a long term perspective, it might be plausible to expect that having a constrained authoritarian regime with higher degree of institutionalization should lead to a higher degree of the rule of law and property rights protection. This also makes sense from the theoretical point of view, if one applies the framework of Acemoglu & Robinson. More institutionalized and constrained authoritarian regimes can be considered to be more inclusive political institutions compared to non-institutionalized and unconstrained autocracies (as I discussed before, authoritarian parliaments and multiparty systems are needed to foster cooperation with the citizens and avert rebellion; moreover, there is evidence that in non-personalist regimes legislative bodies can be actually binding for dictators to a certain extent). Consequently, it is possible to suggest that these more inclusive political institutions in dictatorships should lead to more inclusive economic institutions – meaning better state of the rule of law.

The reason I focus on institutions and not on specific policies fostering the economic growth is that, as this literature shows, once institutions are introduced in the analysis, the effect of policies on economic growth loses its statistical significance. This may be interpreted in several ways. On the one hand, institutions can be regarded as cumulative outcome of the past policy actions, in other words, "good" institutions are produced by "good" policy changes of the past. Thus, the effect of specific policies is already "included" in the effect of institutions, so, it is not possible to plug both institutional and policy variables in the same model (Rodrik et al. 2004). On the other hand, following Acemoglu & Robinson (2012), one can claim that it is impossible to have "good" policies within the framework of

"bad" (extractive) institutions as any attempts to implement "good" policies withing the framework of "bad" institutions would undermine these "bad" institutions; thus, any attempt to really implement beneficial policies will be blocked by the dominant groups. For these reasons, I consider institutions to be more fundamental for economic growth than any particular set of policies, and analyze the rule of law as the most fundamental of these institutions.

Summary

In the current chapter, I reviewed of the literature on formal and informal authoritarian institutions and their impact on economic performance. I also reviewed the literature which theorized and tested how formal and informal authoritarian institutions could interact with each other. An apparent gap in this literature is that, while current studies demonstrate that authoritarian institutions matter for performance, they do not empirically study the mechanism of how that happens. I further reviewed the literature on institutional economics which modeled theoretically and convincingly demonstrated empirically that economic growth was a phenomenon which was primarily caused by institutions, and that the most important among those institutions was the rule of law. Hence, I suggested that the link between authoritarian institutions and their performance might be the way authoritarian institutions affect the rule of law. In the following chapter of this dissertation, I

discuss conceptualization and operationalization of autocracy and authoritarian institutions which I will be using in the project. I will also discuss why some popular conceptualizations and operationalizations of autocracy or autocratic institutions are not used. This is necessary before formulating a precise research queston and a set of testable hypothesis, which will be done in Chapter III.

CHAPTER II. CONCEPTUALIZATIONS AND OPERATIONALIZATIONS

Democracy and autocracy

Before studying the impact of authoritarian institutions on the rule of law, it is necessary to, first of all, find a way to define which countries should be considered authoritarian and which should not at any given time period. This question is obviously linked to a question of how one should define the opposite of autocracy, which is democracy.

In this project, I define democracy and autocracy *procedurally,* not on normative grounds. According to the procedural definition of democracy, democracy is a political regime in which the power is acquired and lost by means of competitive elections with near-universal suffrage. This definition originates from Schumpeter (2003[1943]) and then is used, with slight modifications, by most scholars working in the field of regime studies. Schumpeter (2003)[1943] rejects understanding of democracy based on source of power ("popular will") of the purpose ("common good"), which were common for his time. He instead suggested a procedural definition of democracy, which has been dominant in regime studies at least since 1970s (Huntington 1991) and still remains dominant now - mostly due to the fact that procedural definition is relatively easy to be operationalized. Autocracy here is operationalized as a political regimes in which the power is acquired and lost by any means which are different from competitive elections with near-universal suffrage. In this definition, elections, on their own, do not make any regime democratic; if elections do not serve as means of acquiring and losing power but serve any other goals (i.e. improving legitimacy of the regime), then a given regime is not considered democratic.

There are good reasons why other definitions of democracy and autocracy are normally not used in regime studies. Alternative, non-procedural concepts of democracy convey *normative ideals* of democracy which have not been implemented yet in any country. Concepts such as participatory democracy or deliberative democracy do not have empirical examples, as none of the currently existing democracies fully correspond to these normative ideals. In order to deal with this widespread confusion between democracy as a normative ideal which has not yet been reached and

democracy as a really-existing system with meaningful political competition and universal suffrage, Dahl (1971) coined a term "polyarchy" to describe the latter; however, the term was not universally adopted, so the confusion between the two possible meanings of "democracy" still remains. Normative definitions of democracy can also be useful for a different purpose, namely, for assessing the quality of democracy in countries which meet the procedural definition of democracy in the first place[32]. Countries of the world differ very much in terms of the extent to which participatory procedures, such as referenda, are used (which is part of the concept of participatory democracy) or to what extent the political debate is meaningful (which is part of the notion of deliberative democracy). For example, it is clear that there are no countries where local and national referenda are held as frequently as in Switzerland. However, if alternation of power via elections in a given country is not possible, operationalizing the degree of deliberation or participation in a given country seems less meaningful. For this reason, procedural definition of democracy is also frequently labeled "minimalist": if a given regime does not meet even the procedural criteria of democracy, a given regime is not considered democratic, even though it could have some level of direct participation or deliberation[33]

Another advantage of adopting procedural definitions of democracy and autocracy is that this definition does not imply anything about account regime performance: nothing in this definition presupposes that a democracy must be efficient, non-corrupt, fair, and so on, as well as nothing presupposes that autocracy must necessarily have the opposite qualities (Huntington 1991). This is particularly important since, for the purposes of this project, since I am interested in regime performance, it would have been undesirable if a definition of democracy also, explicitly or implicitly, assumed good performance for democracies (and, respectively, bad performance for autocracies) by default.

The definition I presented above is the general definition of democracy and autocracy. In what follows, I discuss a more operational definition which would distinguish between democracy and autocracy, and, more importantly, an operational definition of authoritarian institutions, which are the main independent variables

[32]There are attempts to operationalize the level of direct participation or deliberation in democracies to measure how close they approach the normative ideals; such an attempt was made, for example, by the authors of V-Dem project.

[33]Some dictatorships introduce formal institutions which are, legally, more participatory or more deliberative than institutions in democracies (likes Soviets in the USSR or self-governing communes in Libya during Qaddafi's rule); however, these institutions are completely controllable and have limited impact on decision-making.

of the current project.

Alternative conceptualizations: overview and critical discussion

Before introducing the final conceptualizations and operationalizations of autocracy and authoritarian institutions which I am using in this project, it is necessary to critically discuss some of the most prominent concepts and operationalizations in the field of political regime studies. First, I discuss several concepts which try to conceptualize regimes which are different from classic democracies and classic autocracies. This separate category has been labelled differently in the literature: some scholars label them "hybrid regimes" (Diamond 2003, Morlino 2008, 2009), while other call them "competitive authoritarian regimes" (Levitsky and Way 2010), . Second, I discuss the use of indices of democracy which claim to operationalize to what extent a given country is democratic. I focus on the most prominent of them: Freedom House, Voice and Accountability, Polity IV, and Tatu Vanhanen's index. Third, I discuss a famous typology of non-democratic regimes by Juan Linz.

a) "Hybrid regimes" and "competitive authoritarian" regimes: critical discussion

Some authors make a distinction between "pure" authoritarianism and "hybrid regimes", or "competitive authoritarian regimes" [34], suggesting that, apart from democracy and autocracy, one should distinguish a third category of regimes with distinct features which differentiate them from both democracies and autocracies. The concept of "competitve authoritarian regimes" was popularized by Levitsky & Way (2002, 2010), while other scholars working on political regimes, like Diamond (2002), or Morlino (2008, 2009), introduced the term of "hybrid regimes". These two concepts are discussed below.

Levitsky & Way (2010), like virtually all scholars working with political regimes, depart from a procedural definition of democracy, more specifically, from criteria of polyarchy by Dahl (1971), which goes back to Schumpeter (2003)[1943]. From Dahl's definition, they deduce three main criteria of democracy: (1) free and fair elections, (2) broad protection of civil liberties, (3) a reasonably level playing field. These criteria are used for distinguishing between the types of regimes they introduce.

[34] Levistky and Way prefer the term of "competitive authoritarianism" rather than "hybrid regimes" to underline that they consider these regimes autocracies and not flawed democracies.

According to them, a pure authoritarian regime is the one in which there are no elections or the ones in which elections are non-competitive (the ones in which virtually all viable non-incumbent candidates are excluded from electoral process or in which electoral fraud is so massive that electoral process becomes meaningless), civil liberties are not guaranteed, and there is obviously no level playing field because there are no meaningful elections. In contrast, "hybrid regimes" (or "competitive authoritarian regimes", which is the term preferred by Levitsky & Way 2002, 2010 to indicate that these regimes are a sub-type of *autocracy* rather than democracy) are the ones in which opposition is allowed to run for elections and the elections are more meaningful in a sense that there is some correspondence between popular preferences and electoral results but at least one of the following conditions are present: a) electoral results are fraudulent, b) civil liberties, such as freedom of speech, are frequently violated, which raises the costs of participation for opposition, c) playing field is consistently skewed in favor of the incumbent, in a sense that the opposition has lesser access to money, media coverage, and legal protection. As far as the outcome is concerned, in hybrid regimes, according to Levitsky and Way (2010), the incumbent is able to control electoral outcomes to a greater extent than in democracies but to a lesser extent than in "pure" autocracies.

Levitsky & Way (2010) insist that, although authoritarian regimes with multiple parties and competitive elections existed before, competitive authoritarian regimes is a completely new phenomenon which emerged in the early 1990s, when, after collapse of the Soviet Union, the Western pressure to democratize became really strong and forced many non-democratic regimes to make elections more competitive and more meaningful for the opposition to keep the West satisfied – while at the same time finding ways to make sure they still can manipulate electoral outcomes well enough to stay in power. According to them, Western leverage and links to the West is the key explanatory factor why some authoritarian regimes eventually have to democratize and why even higher number of non-democratic regimes have been forced to maintain the democratic facade after the end of the Cold War. The concepts of Western leverage and links to the West are, probably, the most significant contributions of Levitsky & Way to the studies of political regimes)

Morlino (2008, 2009) has a somewhat different look on the concept of hybrid regimes. Unlike Levitsky & Way (2010), he explicitly qualifies these regimes as "hybrid", defining them as regimes which have some institutions and procedures of democracy and not others, while at the same time maintaining or acquiring some

autocratic feautures. In other words, hybrid regimes are defined in Morlino (2008) as the regimes which do not have essential attributes to meet a minimal definition of democracy or as a minimal definition of autocracy but has some features of both democracy and autocracy. By minimal definition of democracy, Morlino (2008) means a procedural definition, virtually identical to the one which I provided above of this Chapter. By minimal definition of autocracy, Morlino means a definition by Linz (2003), meaning a regime with the following properties: limited and irresponsible pluralism, discouraging participation, and absence of clear ideology[35]. According to Morlino (2009), hybrid regimes are always a result of "corruption" of pure regime types, in a sense that these regimes are either authoritarian/traditional regimes which lost some autocratic/traditionalist features (e.g. relaxed restrictions on political pluralism or mobilization) or democracies which lost some democratic features (e.g. experienced the intervention from the military or other autocratic veto players who imposed restrictions on electoral competitions).

Morlino (2008, 2009) further classifies hybrid regimes into three types. The first type is labeled a "protected democracy", which means a regime in which a powerful autocratic veto player external to the electoral process (such as the monarch, the military, or the foreign power) puts the limits to electoral competition by, for example, banning certain parties from participating in elections. The second one is called a "limited democracy", in which supreme power is acquired by a formally correct electoral procedure with electoral competition but in which civil rights are not guaranteed, the media is monopolized by the incumbent, and there is no real party-level opposition. A third concept is a "democracy without law" (Morlino 2008), or "democracy without state" (Morlino 2009), which is a regime in which the state does not have capacity to guarantee either either free and fair electoral process or basic civil rights. The definition of "limited democracy" by Morlino (2008, 2009) is the closest to the defintion of "competitive authoritarianism" by Levistky and Way (2010). The definition of "competitive authoitarianism" by Levitsky and Way explicitly excludes regimes in which the incumbent is not elected (such as monarchies), in which the elected officials are heavily influenced by non-elected actors such as the military, and in which frequent violations of civil rights coexist with genuinely competitive elections with no evidence of uneven playing field or electoral fraud. In other words, the definition of "competitve authoritarianism" excludes both "protected democracies" and "democracies without law" as defined by Morlino (2008).

[35]Morlino also follows Linz (2003) in distinguishing traditional regimes like monarchies or sultanistic regimes; more on Linz's typology below in this Chapter

Definition of a hybrid regime in Diamond (2002) is also close to Morlino (2007, 2008): Diamond (2003) defines hybrid regimes as regimes combining democratic and authoritarian elements, so, it is not discussed in details.

Both the definition of competitive authoritarianism by Levitsky & Way (2010) and the definition of hybrid regimes by Diamond (2003) and Morlino (2008, 2009) deserve praise for capturing the important transformations that non-democratic regimes have undergone since the early 1990s. It is undoubtedly true that an increasing number of non-democratic regimes now have mutliparty elections and allow a substantial degree of political pluralism. Nevertheless, there are several reasons why I chose not to use these concepts in this projects.

Firstly, the difference between pure authoritarian regimes and hybrid (or competitive authoritarian) regimes as far as it concerns the way the power is acquired does not seem fundamental. Both in "classical" non-democratic regimes of the 1970s and in modern non-democracies, which are labeled as "hybrid" or "competitive authoitarian" the supreme power is not acquired by means of elections. The only difference between the two is is that in most regimes that are defined by Levitsky & Way (2010) as competitive authoritarian or defined by Diamond (2003) or Morlino (2008,2009) as hybrid, the dictator or the ruling group allow the opposition to gain more votes in the election, or even to win elections of secondary importance (local elections or national parliamentary elections in countries with superpresidentialist constitutions, i.e. in which the formal powers of the parliament are so weak that it cannot really endanger presidential power), to co-opt them or to make some concessions to them in a peaceful way, so that the opposition loses incentives to rebel. Whether it is necessary to allow opposition to gain 10% of seats or 49% of seats (or even more than half of votes in non-important elections) to accomplish this goal is, in my point of view, only a question of strategy chosed by the dictator or the ruling group rather than a defining feature of the regime. Thus, it seem unreasonable to exclude these regimes from a sample of autocracies or to treat these regimes separately from "classical" autocracies.

Secondly, both concepts include some regimes in which the alternation of power via elections is actually possible, on the basis of the fact that these regimes do not perfectly correspond to the definition of democracy. For example, Levitsky and Way (2010) classify Georgia after the "revolution of roses" of 2003 as a competitive authoritarian, even though the party of Mikheil Saakashvili, who became president

in 2005, lost elections in 2012, and a candidate of his party lost presidential elections one year later and acknowledge his defeat. The reason why Levitsky and Way (2010) included Georgia in their sample was harrasment against journalists in before parliamentary elections in 2004 and closure of some TV stations during 2007 state of emergency. Likewise, many countries which Morlino (2008, 2009) included in the category of "democracies without law" or "democracies without a state" (which are part of his category of hybrid regimes) actually have regular alternation of power, such as Albania, in which Socialist Party and Democratic Party alternate in power every two electoral cycles, pretty much as frequently as it happens in most advanced Western democracy. The basis for including these countries in hybrid regimes is widespread violation of civil liberties due to the weakness of the state.

Speaking about Levitsky & Way's classification, it seems debatable that regimes in which the incumbent cannot guarantee the outcome of electoral procedure can be called authoritarian, since, strictly following procedural definition of democracy, a regime in which elections matter for acquiring and losing power is democratic, even if it does not fully posess all the features which are present in advanced democracies. In essence, if the incumbent does not control the electoral outcome with certainty, the regime cannot be defined authoritarian, as elections remain a means of aquiring and losing power.

It is natural for many incumbents (including the ones in democracies) to try to stay in power as long as possible, and to use their incumbent position to get an unfair advantage; however, not every leader which does that actually manages to transform institutions in a way that makes him or her fully immune from electoral challenges. For example, Silvio Berlusconi, former prime minister of Italy, directly or indirectly controlled around 90% of Italian private media market via ownership and via state-owned media outlets and intimidated independent journalists using defamation laws during 2000s (Freedom House 2013); yet it did not prevent his electoral failure in 2006 and his final resignation in 2011. Another example of skewed playing field is the U. S., which has a problem of partisan gerrymandering and of exclusion of racial minorities from electoral process up to the present day. Actually, the first studies on electoral fraud originated on the U. S. data and only then were applied to non-democracies. The main issue about the U. S. elections, extensively studied in the literature, is different legal mechanisms of excluding Black and other minority voters from electoral process. Since members of these groups predominantly vote for the Democrats, these mechanisms benefit the Republican party[36]. If one strictly

[36]For example, see Behrens et al. (2003), who claimed that laws restricting felons' right to vote

follows the codebook of Levitsky & Way (2010), Berlusconi's Italy and the U. S. at present times should be treated as competitive authoritarian regimes rather than democracies, as, in both cases, the playing field was (or is) skewed. This way, too many countries (even the ones which are undoubtedly democratic, like Italy or the U.S.) in which alternation of power via elections is possible have to be considered competitive authoritarian only because they do not fully correspond to the ideal type of democracy. It is possible to use criteria of Levitsky and Way's criteria to capture *attempts* of democratic leaders to dismantle democracy and to become dictators. However, not every democratic leader which attempts to become a dictator actually manages to become one; transition from a democracy to an authoritarian regime can be considered complete only when elections finally lose their function as a means of acquiring and losing power.

Turning to classification by Morlino (2008, 2009), and, in particular, to his category of "democracy without a law" within the category of hybrid regimes, it seems debatable that a country with a regular alternation of power should be labeled as a non-democracy only due to the lack of law enforcement, in spite of presence of regular alternation of power (as in case of Albania). Including respect for civil rights in a definition of democracy (explicitly or implicitly) makes an a priori assumption about good performance of democracy, which departs from a purely procedural definition of democracy. This is justifiable in other studies, for example, in studies focusing on the quality of democracy; these studies may require a higher threshold for democracy than a purely procedural, minimalist definition. However, in this study, selecting countries for empirical analysis based on respect for civil liberties in these countries (which is strongly related to the concept of the rule of law) would mean selecting my cases on the dependent variable, which would lead to endogeneity problem and thus bias the results of the study.

b) Indices of democracy and their criticism

Many scholars that attempt to take into account the impact of political regime generally rely on some indices of democracy. These indices seem to be a convenient way to operationalize political regime as a continuous variable, ranging from the most autocratic to the most democratic. They also generally provide scholars with a shortcut to assess the role of political regime as a background control variable.

were passed predominantly in areas with large minority population

It is virtually impossible to list all scientific publications which use indices of democracy, as there are hundreds, if not thousands of them. Here, I only provide examples of several prominent works using democracy indices: Genschel et al. (2016) use Polity IV index to study the relation between political regime, country size, and corporate taxation; Knack (2004) uses Freedom House and Polity IV indexes to study the impact of foreign aid on democratization; Chowdhury (2004) use Freedom House indexes ("Freedom in the world" and "Freedom of press") to study the impact of democracy and press freedom on corruption; De Haan & Strum (2003) use Freedom House index to study the impact of democracy on economic freedom; Davenport & Armstrong (2006) use Polity IV and Tatu Vanhanen indices to study the impact of democracy on the level of repression.

In spite of their popularity among scholars, these indices are not used in the current project present some problems that make them not appropriate for the purposes of this analysis. In what follows, I present a general argument against using indices to operationalize a political regime and then put forward more specific critique of the most popular indices: Polity IV, Freedom House, Voice and Accountability, and Tatu Vanhanen's index.

General argument

A general argument against the use of any indices in the current project is the following. A minimalist, procedural definition of democracy that is used in the current work is in contradiction with the idea of a continuum between democracy and autocracy, which is an underlying idea behind indices of democracy. According to the definition here employed, democracy is a regime in which the power is acquired and lost by means of competitive elections. Thus, in any given regime, the power is acquired either by means of competitive elections (which means it is a democracy) or by any other means (than it is not). If one accepts the minimalist, procedural definitions of democracy, a "middle ground" is not logically possible.

By this, I do not mean that distinguishing *empirically* between democracies and non-democracies is always easy and unambiguous. Sometimes, a slide towards authoritarianism is slow and gradual, and it is hard to identify when a flawed democracy finally turns into an authoritarian regime. For example, in their codebook, Geddes et al. (2014) acknowledge the difficulties in ascertaining when the regime of Hugo Chàvez in Venezuela crossed a line between a flawed democracy and electoral authoritarianism. Hugo Chàvez started to consolidate his power since the very

beginning of his presidential term in 1998: he proposed a new Constitution which increased presidential power and allowed him to remove public officials at will, and had it approved by the referendum in December 1999. He managed to win his next presidential term also in 2001. In 2004, the opposition, which has been accusing Chàvez of authoritarian tendencies for long, manage to collect enough signatures to conduct a referendum on Chàvez's recall – which Chàvez also won, and, according to independent observers, overall, that referendum was still relatively fair. Later on, Chavists managed to get rid of any judiciary independence, and thousands of people among those who signed the petition for the recall referendum lost their jobs, and next parliamentary elections of 2005 were boycotted by the opposition, because the authorities could use the fingerprinting machines for voter registration to identify and then to punish those who voted for the opposition (Geddes et al. 2014). In light of this trajectory, Geddes et al. (2014) consider early 2005 as the end of democracy and beginning of a new autocratic regime. Similarly, slow autocratization can be observed in Hungary (Bozoki 2011, Agh 2016) in Turkey (Toktamis & David 2018) during 2010s. In both cases, it is hard to identify whether the regime in both countries is still democratic or already autocratic, and, if it is autocratic, when the line between democracy and autocracy was crossed. However, empirical difficulties of distinguishing between democracies and autocracies are not a good reason to blur a theoretical distinction between democracies and autocracies.

Applying the ideas of Sartori (1970), there is a difference *in kind*between democracies and autocracies; these two types of regimes are conceptually different. The meaningful comparison of *degree* may be made only among the units of the same *kind*. A given authoritarian regime may have a parliament and multi-party elections but that does not make it more democratic: survival of the dictator does not depend on these elections as they are always manipulated in a way to make sure the incumbent always wins (even if there is no obvious electoral fraud or obvious coercion on electoral day)[37] or the formal powers of elected institutions is so insignificant that the dictator is not threatened even if the electoral outcome is negative[38]. Furthermore, as previously discussed, the mere purpose of these institutions in authoritarian regimes is different from their purpose in democratic ones. While in democracies parliaments legislate, parties compete for power and elections serve to choose a new leadership, in authoritarian regimes all these institutions

[37] On the variety of ways in which the incumbent can manipulate electoral process in order to stay in power, see Schedler 2002

[38] The most obvious examples are monarchies in Morocco or Jordan, in which the king does not even need to manipulate elections, as the supreme executive power, both formally and substantially, belongs to the king who is unelected.

simply allow the dictator to co-opt potential opposition or to make some concessions to it without putting their power at risk. Parliament, parties, and elections just make authoritarian regimes more institutionalized and perhaps more inclusive but not less authoritarian[39]. Thus, it seems inappropriate to apply the same operationalization and measurements to some properties of authoritarian and democratic institutions in spite of the fact that they have the same name in democracies and autocracies. In spite of the fact that many autocracies, have institutions which are called parliaments, parties, and elections, authoritarian parliaments do not legislate, authoritarian parties are not created to pursue electoral victory, and authoritarian elections do not serve as a means of leadership selection[40].

It could be argued that, in spite of this fundamental problem, certain indices of democracy can still be applied for practical purposes, also because it is normally believed that in quantitative research, in is more convenient to use continuous variables rather than typologies, as typologies are assumed to be less informative than scale variables and to be more problematic in terms of statistical analysis (Gill 2006, Salkind 2007, Stevens 1946, Young 1981, cit. in Collier et al. 2012). It can be also argued that, empirically, democracies consistently have higher values of indices of democracy than autocracies, and it is possible to empirically distinguish between the two by establishing a certain threshold for these indices. To show that this is also not the case, I further overview several most popular indices of democracy and demonstrate that they are not suitable for the purposes of this research.

Polity IV index

Polity IV index (Marshall et al. 2017) operationalizes institutional features of political regimes, both autocratic and democratic. The authors of the index distinguish between two ideal types of polities, one of which is institutionalized democracy and another one is institutionalized autocracy. According to them, the institutionalist features of a mature, internally coherent democracy are: 1) unrestricted and competitive political participation; 2) elective executive recruitment, 3) substantial constraints on on chief executive. Institutionalist features of a mature, internally coherent autocracies are: 1) sharply restricted political participation, 2) selection of a chief executive by a regularized process by the political elite, 3) few institutional

[39] For further discussion on why higher institutionalization does not make an authoritarian regime more democratic, see conclusions of Gandhi (2008a)

[40] This is not to say that that these institutions are meaningless; quite the contrary, the idea that formal authoritarian institutions are very important for dictators in precisely the core of theoretical framework by Gandhi and Przeworski. However, the meaning of these institutions in autocracies *differs* from the one in democracies.

constraints on chief executive. Then, they operationalize these features of institutionalized democracy and institutionalized autocracy according to these criteria, and obtain a democracy score and an autocracy score for a given country. Each score is an 11-point scale (0-10), as a sum of scores for each characteristic of institutionalized democracy and institutionalized autocracy. A final Polity IV index is obtained by subtracting autocracy score from democracy score.

According to the theory that Marshall et al. (2017) use, which goes back to Eikstein and Gurr (1975, cit. in Marshall et al. 2017), a given polity can be characterized by mixed patterns of authority and can combine both autocratic and democratic features. They found out, based on the original dataset which included country-years from 1800 to 1971 that internally coherent democracies and autocracies are more durable than regimes which combine autocratic and democratic features.

Policy IV score could be potentially considered as the measure of institutional openness of a given regime because it is constructed by assessing the institutional features of political regimes. However, the problem is that this index bunches together several theoretically distinct dimensions of political institutions. This is a problem of most indices, which was critically pointed out by Schmitter (2015). The authors of the index warn its users that summing up democracy and autocracy score violates the original idea of Eikstein and Gurr and should be done with caution (which is rarely taken into account by scholars who are using this index). However, even if I used only autocracy score, the problem still remains: restricted political participation and constraints on chief executive (which are two of the indicators included in the autocracy score) are theoretically very distinct, as follows from the theories of autocracy reviewed above: a regime with few institutional constraints for a chief executive can at the same time allow for more political participation than a regime with more institutional constraints. For example, one can compare any single-party regime without multiparty elections, like the Soviet Union or contemporary China, with any personalist regime with multiparty elections, like contemporary Russia (as of 2019). The former allow for less political participation than the latter, however, the former ones also effectively constrain a chief executive more, in a formal or an informal way. It is not entirely meaningful to combine two indicators of theoretically and empirically different dimensions in one index, especially given the fact that variety of authoritarian institutions is the main focus of the current project.

Freedom House index and Voice and Accountability index

Two other popular operationalizations of political regime frequently used by scholars are "Freedom of the world" index by "Freedom House" (further, FH index) and "Voice and Accountability" index by the World Bank.

FH index is an average of two indices, namely, the index of political rights and the index of civil liberties. Political rights score includes evaluation of: 1) electoral process, 2) political pluralism and participation 3) functioning of the government (dependence on elected bodies, corruption, accountability between elections). Civil liberties index includes evaluation of: 1) freedom of expression and belief, 2) associational and organizational rights, 3) rule of law, 4) personal autonomy and individual rights[41]. Assessment is done through expert evaluation. The methodology description states that this index is based on the Universal Declaration of Human Rights, adopted by the UN General Assembly in 1948.

The most evident reason for not using the index is that it includes assessment of the rule of law, which is the dependent variable this research is dealing with. Hence, using this index could cause endogeneity problem. However, this endogeneity could have been potentially avoided if I used only political rights score, which does not directly includes the rule of law.

A more fundamental reason not to use a Freedom House index is that it essentially operationalizes not the regime itself but rather some properties which may or may not be present in a given authoritarian regime[42]. Namely, political rights score operationalizes fairness of electoral process, a possibility of opposition to participate in the elections and the degree to which the government is accountable to elected bodies while civil liberties score operationalizes the degree of repressiveness of a given regime. The problem is that electoral fraud, severe restriction on activity of political opposition, and repressiveness are not obligatory features of authoritarian regimes. They are indeed present in many if them, but in some authoritarian regimes opposition is allowed to participate in elections or sometimes even to win some elections, and the government does not imprison anyone for political activity – for a simple reason that these dictatorships have subtler strategies to ensure their survival in power.

[41] A full description of methodology is available here: https://freedomhouse.org/report/freedom-world-2016/methodology

[42] Even the authors of the index themselves do not claim that their index operationalizes democracy: it captures *political rights* and *civil liberties*.

At the same time, in some democracies, the government may be corrupt, elections may not be entirely fair (for example, there may be partisan gerrymandering or there may be some ways to suppress the vote or marginalized groups, like in the U.S.), or some civil liberties may be restricted or violated – which does not influence a regular alternation of power in the country.

This is not a merely theoretical problem. In some cases, using FH index does not allow to distinguish between benevolent, non-repressive autocracies from problematic, unstable democracies, as both receive the same or similar FH score.

To give an example, the fact that Singapore has a FH score of 4.5 in 2010 does not make it more democratic than Nigeria with the FH score of 4.5 at the same year. Singapore is a stable authoritarian regime (coded by Geddes as single-party) since its independence declaration in 1965 with a continuous domination of its Popular Action Party (PAP), which, although does not violently repress political opponents and does not engage in electoral fraud, finds a way to put pressure on political opponents by defamation lawsuits, tight media control, gerrymandering, clientelism, and other non-repressive means. For example, in his memories, Lee Kuan Yew acknowledged himself that, during his electoral campaigns, he made it clear that the order of renovation of different parts of the city would depend on the share of votes the ruling party would get in the elections (Lee Kuan Yew 2000). In contrast, Nigeria since 1999 has been having reasonably free and fair competitive elections, although there have been numerous problems related mostly to rebel violence. A use of FH score does not allow to make a clear-cut distinction in such cases, which makes it unsuitable for distinguishing between democracies and non-democracies in a general case[43].

As for the "Voice and Accountability" index by the World Bank, similar problems can be identified. According to the codebook, "voice and accountability captures perceptions of the extent to which a country's citizens are able to participate in selecting their government, as well as freedom of expression, freedom of association, and a free media"[44], which is very close to the definition of FH political rights and civil liberties indices. Moreover, "Voice and Accountability" index is composed of several indications, among which there are also the two indices of Freedom House. Thus, the empirical and theoretical problems raised with regards to Freedom House

[43] To be fair to "Freedom House", they make it clear in the methodology description that their indices operationalize a state of political rights and civil liberties rather than political regime types

[44] A full list of indicators used to compose Voice and Accounabiliry index can be found here: http://info.worldbank.org/governance/wgi/pdf/va.pdf

indices hold equally for the World Bank index on Voice and Accountability.

Tatu Vanhanen index of democratization

Another index quite frequently used to operationalize democracy/autocracy (though less frequently than Polity IV and Freedom House indices) is Tatu Vanhanen index (Vanhanen 1993, 2000). The index is simply a multiplication of two shares: a share of seats obtained by non-incumbent party (or, for presidential elections, share of votes obtained by non-winning candidates) on the last national elections, which represent competition and a share of population which actually participated in the last elections, which represents participation. If there are presidential elections alongside with parliamentary ones, the average scores between the latest elections of these two types is calculated. If a de facto head of state is not elected and a parliament is elected (like in dualist monarchies or like in Iran where a head of state is an ayatollah, who is elected not by a popular vote but by an expert council, which is itself not elected), competition and participation score for executive election are set to 0, and are averaged with competition and participation score for parliamentary elections. Alliances of parties are coded as one unit. Multiplication of two shares, rather than summing them up, reflects that both competition and participation are equally necessary for democracy, and that it's not possible to substitute one with the other. Both figures have to be high enough to get a high value of the index. To give an example in a system in which electoral participation is 99% and electoral competition is 1% would get an overall score of 0.0099, which is extremely low even though participation in elections is extremely high.

Tatu Vanhanen also establishes the thresholds of the lowest possible level of competition (0.3), participation (0.1), and the overall index (0.05) below which the country is not considered to be democratic in a given year. All the three numbers must be higher than the threshold levels for a country to be considered democratic in a given year.

The index reflects the classification of political regimes by Dahl (1971) who classified political regimes by the degree of participation and competition, and described different modes of democratic transition based on whether increasing competition precedes increasing participation or the other way around. He argued that, historically, the most successful democratic transitions started with increasing competition (legalization of political opposition in the parliament) followed by increasing participation (extension of voting rights), which is exactly how it happened in the U.K.

or the U.S.

The advantage of Tatu Vanhanen index is that it is extremely parsimonious and relatively easy to construct, and, for this reason, a dataset for this index covers the time period for almost all countries in the world since 1800. It also lacks disadvantages associated with expert evaluation as both competition and participation are measured objectively, based on the official electoral results and the population data. Also, Vanhanen's index has more solid theoretical grounds than other indices such as Freedom House score, as it operationalizes theoretical dimensions of democracy introduced by Roald Dahl.

However, the same way as FH or Polity IV index, Tatu Vanhanen index has a number of problems.

While higher electoral turnout and having multiple parties do make an authoritarian regime more institutionalized, it does not make it more democratic: even with comparatively low electoral results for the incumbent party the dictator is not threatened, as he has multiple ways to ensure his power even without an overwhelming parliamentary majority, or even without a parliamentary majority at all. For example, in Venezuela a pro-presidential party lost parliamentary elections in 2015 – which does not prevent Nicolás Maduro, the current president, from staying in power, repressing his political opponents, and using lethal violence against people protesting against him since 2015 up to now, as he still can rely on loyal police and military forces (as of 2019). The same could be said about Russia since 1993: pro-presidential parties were gaining just around 15% of seats during parliamentary elections of 1993, 1995, and 1999[45] (14.4%, 12.2% and 16.2% of seats respectively). The presidential elections of 1996 were won by Yeltsin during the second round by a small margin. For this reason, the Tatu Vanhanen index scores for Russia for these years are just high as (if not higher than) in advanced democracies. Yet neither Geddes et al. (2014), nor Przeworski (2000) or Cheibub et al. (2010) consider Yeltsin's Russia as a democracy in their datasets, and for valid reasons: as it was mentioned in Chapter I, Boris Yeltsin used armed forces to resolve his conflict with the previous parliament (the Supreme Council), enforced a new Constitution with significantly extended presidential powers, and heavily skewed the electoral process for 1996 presidential elections, which allowed him to win in spite of having single-digit figures of public support in 1995. Yeltsin himself in his memories wrote that,

[45] Parties "Vybor Rossii" ("Russian Choice"), "Nash Dom Rossiya" ("Our home is Russia") and "Yedinstvo" ("Unity") for 1993, 1995 and 1999 elections respectively.

in 1995, he had already prepared decrees to ban the Communist party (the party of the main contender), to introduce a state of national emergency and to postpone presidential elections for two years. He then reconsidered, and elections were held as scheduled; however, he stated in his memories that failure was unacceptable for him (Yeltsin 2000). These elections were marked by enormous incumbent advantage in media coverage and campaign finance (OSCE 1996); also Myagkov (2008) found also quantitative evidence of direct electoral fraud in some regions.

The same way, the fact that in some democratic countries the electoral system leads to domination on two parties (like in the U.K. or the U.S.), and, thus, to comparatively lower score of competition does not make them less democratic: the U.K. and the U.S. are characterized by regular alternation of power, and no incumbent can control electoral outcomes with certainty[46]. Vanhanen tries to correct this bias by establishing a maximal level of competition of 0.7 but this solution looks like an ad hoc one, without a valid theoretical justification (as well as the thresholds for democracy themselves).

In practice, it leads to similar scores for some autocratic and some democratic regimes, namely, to similar scores for democratic countries with majoritarian electoral systems and authoritarian countries with multi-party elections. To continue above-mentioned examples, Russia in 2002 had a value of democratization index of 29.4% - even higher than the same value for Britain in 2002, which was 26.6%[47]. In other words, applying Tatu Vanhanen index can lead to even more obvious mistakes in distinguishing between democracies and autocracies than Freedom House or Polity IV.

Conclusion

In short, there are substantive reasons to justify my choice not to use indices of democracy for the purposes of this work. The most important of these reasons that is my theoretical starting point is a clear conceptual distinction between democracies and autocracies. This conceptualization contradicts the idea of a scale between democracy and autocracy, which is an underlying assumption behind any index of democracy. There are also practical reasons not to rely on these indices in this thesis: the indices reviewed above fail to operationalize the difference between

[46]It is true that gerrymandering as a means of ensuring electoral victory is pretty common in the US on the state and local level. However, in spite of the fact that this practice obviously goes against democratic principles and indicates low quality of American democracy, it does not prevent alternation of power in the U.S. at least on the federal level.

[47]Vanhanen's Index of Democracy, URL:https://www.prio.org/Data/Governance/Vanhanens-index-of-democracy/

authoritarian institutions in a way which would be useful for the purposes of this project. Moreover, in some cases, the use of these indices is misleading even for a purpose of distinguishing between democracies and autocracies.

c) Arguments against typology of Juan Linz

Finally it is necessary to discuss why a famous distinction between totalitarian and authoritarian regimes introduced by Juan Linz (1975, 2001) is not used here.

Linz argued that there was a fundamental difference between two types of non-democratic rule, one of which he labeled as totalitarian and another one as authoritarian. According to him, a totalitarian regime is the one which is characterized by the following central features: 1) monistic center of power (the leader and his closest collaborators); 2) a well-elaborated exclusive ideology which serves as a basis and as legitimation of policies; 3) citizen participation and active mobilization in regime support is encouraged and even demanded. The latter characteristic, paradoxically, brings totalitarian regimes closer to democracies than to non-totalitarian autocracies, as political participation and mobilization is something which is normally associated with democracies. The difference, however, is that in totalitarian systems all political participation and mobilization is set by one center as has only one possible purpose and direction (meaning that participate in politics only exclusively in support of the regime).

From the three main features of totalitarian systems mentioned above, all the others, are derived: importance of education and culture (as ways for the ruling group to indoctrinate people and get them engaged in political participation, in a desired way); elitism (as a distinction between the people who are actively engaged in elaborating and maintaining the state ideology and all the others); a special role of a single party, which penetrates society (as a tool to encourage and demand political participation and mobilization by the people); quite often, terror, especially within the elites (due to ideological commitment within the political elite, due to their desire for monopolistic control and a fear of losing power); cult of the leader. However, the last two features, according to Linz, are not essential for totalitarian regimes but rather are present more frequently then not. What is crucial is that for totalitarian regimes passive obedience of the citizens is considered undesirable, and their active role in maintaining the regime is required.

Authoritarian regimes, according to Linz, are distinguished by almost the opposite features: 1) limited, irresponsible pluralism, 2) absence of clear ideology, 3)

absence or deliberate discouragement of political participation and mobilization. Irresponsible pluralism is defined as a bunch of semi-opposition and pseudo-opposition groups which are engaged in a partial criticism of the regime but which are not willing to participate in power and never fundamentally challenge the regime; their existence is tolerated by the regime. Participation in this type of regime is discouraged because popular engagement in politics without a totalitarian control over all structures of society does not strengthen the regime but rather endangers it.

Linz further distinguishes between multiple types of authoritarian rule: 1) bureaucratic-military authoritarianism (mostly, military regimes like in Latin America in 1970s), 2) organic statism (civilian neocorporatist regimes like the one of Juan Peron in Argentina), 3) mobilizational post-democratic authoritarian regimes, 4) postindependence mobilizational authoritarian regimes, 5) racial and ethnic "democracies" (South Africa during apartheid), 6) pretotalitarian regimes, 7) posttotalitarian regimes.

Linz excludes from these typology the regimes which are based on traditional legitimacy (monarchies) and the ones based on unconstrained authority of one person, not bound by any ideology or bureaucratic organization, who rules by redistributing rewards and punishments, and who use their power for private enrichment (these regimes are labeled bs Linz as "sultanistic"). The reason for exclusion of these regimes from the typology is that, according to him, both of them of them are close to impossible in advanced industrialized societies.

Linz combines all of his political regime types in a typology which has three dimensions (degree of ideologization, degree of mobilization, degree of pluralism).

Linz's typology have been very influential in political science and have been useful in classifying non-democratic regimes before the 1990s. Linz's typology also highlighted the fundamental difference between regimes like Nazi Germany or the U.S.S.R. during Stalin's rule on the one hand and regimes like Latin American military dictatorships on the other, showing that, in the former, the degree of state control over society was much higher than in the latter. However, several objections can be raized against the usage of Linz' typologies in this project.

First of all, there are empirical reasons not to use this classification. For the time period under study, a category of totalitarian regimes has almost zero empirical content: the only currently existing political regime which can be classified

as truly totalitarian is probably North Korea. The same can be said about some sub-types of authoritarian regimes, such as racial democracy (do not exist since the apartheid regime in South Africa was abolished), post-independence mobilizational authoritarian regimes (the ones which were established after decolonization do not exist any longer), and possibly also other types. A typology where some of the categories have zero or close to zero empirical content cannot be considered useful, especially in a quantitative study in which no conclusions can be drawn from 1-2 cases. Linz's typology is useful to classify non-democratic regimes which existed in 1930s-1970s but it seems much less useful for the universe of non-democracies since 1990s onwards.

Second, Linz's sub-types of authoritarian regimes does not seem to be based on clearly defined dimensions: although four dimensions of authoritarian rule are indicated by Linz (degree of pluralism, degree of participation, degree of ideologization and degree of constitutionalism),his classification of authorirarian regimes is not based on these dimensions. Rather, his types of authoritarian regimes were first inductively elaborated from the regimes that existed in times when the book was written and only then classified according to the dimensions. Only distinction between totalitarian and authoritarian regimes is theoretically unambiguous and directly applicable empirically. Problems of classification criteria used by Linz for distinguishing between sub-types of authoritarian regimes was pointed out by some prominent scholars, including Magaloni (2008).

Dichotomous definitions of democracy and autocracy

After having explained some conceptual decisions regarding the operationalizations of regime types, it is possible to turn to the more detailed analysis of the definitions of democracy which are consistent with my theoretical starting point. Namely, these conceptualizations should define democracy and autocracy in procedural terms and distinguish between them in a dichotomous way. I identified two definitions which fulfill these criteria: one of these definitions is provided by Adam Przeworski and another one is elaborated by Barbara Geddes. The one advocated by Adam Przeworski, is more parsimonious and another, implemented by Barbara Geddes, is more nuanced.

Adam Przeworski and his followers (such as Cheibub et al. 2010 who expanded the democracy dataset constructed in Przeworski et al. 2000) define democracies as

regimes in which incumbents lose elections, meaning that they cannot manipulate the chances of candidates in the elections ex ante or avert electoral results ex post. For them, the only proof that in a given political regime an incumbent can lose election is a situation in which the incumbent actually loses them under current rules. Basically, any regime is a priori treated as non-democratic until proven otherwise, by the actual alternation of power under given institutions[48]. The advantages of this definition is that it is consistent with the minimalist procedural definition of democracy, and it has a clear and observable criterion of distinguishing between democracies and non-democracies.

Geddes et al. (2014) have a slightly different approach. They accept the definition of democracy as a political regime in which the power is acquired and lost by means of competitive elections. Their distinction between democracies and non-democracies is also essentially dichotomous: they do not use any notion of "degree" of democracy in their typology or any indices, nor do they accept the concept of hybrid regimes (see the critique of this concept in Geddes 2006).

However, they define an authoritarian regime not just as anything different from democracy (procedurally defined) but as a set of formal and informal rules that identify the group from which leaders can come and determine who influences leadership choice and policy (Geddes et al. 2014), in other words, as a set of institutions. While in Przeworski's definition, the focus is on democracy (and autocracy is a residual category), in Geddes' definition, the focus is on autocracy (and democracy is one of the residual categories among others).

Defining autocracy as a set of institutions has the following implications. First, the definition of Geddes excludes the situations (country-years) in which there are no domestic rule in a country at all (and, thus, no "regime"): foreign occupation, anarchy, non-independence (colonial status). It also excludes provisional governments aimed at ruling the country during democratic transit. Second, it allows to capture not only autocracy-to-democracy and democracy-to-autocracy transformations but also autocracy-to-autocracy ones in which a country does not become democratic but formal and informal institutions of leadership selection and policymaking change. Following their definition, Geddes et al. (2014) define a set of

[48] More specifically, "a regime is a dictatorship if it fails to meet at least one of the following four rules: (1) the chief executive must be elected; (2) the legislature must be elected; (3) there must be more than one political party competing in elections; and (4) an alternation in power must have taken place" (Przeworski et al. 2000, cit. in Gandhi 2008).

situations which are coded as the start and the end of the regime[49]. With the use of Przeworski's definition, it is possible to capture only transitions from autocracy to democracy and backwards.

Compared to Przeworski et al. (2000, 2013) or Cheibub et al. (2010), Geddes does not use the alternation rule (the rule which count the alternation of power as the only proof of democratic character of the regime), preferring instead the reports of electoral observers to identify whether given elections were reasonably free and fair. If this was the case, the regime is coded as democratic (at least till next elections or till another event which made it impossible for the opposition to regain power) even if the actual alternation of power did not happen. This is a "softer" criterion for distinguishing between democracies and non-democracies, and more demanding in terms of the information needed to apply it; however, it takes context into account better than Przeworski's definition, which may improve accuracy of coding. To give an example, a strict application of alternation rule made Cheibub et al. (2013) code South Africa after the fall of apartheid as non-democracy, simply due to the fact that African National Congress, the party of Nelson Mandela which keeps governing the country since 1994. Considering South Africa as a non-democracy is surprising since there is no other evidence that elections in South Africa since 1994 has been fraudulent in any way or that other parties are excluded from electoral competition or suffer from systematic disadvantages. Geddes et al. (2014) code post-apartheid South Africa as a democracy, which seems to be more accurate.

There are a lot of democracies with the dominant party systems in which the dominant party rarely loses power. For example, Swedish political system is dominated by Social Democrats, Japan is dominated by Liberal-Democratic Party, and India was dominated for many decades by Indian National Congress. If one observed these countries in periods between the establishment of the current political institutions and the first defeat of the dominant party (for example, Japan between 1955 and 1993, India between 1947 and 1977, or Sweden between 1932 and 1976) and applied Przeworski's criteria, one would wrongfully consider these countries as autocratic[50].

[49] An authoritarian regime is considered established if the power 1) is acquired by non-democratic means (meaning reasonably free and fair elections), 2) acquired by democratic means but then the rules are changed in a way to limit the electoral competition, 3) acquired during elections in which the military prevented one or more parties from participation or dictated the policy choices in important areas. An authoritarian regime in considered collapsed if 1) a non-incumbent wins competitive elections and takes power, 2) incumbent is ousted violently, and the regime (defined again as a set of institutions) changes, 3) the ruling group itself significantly changes the rules of leader selection or constraints on the leader (Geddes et al. 2014).

[50] In the actual dataset by Cheibub et al. (2013), Sweden, Japan, and India are coded as demo-

For these reasons, in this project, I choose to use Geddes et al. (2014) approach in distinguishing between democracies and autocracies rather than the approach by Przewoski et al. (2010) and Cheibub et al. (2013). In practice, though, the implementation of the two approaches gives almost identical results in terms of distinguishing between democracies and non-democracies, with very limited disagreement about certain country-years (the data provided by Cheibub et al. (2013) tends to code slightly more country-years as autocratic). Thus, a choice between the two operationalizations of autocracy should is unlikely to make a difference for the results of the analysis.

Coding of formal and informal authoritarian institutions

After dealing with the distinction between democracy and autocracy, it is possible to discuss the operationalization of formal and informal authoritarian institutions.

As a basis of my classification of *informal* authoritarian institutions, I will use typology by Barbara Geddes. As discussed in the Chapter I, this typology of informal authoritarian institutions is one of the most influential. Most studies follow Geddes' typology as it is, without recoding it or recoding it in a way which is prescribed by the codebook. However, for the purposes of this study, it seems more reasonable to modify it to make the typology fit the theoretical argument of this work. Below, I explain why and how Geddes' typology is modified for this study.

Since my main argument for why some types of authoritarian regimes perform differently from others is the argument of constraints imposed on the dictator, then, from the point of view of the theory, military and single-party regimes are not theoretically different from each other in this respect – they are both constrained. For the same reason, it does not make sense to make a theoretical distinction between personalist regimes and monarchies – they are both unconstrained[51]. Hybrids which involve a personalist element (regimes coded as party-personalist or military-personalist) are in between fully constrained and fully unconstrained regimes, thus I label them "semi-constrained". This also does not deviate too much from an established literature. Wright (2008) and Wright & Escribà-Folch (2010) in their analysis

cratic at least from mid-XXth century because the dominant party in these countries eventually lost power under the same institutions under which it previously used to win. However, I made this counterfactual to explain how Przeworski's approach can lead to mistakes.

[51] As it has been shown above, military and single-party regimes are dramatically different in terms of longevity and a mode of breakdown. The same goes for personalist regimes and monarchies. However, regime longevity and modes of breakdown are not the focus of the current project.

make a distinction between non-personalist and personalist dictatorships. By non-personalist ones, they understand Geddes' categories of military and single-party regimes while by personalist ones, they understand Geddes' categories of personalist regimes and monarchies.

This recoding is justifiable not only theoretically. From the empirical point of view, monarchies have been rare since mid-XX century (for this reason, in the first version of the dataset, Geddes did not even include them), and military regimes became extremely rare since late 1980s, when all military regimes in Latin America collapsed. For example, in 2010, there have been only 7 monarchies and 2 military regimes in the world, according to the dataset (excluding the countries whose population was less than 1 million people). Given that, using the original Geddes' categories would mean making an inference about military regimes and monarchies based only on a very small sample of countries, and, even if the results for these regimes happen to be statistically significant, they would have been highly unreliable. This warning about inferences on monarchies was explicitly mentioned in Geddes et al. (2014).

As for *formal* authoritarian institutions, it seems more sensible to operationalize them in a way which is similar to existing studies. Formal authoritarian institutions are coded based on Przeworski et al. (2013) dataset "Political Institutions and Political Events" (PIPE). In this dataset, parties are defined simply by their de jure existence and legislatures are defined as bodies which have formal, and solely, legislative power; thus, it excludes juntas[52] (as these bodies combined legislative and executive functions) and consultative councils, even if they are elected, as they don't have formal legislative functions. Based on their data on parliaments and parties, I code any given authoritarian regime as "institutionalized" if 1) there is parliament with multiple parties, 2) there are elections in which voters can choose between at least two parties[53]. It is coded as "non-institutionalized" if there is no legislature and no legal opposition is permitted[54]. Otherwise, it is coded as

[52]There may be some degree of arbitrariness here, since, for example, a Soviet legal doctrine did not acknowledge separation of power and, formally, the Soviets (legislative councils) in socialist countries concentrated both legislative and executive power in their hands; nevertheless, all socialist dictatorship which had Soviets are coded as having a legislature. However, in all socialist countries, there was also a government functioning separately from the Soviets.

[53]Some regimes have parliaments with multiple parties but they all go on elections as a single list, so voters have no choice. Also, in some regimes, a single party (or party block) participates in elections together some independent candidates but other parties or blocks cannot participate. PIPE dataset has a special dummy variable "opposition" to account for that, which indicates whether or not a given political system legally allows for some kind of political pluralism. In these cases, I code a regime as semi-institutionalized.

[54]As Geddes (2006) mentions, occasionally, there have been authoritarian regimes with no legis-

"semi-institutionalized": an example of a semi-institutionalized regime may be contemporary China (present legislature with one party and absence of multiparty elections) or United Arab Emirates (present legislature without parties and only partially elected). This is close to coding used in Gandhi (2008, 2008a), except that in this study, I do not count regimes with multiple parties but with non-competitive elections as fully institutionalized because a situation in which several parties which participate in elections as a single front with a single list is closer to a situation of a single party than it is to the situation of multiple parties. I also do not consider regimes with legislatures but without parties as completely non-institutionalized, as Gandhi (2008, 2008a) does, since legislature, even without parties in it, is also an institution which, at least formally, have legislative power and thus can be regarded as a partial concession to potential rivals of the dictator, compared to the situation when there are no legislature at all. Courts are not considered in the definition of formal institutions as judiciary independence is part of the dependent variable of this study, and the same is the case for economic institutions.

It is necessary to underline that I treat formal and informal authoritarian institutions as mutually exclusive, non-overlapping concepts. Formal institutions are defined based on presence of absence of certain formal bodies and nothing more: even if there are valid reasons to suspect that, in a given country, presence of parties, parlament with multiple parties, and multiparty alternative elections makes absolutely no impact on decision-making (like in Zimbabwe during Mugabe's rule), their formal presence allows to code this regime as institutionalized. Likewise, presence of a legislature and a single party allows to classify North Korea as a semi-instititonalized regime even though, their de facto role may be negligible. In turn, as far as informal institutions are concerned, coding regimes as constrained, semi-constrained or unconstrained is completely independent from presence or absence of parties, parliaments, or elections: for example, the military regime in Myanmar did not have a parliament, parties, or elections for many years, yet it is defined as constrained as in military regimes it is junta which makes decisions rather than just the dictator. At the same time, Russia since 1994 is coded as a personalist regime in spite of having a parliament, multiple parties, and multiparty elections, as neither the ruling party nor the military could constrain Yeltsin or Putin in their decision-making.

lature but with the single party present. However PIPE dataset does not contain a specific variable for de jure existence of parties specifically. In any case, since the early 1990s, these kind of regimes are extremely rare, if at all present.

One can point out that there is an overlap between definitions of formal and informal institutions: it is not possible to have a single-party regime in a situation in which parties are legally prohibited (thus, there cannot be a single-party non-institutionalized regime by definition). If I used Geddes' typology as it is, that would have been a methodological problem. However, in this study, I combine single-party and military regimes into the same category of constrained regimes, for the reasons outlined above, which resolves the problem of overlap between categories: a given authoitarian regime can be constrained (regardless of which body is constraining the dictator) and at the same time lack any legislature, parties, or elections. As demonstrated in Chapter IV, all combinations of formal instititonalization and informal constraints are possible not just theoretically but also empirically.

I can summarize our theoretical framework as following:

1. Formal institutionalization:

    (a) Non-institutionalized regime (no institutions: no legislature, no legal opposition permitted).

    (b) Semi-institutionalized regimes (underdeveloped institutions, such as: and unelected legislature; an elected legislature without parties or with a single party; an elected legislature with multiple parties going as one list so that voters have no choice; an elected legislature in which there is one party in the electoral list with other candidates run as independent).

    (c) Institutionalized regime (fully developed formal institutions, on paper resembling institutions in democracies: legislature with multiple parties and elections in which voters can choose between at least two parties).

2. Informal constraints (original Geddes' types in brackets):

    (a) Unconstrained regimes (regimes in which a dictator's decision-making is not constrained by the ruling group: personalist, monarchy).

    (b) Semi-constrained regimes (regimes in which a ruling group keeps its organizational autonomy but can influence the decision-making only to a limited extent: party-personal, military-personal, party-military-personal).

    (c) Constrained regimes (regimes in which a dictator is constrained and can be replaced by a ruling group: military, indirect military, party, party-military, oligarchy).

In other words, I distinguish between two dimensions of authoritarian institutions: the first one is a *degree of formal institutionalization* of a given autocracy, and the second one is a *degree of informal constraints.* The latter makes the current typology different from the original typology by Geddes et al. (2014), which does not have a single underlying dimension: essentially, their typology has two dimensions, the first being the type of the ruling group (party, military, both party and military, royal family, or dictator's narrow circle), and the second being a degree to which the ruling group is constraining the dictator (which is high in military or single-party regimes, medium in hybrids with a personalist element, and close to zero in personalist regimes and monarchies). Applying the terminology of Collier et al. (2012), their typology can be qualified as "free-floating". According to Collier et al. (2012), some of the most innovative typologies tend to be free-floating, and this kind of typology is widespread in social sciences; however, free-floating typologies can be refined by teasing out the underlying dimensions. In this study, since I am interested only the degree of informal constraints imposed on the dictator and not in the nature of the ruling group, I change this typology to leave only one dimension.

Both dimensions are composed of mutually exclusive and totally exhaustive categories: any possible autocratic regime in any given year belongs to one and only one category based on the level of formal institutionalization or on the level of informal constraints. Moreover, if I intersect the two categories to obtain a 3 by 3 matrix, the resulting types do not contain any combinations which are logically or practically impossible: while some combinations are more frequent than others, none of the cells of this matrix is empty. In a table below, I intersect the two categories and quote an empirical example of each cell[55]:. Those examples clearly show that each cell in the table represents really existing regimes.

[55]For the evidence that none of the cells is empty also for the time period under study, see Chapter IV

Table 2: **Classification of authoritarian regimes based on formal institutionalization and informal constraints**

		Informal constraints		
		Unconstrained	***Semi-constrained***	***Constrained***
Formal institutions	***Non-institutionalized***	Non-institutionalized unconstrained autocracies (Saudi Arabia 1927-present)	Non-institutionalized semi-constrained autocracies (Chile 1974-1989)	Non-institutionalized constrained autocracies (Myanmar 1989 -2000)
	Semi-institutionalized	Semi-institutionalized unconstrained autocracies (Libya 2001-2011)	Semi-institutionalized semi-constrained autocracies (North Korea 1948-present)	Semi-institutionalized constrained autocracy (China 1948-present)
	Institutionalized	Institutionalized unconstrained autocracy (Russia 1994-present)	Institutionalized semi-constrained autocracy (Uzbekistan 1994-present)	Institutionalized constrained autocracy (Singapore 1965-present)

Sources: Geddes et al. (2014), Przeworski et al. (2013), own elaboration.

Ideally, following the template for typology formation by Collier et al. (2012), one would clearly formulate a separate concept for each of the 9 categories obtained by intersecting the two typologies I formulated (e.g. one would need to call an intersection of fully institutionalized and fully constrained regimes something else rather than just "institutionalized constrained autocracy"). This was done, for example, in Dahl (1971) who, having classified political regimes based on the level of competition and participation, coined for concepts: closed hegemony (low competition, low participation), open hegemony (low competition, high participation), competitive oligarchy (high competition, low participation), and polyarchy (high competition, high participation). However, in this particular case, it seems to be unfeasible to find meaningful names for each cell, so I leave it as it is, which is also common in social sciences (e.g. Rogowski et al. 1989, Tilly & Tarrow 2007, cit. in Collier et al. 2012).

According to the above-mentioned literature, formal and informal institutions interact with each other in a way that the same formal authoritarian institutions may have a different role in different types of authoritarian regime, and, consequently, their impact on the state of the rule of law may also vary. Thus, apart from checking the impact of formal and informal institutions on my dependent variables separately, I will test an impact of *interaction effects* between variables, which, since the variables are not truly interval, means a cross-tabulation of the categories.

Summary

In this chapter, I discussed the concept of autocracy used in this project and an operational definition which allows distinguishing between democracy and autocracy. I provided a number of reasons for not relying on several popular concepts and operationalizations of autocracy and autocratic institutions, the concept of hybrid regimes, and the concept of totalitarianism, as well as using indices as a way to operationalize democracy/autocracy. The main reason not to use the concepts of hybrid regimes and not to use the indices of democracy is that both are incompatible with procedural defintion of democracy. The main reason not to rely on concepts introduced by Juan Linz is their limited empirical relevance since 1990s onwards. I also introduced an original typology of formal and informal authoritarian institutions, which is based on the existing literature but which modifies existing typologies to suit better the purposes of the current study.

In the following chapter, I formulate the research question and hypotheses to test. I also describe the methodology of the ensuing empirical analysis.

CHAPTER III. RESEARCH DESIGN AND METHODOLOGY

Research question and hypotheses

Following up on the theoretical premises outlined in previous chapters, the research question of this project can be articulated as follows: *what impact do formal and informal authoritarian institutions have on different aspects of the rule of law?*

Particular operationalization of authoritarian institutions was discussed in the Chapter II. Operationalization of the rule of law, as well as of its sub-components, is provided in respective empirical chapters; however, here, it is necessary to specify that I am using a *narrow* definition of the rule of law. As stated in the introduction, I rely on the definition of the rule of law provided by Kaufman et al. (2009), according to which the rule of law means

> ...the extent to which agents have confidence and abide by the rules of society, and in particular the quality of contract enforcement, the police and the courts, as well as the likelihood of crime or violence.

This definition is useful for studying the rule of law in authorirarian regimes because it does not make any assumptions about the nature of the law-making process. The "rules of the society" may be introduced by decrees of the dictator, by decisions of some unelected body (like junta, party central committee, or unelected legislature); however, as long as these rules are generally stable and be relied upon, one can assert that, in a given country, the rule of law is present. This definition also corresponds to the meaning of the rule of law for scholars in instututional economics mentioned in Chapter I (North 1987, Rodrik et al. 2004, Acemoglu & Robinson 2012): what matters for economic development is not how laws are made but how predictable their application and enforcement is.

Also, even though the focus of this work is the regime (in other words, the state), property rights protection can be undermined tot just by the state but also by private actors (such as organized crime). As Acemoglu & Robinson (2012) demonstrate, even in democracies, such as the ones in contemporary Latin America where there are no state repressions, pervasive crime and violence effectively

undermine property rigths protection and thus the institutions in these countries are characterized as extractive and not inclusive. Thus, prevalence of crime and violence, alonglide with predictability of law enforcement, need to be included in the definition of the rule of law.

The theoretical expectations on the impact of authoritarian institutions on our dependent variable, based on the literature reviewed above, are the following.

First, as outlined in details in Chapter I, formal authoritarian institutions such as parties, parliaments, and elections, are suggested to be arenas in which dictators can make some concessions to groups whose cooperation is needed and can create somewhat credible commitments, without risking their power (Gandhi & Przeworski 2006, Gandhi 2008, 2008a). It has been also suggested in the literature that, although authoritarian institutions are not as credible as democratic, they stil lower uncertainty about the rules, improve the flow of information between the dictator and the population, and decrease the possibility of violent uprisings(Gandhi 2008). This leads to the following hypothesis:

Hypothesis 1: higher the degree of institutionalization of an authoritarian regime leads to less arbitrarity in law making and law enforcement, as well as better protection from abuses by private actors.

Second, as for informal constraints, it is plausible to expect that constrained regimes (military or single-party according to Geddes' classification) are less likely to behave in arbitrary way, because in military and single-party regimes the dictator can be stopped from taking arbitrary actions or even removed by his fellow party members or military collagues. This expectation is based on the definitions of military and single-party regimes provided in Geddes (1999), Geddes et al. (2014): accroding to these definitions, military and single party regimes are the ones in which the leadership selection, access to offices and control over policies (at least partial) belongs to, respectively, to the military and to the party. Constraints on the dictator and a real threat of ousting may decrease the risks of arbitrary actions (including, but not limited to, expropriations or repression), since these actions would require consent of the ruling group rather than just a will of the dictator. In some constrained regimes, rotation of dictators within the regime is a routine practice (like in China between Deng Xiaoping and the current President Xi Jinping, in Mexico during 70-years long PRI rule, or in Brazil during the military rule in late 1960s - mid-1980s), therefore, in these regimes, dictators' actions become

crucial in determining whether he will continue to serve as a dictator or not... Even if, in a given constrained regime, dictators normally rule the country till their death, like in the Soviet Union, the risk of ousting does not disappear, and this point can be illustrated by the following example. As Thomson (1991) claims, the main reason for Nikita Khrushchev's (C.P.S.U. First Secretary and de facto ruler of the U.S.S.R.) ousting in 1964 were his constant administrative reorganizations and frequest turnover of party and state officials, which not only threatened the positions of the party elite but was also economically damaging. Besides, Thomson (1991) claims that Nikita Khrushchev's policies were already unpopular among population by 1964. High-rank party officials were aware of the dangers of popular dissatisfaction, which contributed to their decision to oust the First Secretary. A following leader, L. Brezhnev, promised during his first speech to adhere to the principles of collective rule, and actually adhered to those principles (as mentioned in Chapter II). This example demonstrates that in regimes with informal constraints it may be dangerous for the dictator's political career to behave in an unpredictable way. Hence:

Hypothesis 2: More constraints imposed on a dictator by the ruling group decreases arbitrarity in law making and law enforcement, as well as improves protection from abuses by private actors.

Third, the effect of formal authoritarian institutions may be conditional on informal constraints. More specifically, it has been demonstrated, for example, in Wright (2008) that, in constrained regimes, formal institutions are somewhat binding for the dictator, meaning that it is not easy for the dictator to completely ignore the opinion of the parliament or the party. At the same time, in unconstrained regimes, authoritarian institutions just empower the dictator, without constraining his behavior. To illustrate that, in personalist regimes, authoritarian parliaments are non-binding, Wright (2008) provides multiple evidence from different personalist autocracies, including the one in Dominican Republic in during Trujillo's rule, the ones in Jordan and in Morocco, that, far from constraining dictator's behavior, legislatures are used by the dictator to redistribute rewards and punishments among his cronies, as a seat in the parliament can be is some cases regarded as a punishment, if an official is sent to the parliament from a more high-rank position. At the same time, for moderate opposition, a possibility to get some seats in the legislature can be regarded as a reward for their loyalty. In both cases, one can expect little, if any, impact of the legislature on dictator's discretion, and, consequently, on the state of

the rule of law in the country. Conversly, those scholars who look at constrained regimes such as Gandhi (2008), make different conclusions about the role of authoritarian partiaments. Gandhi (2008) provides an example of a Brazilian military regime under which the parliament was able to reject government-sponsored tax bill, an international trade bill, and an effort to lift the immunity of a parliamentarian who was accused of insulting the military – which is something that would be close to impossible in a situation in which the dictator is completely free in his actions.

The same can be said about parties in personalist regimes. IIsaacs & Whitmore (2014) conducts two case studies of the ruling parties in Russia and Kazakhstan (respectively, "United Russia" and "Nur Otan") and convincingly argues that neither of the two parties play any role in policy-making, or drafting any legislation, they don't have independent resources, and their function is limited to consolidating elites and mobilizing masses for supporting the leader. In these countries it is the state bureaucracy which completely controls the party, not the other way around[56]. IIsaacs & Whitmore (2014) compare it with the situation in Mexico before 1990s or in current Singapore (which, according to Geddes' classification, are single-party regimes), where the ruling party had a real autonomy, independent resources, and substantial influence in policymaking. This reasoning leads to the following hypothesis:

Thus, I can hypothesize the following:

Hypothesis 3: higher degree of institutionalization of an authoritarian regime improves predictability of law making, law enforcement, and protection from crime and violence if informal constraints are present. However, in absence of informal constraints, higher degree of formal institutionalization has little or no impact of the rule of law.

Finally, it may happen that authoritarian institutions affect some aspects of the rule of law and not the others. Historically, in Western Europe, property rights protection developed hand in hand with personal rights protection, and for this reason many authors (including Rodrik et al. 2004, as well as Acemoglu & Robinson 2012) tend to use the rule of law and the property rights protection as interchangeable concepts. However, in many authoritarian regimes (such as Chile during the military dictatorship, or South Korea during military and civilian dictatorships before

[56]In the USSR, which was a classical single-party regime, the Communist party bureaucracy duplicated state bureaucracy, and essentially made state bureaucracy largely redundant.

1987, or in current China), repressions and even extrajudicial killings of political opponents coincided with strong property rights protection. In Chile, the military regime of Pinochet was even more favorable to private property than the preceding democratic regime under the presidency of Allende who conducted extensive expropriation of agricultural land and nationalized large industries such as copper mining and banking (Shiraz 2011).

One may take a closer look at the Chinese single-party regime to better illustrate this point. Current China is not less violent towards its political opponents and to any independent activism in general than any other authoritarian regime. It has been persecuting member of a religious group "Falungong" since 1999, and, since then, multiple examples of extrajudicial killings of thousands of its members was provided by members of the group themselves[57], and by members of Chinese diaspora abroad[58]. Persecutions of people in Tiben who are struggling for a genuine cultural autonomy of their region are also well-known. Even Western backing does not help Chinese dissidents to avoid persecutions: one of them, Liu Xiaobo, who had been sentenced to 11 years of prison in 2009, was granted a Nobel Peace Prize for non-violent struggle for human rights in 2010, however, Chinese government did not release him, and he was only released shortly before his death from cancer in 2017. China is also one of the most restrictive countries in terms of freedom of speech: since 2003, it has the most sophisticated system of Internet censorship in the world, which is officially called "The Golden Shield" and colloquially known as "The Great Firewall of China": the system blocks Facebook, Twitter, Youtube, Google, and many other popular Western websites, and their local alternatives (Sina Weibo for Twitter, Baidu for Google, and other) are closely monitored by the authorities. Thus, one cannot speak of any guarantees for human rights China.

At the same time, in terms of property rights protection, China is ranked quite highly. According to International Property Rights Index, China got a score of 5.712 out of 10 and was ranked 52nd out of 127 countries under study – overtaking even several Western democracies such as Cyprus (5.447), Greece (5.389), Romania (5.042), among others (Levy-Carciente 2017). While Chinese laws in general are still not in full correspondence with international standards in terms of investors' protection, in multiple special economic zones they created (the most important

[57] A book on this issue entitled "Nine Commentaries on the Communist Party" was published anonymously in China and translated into English. It can be found here: http://www.ninecommentaries.com/english/

[58] An American news agency "The Epoch Times", founded in 2000 by members of Chinese diaspora in the US, constantly reports about human rights violations against Falungong members, as well as about other cases of human rights violations for which they manage to find evidence.

one is in Shenzhen) the legal regime for foreign investors is close to the Western standards, and they also have multiple benefits in terms of taxation and customs duties (Tantri 2012).

This disparity between property rights protection and human rights protection also makes sense theoretically. For dictators, there seem to be few rational reasons to protect human rights. International pressure, as it is clear from the example of China, is not strong enough to generate costs for the dictator for human rights abuse[59]. There is also no evidence that international capital punishes countries for human rights violations: to continue Chinese example, short after massacre on a Tiananmen square in 1989, foreign direct investments in China started to rapidly grow, and the FDI inflows accounted for 6% of Chinese GDP in 1993[60], and continued to be significant later on. Also, there is a lot of FDI influx Myanmar (which is a military regime), especially in textile industry (in 2015, they accounted for almost 7% of GDP), in spite of continuous atrocities committed against Muslim population of the country[61]. One can cite multiple examples of countries in which the international capital continues to inflow in spite of massive human rights violations.

However, ensuring property rights protection is crucial for economic development, since it the only way to stimulate domestic investments and attract foreign capital. While a ruling group in authoritarian regime may not care about economic development of his country as such, economic crises endanger any regimes, both authoritarian and democratic, (Geddes et al. 2014), so it is in their best interests to make sure that the country's economy does not collapse. At the same time, members of the ruling group may also have a strong personal interest to protect their own property from expropriation by the dictator.

Hence, it is plausible to suggest that the relation between authoritarian institutions and property rights protection is stronger than the one between the same institutions and human rights protection. Even if, in a military or a single-party regime, the military or the party are able to push for less human rights abuse, they have little, if any, incentives to do so: there are little benefits from improving the situation with human rights in a country. What is worse, potential costs of

[59] It may be important to check whether this is true for smaller countries who may be more vulnerable for external pressures; this can be approximated by country's population.

[60] Source: World Bank

[61] An extensive legal analysis of persecutions against Muslim population of Myanmar which studies the question whether these persecutions are severe enough to qualify them as genocide was conducted by Yale Law School. URL: http://www.fortifyrights.org/downloads/Yale_Persecution_of_the_Rohingya_October_2015.pdf

improving human rights protection may be high: easing repressions and better respect for civil and political rights may endanger the regime. For example, Mikhail Gorbachev in the U.S.S.R. eventually lost power partly because the liberalization that he himself started went out of control. However, the military or the party has all the incentives to stop the dictator from violating property rights, as, while these actions can benefit the dictator personally, they can endanger the power of the military of the single party regime as a whole. The same line of reasoning may work also for formal authoritarian institutions: for opposition groups, co-opted into the legislature or into one of the authoritarian parties, it may be more important to make sure the dictator does not violate property rights (as they are obviously interested in protecting their own property) than to prevent the dictator from repressing opposition which is not co-opted or just random people.

Thus, I may suggest the following:

Hypothesis 4: An overall impact of authoritarian institutions on property rights protection is stronger than on human rights protection.

Description of control variables

A number of controls will be used in the empirical analysis to take into account two possibilities. First, one has to account for other factors affecting for the state of the rule of law or the state of human and property rights protection in a given country. Second, it is necessary to account for factors which, according to the literature, affect existence of formal or informal authoritarian institutions. Introducing these variables will allow to be certain that the effect of authoriarin institutions, if significant, can be genuinely attributed to these instituions and not to background conditions under which these institutions exist. Most of the variables described below serve both functions: they represent additional factors which affect the stateof the rule of law and serve as contextual factors which affect the probability of having formal institutions or informal constraints.

An obvious control variable to include is logged GDP per capita as the measurement of economic development. The relation between economic development and rule of law is a mutually reinforcing relation. On the one hand, the rule of law reinforces the economic development, according to all institutionalist literature (North, 1987, North, 1989, Rodrik et al., 2003, Acemoglu & Robinson, 2012). On the other

hand, the economic development may lead to higher demand for the rule of law and higher capacity to deliver one (Charron & Lapuente, 2011 use similar argument for the quality of government). However, since it is not the primary variable of our interest, the fact that the coefficients for GDP per capita can be overestimated in the models will not necessarily affect the main variables of interest. If anything, the regression coefficients for GDP per capita can be biased *upwards*, which can bias the coefficients for the main variables of interest *downwards.* Thus, if any statistically significant relation between authoritarian institutions and the rule of law and its subcomponents can be found in this study, one can trust the results *more*, not less. GDP per capita is also important to control for because different formal and informal authoritarian institutions emerge under different socioeconomic conditions (Wright 2008), so, in spite of endogeneity problem, it cannot be simply omitted. Since exchange rate does not allow to account for price difference between countries, I am using PPP estimate of GDP per capita and 2011 international dollars (if one uses exchange rate instead of PPP, one could confuse actual rises and drops of production of goods and services with fluctuations on the exchange rates).

Another indicator of economic development which is sometimes used in the literature is infant mortality (measured as a number of children who died before 1 year of age per 1000 live births), which allows to correct the bias which occurs when GDP per capita is used to assess economic development of resource-rich countries (whose GDP per capita is high just because of resource exports, not because of country's actual economic development) or of city-states. It was used, for example, by Obydenkova & Libman (2013) to complement GRP per capita as a measurement of economic well-being on the regional level.

Wright (2008) finds evidence that countries with smaller populations are more likely to have personalist regimes, for which it can have an indirect negative effect on the rule of law. However, population may also have a direct positive on human rights protection due to a higher vulnerability of smaller countries to international pressure for democratization (since smaller countries are more vulnerable for economic sanctions or to Western military intervention which may happen if country seriously violates human rights). Although I avoid controlling for international pressures explicitly (more on that in this chapter below), country size is can serve, implicitly, as a proxy for the intensity of these pressures Thus, this variable can affect the rule of law in a positive or in a negative way, and, in either of the two cases, logged population has to be introduced in the regression model.

Another variable which has to be taken into account is dependence on primary commodities export, measured as a share of resource revenues in a country's GDP (meaning oil, natural gas, and minerals) minus costs of extraction and normal capital returns. This variable can be regarded as a proxy for the need for cooperation for the dictator, as higher oil, gas, or mineral rents decrease the necessity to tax citizens (and foster citizens' cooperation in order to collect these taxes) and increase his ability to redistribute spoils among potential rivals, and thus alleviates the need to institutionalize more. This argument is made, for example, in Wright et al. (2013): studying the impact of oil revenues on autocratic regime survival, authors demonstrate that oil revenues decrease the chance of replacement of one autocracy by another (while they do not necessarily affect the chances of democratization). The suggested mechanism is that oil revenues facilitate both redistributing spoils to potential rivals and increasing the level of repression by investing into security forces. More generally, and irrespective of the regime type, the resource revenues can affect the rule of law also directly, by facilitating patronage, which is one of the arguments of the whole literature on "resource curse" (see, for example, Robinson et al. 2006). I calculate resource revenues as a simple sum of three values, which are oil, gas, and mineral rents, each of them defined as revenues from oil/gas/minerals minus the production costs and normal capital returns, divided by a country's GDP in a given year. Compared to oil reserves, which is a more classical measurement of resource dependence, it has two advantages. First, it takes into account not just oil revenues, but all the income which is independent from country's economy. While most countries affected by "resource curse" are indeed dependent on oil, some of them, like Turkmenistan, depends on natural gas export, while Mauritania depends on exporting gold, iron, and cooper. Second, another advantage of using resource rents is that this measurement takes into account that having large oil reserves is not equal to high oil extraction or high oil dependence.

In order to control for path dependence, I use democratic legacy, as the previous democratic experience may make it harder for the dictator to openly repress people. At the same time, this variable may also be regarded as a proxy for the strength of potential opposition, which is, as Gandhi & Przeworski (2006) suggested[62], is one of the factors affecting the degree of institutionalization in autocracies. Democratic

[62]Instead of democratic legacy, Gandhi & Przeworski (2006) used inherited parties, which is a dummy variable indicating whether there is any party in a given regime which survived since the previous regime, regardless of whether that regime was democratic or not. However, I believe that democratic legacy serves not just a factor which affects the need to introduce formal institutions (the same way as the variable for inherited parties) but also as a factor directly contributing to the rule of law, that is why for the purposes of this study it is preferable.

legacy is used as a dummy variable, coded as 1 if a previous regime was democratic and 0 if otherwise.

There might be some relation also between the regime longevity and rule of law, since, frequently, the worst human right abuses and expropriations happen when the regime is just established because it is normally the time when the dictator needs to suppress all the opposition which remained from the previous regime, no matter if autocratic or democratic (Rorbaek et al., 2015). Rorbaek et al. also hypothesized that the repressiveness of authoritarian regimes may increase as the regime approaches its collapse but do not find evidence in favor of that; suggesting that the relation between regime longevity and repressiveness is linear rather than parabolic. The reason for the linear relation is that, while some regimes become more repressive struggling to stay in power, a bigger number actually conduct liberalization before collaplse, so, on average, as authoitarian regimes get older, they tend to rely on repressions less. Thus, the longevity of the current regime (a number of years from its establishment to a given year) is also included in the regression.

Time frame

As mentioned in the introduction, time frame for this research is 1992-2008, for the following reasons. Excluding observations after 2008 is determined simply by the fact that the PIPE dataset, which serves as a basis for my coding, covers only country-years up to 2008. The most obvious reason to exclude observations before 1992 is also data availability: some of the variables described above are not available at all or are available only for a limited number of countries before that. For example, the data on infant mortality from the World Bank is available only from 1990. However, this is not the main reason for excluding observations before 1992: it is always possible to find proxies which would capture the phenomena one is interested in.

More importantly, this temporal scope allows to control for external pressures. The time frame of 1992-2008 is characterized by strong pro-democratic pressure of the West worldwide and, on the contrary, absence or at least weakness of pro-autocratic pressures from any country (since the systematic Soviet and American[63]

[63]Pro-autocratic external pressure does not necessarily have to be exercised by autocratic countries: although the U.S. is a democracy, it supported a number of anti-communist autocratic regimes during the Cold War. See Shiraz (2011) on American involvement in a coup in Chile in 1973 which brought Pinochet to power. Likewise, occasionally, autocratic countries can actually support democracy in other countries if it suits their pragmatic interests (Way 2015 mentions Russian support of the opposition to the president of Kyrgyzstan in 2010 as an example of that).

support of friendly non-democratic regimes worldwide has stopped after the end of the Cold War, and autocracy promotion by Russia or China started to become relevant closer to early 2010s. Even if there had been a number of instances of Russian interference in domestic affairs of a number of post-Soviet countries before 2010s (such as an attempt to facilitate electoral fraud in Ukraine in 2004 in favor of pro-Russian presidential candidate Yanukovitch and further backlash against the "Orange Revolution" or military invasion to Georgia in 2008), these efforts induced instability rather than actually promoted autocracy; they were also largely inconsistent, and their efficiency was claimed to be doubtful (Way 2015). Thus, this selection of the time frame makes it possible to avoid controlling for international dimension of regime change. Systematically controllig for external democratic or autocratic pressures requires a lot of data. The variables that are sometimes used in the relevant literature to capture international democratic or autocratic influence in a parsimonious way (like the number of democracies in the world, like in Escribà-Folch (2009) or the Cold War dummy, like in Wright 2008) have no between-case variation. In other words, these variables have the same value for all countries in any given year. A case-invariant variable is of limited usefulness in a situation in which the dependent variable as a constant global yearly mean (in this study, the WGI Rule of Law index, used in the Chapter IV, is an index which is constructed in this way), which makes it problemaic to use it in this particular study. Finding a variable or a set of variables which would capture a pro-democratic or pro-autocratic pressure which every particular autocracy experiences in any given year would be complicated for a number of reasons. First, both pro-democratic and pro-autocratic pressure can come in a number of forms, ranging from military interventions and financial support to diplomatic and rhetoric tools (Obydenkova & Libman 2015), for some of which it is hard to elaborate any quantitative indicators. Second, even it is possible to find indicators of potential pressure that the democratic or autocratic powers can exercise on a given country, it is not possible to assume that any pressure coming from democratic countries is pro-democratic, or that any pressure from autocratic countries is autocratic: as mentioned before, it is not rare for democratic countries to support autocracies, and vice versa, especially before the end of the Cold War. Thus, eliminating the need to control for external pro-democratic or pro-autocratic pressures helps to avoid a number of problems associated with complexities of international dimension of democratization or autocratization[64]

[64]The fact that many prominent scholars working in the field of authoitarian studies use shortcuts for taking into account international pressures for democratization, such as Cold War dummy (Wright 2008, Wright & Escribà-Folch 2011) or the number of democracies in the world (Escribà-Folch 2010) demonstrates that it is difficult to account for international pressures for democrati-

In addition, excluding observations before 1992 ensures that the argument about the necessity of the rule of law and especially property rights protection for economic growth holds true for virtually any country. This was definitely not the case for socialist countries in which all or most means of production belonged to the state, as these countries mostly simply did not need any foreign (or even any private domestic) investments in order to grow. As these countries did not need to attract foreign investments to foster economic growth, they did not have any economic incentives to improve the rule of law , without even speaking about property rights protection (as the mere notion of private property in these economies does not exist or exists in a restricted way). However, by 1992, almost all socialist economies either collapsed (like in all Central European and post-Soviet countries) or had to open up to the international capital and to transit to market economy (like China or Vietnam). Thus, excluding observations before 1992 makes it unnecessary to take into account socialist countries, making overall research design simpler. As mentioned further in Chapter IV, Cuba and North Korea, which are the only two remaining socialist economies in the world, are droped from the dataset due to lack of data so there is no need to exclude them specifically.

Methodology

The data which is used in this project is data on as many autocratic countries as data allows over the period of 17 yers, from 1992-2008. Using the data for as many cases as possible for appropriate time frame seems to be the only way to make generalizable conclusions about the impact of authoritarian institutions on the rule of law and its aspects. By nature, this is panel data, as it contains observations of multiple units in multiple points in time and, thus, has both cross-sectional and temporal variation. For this reason, the research methodology of this study must be approprite for this type of data. A description of panel data methodology used in this project is presented below.

This is *not* a full technical description of methodology of panel data regression analysis. I outline only the main idea behind the models used for panel data analysis rather than the details of the estimation process.

zation in a large-N, cross-country study and that some simplifications have to be made in order to make any inference at all. The fact that Western leverage over a given country is inversly proportional to its population and economic development is indirectly taken into account by GDP per capita, infant mortality, and population.

As said before, data is data which contains observations of several cases observed over time. So, it differs both from regular cross-sectional data, in which every case is observed just once at the same point in time, or from regular time series data, in which one case is observed over multiple time periods. For this reason, both cross-sectional and temporal variation in the data has to be taken into account.

Some scholars (notably, Beck and Katz 1995, Beck and Katz 2004) also make a distinction between panel data and time-series cross-sectional (TSCS) data: while panel data contains below 10 temporal observations per unit, TSCS data contains 20 or more, with 20-100 cross-sectional units (Beck and Katz 2004). This difference has implications for statistical analysis: while panel data is more similar to cross-sectional data, TSCS data in more similar for time series data, which makes a difference in terms of methods applied. Below, I go in further details on that.

The main assumption behind any panel data analysis or TSCS analysis is the assumption of *poolability,* that is, the assumption that all units are characterized by the same regression equation at all points in time (Beck and Katz 1995), or, in other words, the relation between the variables of interest remains the same (or at least sufficiently similar) across units of analysis and across points in time. If there are valid reasons to assume that, then it is possible to proceed with panel data analysis. Conversly, if there are strong reasons to believe that the relation between phenomena under study is substantially different across cases or across time periods, then panel data analysis is not a suitable methodology. In this case, it is necessary to apply cross-sectional or time series analysis for every time period or for every unit respectively. Bartels (1996) suggests a formal test for poolability, called Chow's test; essentially, it estimates regression coefficients for each cross-sectional unit separately and then test the hypothesis on whether the difference between coefficients are statistically significant; however, this test would require much more observations per cross-sectional unit than available in the data for this project. Thus, I have to assume, without formal testing (as all scholars working in the field of authoritarian studies do), that the consequences of authoritarian institutions are, in general, similar across countries and across time. The fact that, by choosing the time frame of 1992-2008, I excluded the Cold War period, which was substantially different in terms of foreign pro-democratic pressure and also excluded socialist countries, for which the rule of law was less, if at all, relevant for economic activity, makes the poolability assumption more plausible.

If one makes poolability assumption, the simplest way to analyze panel data is simply to ignore its panel nature and treat all observations (e.g. country-years) as if they were separate units. With this simplification, it is possible to construct a simple regression model, which is not different from a standard linear regression:

$$y_{it} = \beta_0 + \beta_1 x_{1t} + \beta_2 x_{2t} + ... + \beta_n x_{nt} + \epsilon_{it}$$

where:

- i is an index of cases,
- t is an index of time,
- n is the number of independent variables,
- y_{it} is a value of the dependent variable for a case i and time t
- $x_{1,\,it}$, $x_{2,\,it}$ ... $x_{n,\,it}$ are values of independent variables for a case i and time t
- β_0 is an intercept (a value of y if all x are set to 0),
- $\beta_1, \beta_2 ... \beta_n$ are regression coefficients of independent variables,
- $\varepsilon_{\mathrm{it}}$ is a random error distributed normally both across cases and across time.

This model is called *pooled OLS.*

However, if this simple method is applied, a number of specific features of panel data can be overlooked.

First of all, one can overlook unit effects. While, by making poolability assumption, one assumes that the relation between the variables of interest is the same, regardless of units and time periods, it is still necessary to control for the fact that there are some factors associated with the units of analysis which affect the dependent variable. In other words, in addition to a random error, which is normally distributed across cases and across time, it is necessary to estimate this unit-specific error component.

It can be done in two ways. Following the first way, one assumes that time-invariant and unit-specific random errors may be correlated with dependent variables. To take this into account, it is possible to create a dummy variable for every entity, which allows to account for time-invariant, panel-specific unobserved variables which affect the dependent variable. The model then becomes:

$$y_{it} = \beta_1 x_{1,it} + \beta_2 x_{2,it} + ... + \beta_n x_{n,it} + \gamma_1 E_1 + \gamma_2 E_2 + ... + E_k \gamma_k + \epsilon_{it}$$

where:

- k is the number of entities,
- E_1 , E_2 ... E_k are dummy variables for every entity except one,
- γ_1, γ_2 ... γ_k are coefficients for these dummy variables,
- the rest of the notation is the same as in pooled OLS.

Essentially, this model is a regular OLS regression in which each unit has its own individual intercept; thus, the model does not have a general intercept. This model is called *fixed effects model*.

Fixed effects model can also include not just entity effects but also time effects, if there are reasons to believe there is some temporal trend in the dependent variable, independently of regressors, or there were some important unobserved events in some of the time periods which equally affected the dependent variable for all the cases in these time periods. This is technically done by creating a dummy variable for each year and estimating coefficients of these variables. More formally: $\delta_1 T_1 + \delta_2 T_2 + ... + \delta_p T_p$, where p is the number of time periods, T_1, T_2 ... T_n is a dummy variable for each time period, δ_1, δ_2 ... δ_{p-1} are the coefficients of these dummy variables. As in the previous case, this model is a regular OLS regression with individual intercepts for each time period. Time effects can be used instead of entity effects or together with them[65]. However, including dummy variables both for time periods and for units leads to the need to estimate too many parameters on too little data, which makes the estimators inefficient. Also, in country-level studies, it is more reasonable to believe that the difference between countries is much more drastic that the difference between years; thus, time fixed effects are rarely used in this kind of studies.

An advantage of a fixed effects model is that it allows to take into account not just observed but also unobserved time-invariant characteristics of cases, since their effect is "included" in the effect of dummy variables, and to allow for the fact that these individual characteristics may be somehow correlated with the variables present in the model. In case where the cases are countries (as in the current project)

[65] Some software, such as Stata, estimates general intercept also for fixed effects model; however, in this case, one of the coefficients for a dummy variable for an entity or a time period is not estimated, otherwise, it will be perfectly collinear with a general intercept.

it is possible to implicitly take into account such time-invariant characteristics of cases as political culture, colonial legacy and other variables not explicitly included in the regression and which could influence the dependent variable.

The problem is that if one or more independent variables are time-invariant (which is quite likely if these variables are not interval), then it becomes impossible to distinguish between the effect of this variable from the effect of a dummy variable introduced for each entity (more technically, in this case a time-invariant variable is perfectly collinear with the intercepts and thus the model cannot be estimated). For instance, if one wants to study the impact of monarchies (as defined by Geddes et al. 2014) on economic growth using the data for 1990s and 2000s using fixed effects, that would not be possible: no old monarchies collapsed and no new monarchies emerged in this time period, thus, it would not be possible to distinguish between the effect of monarchies from the effect of the dummy variables for each country that was a monarchy in this time period. Another problem of this model that, by introducing entity-level dummy variables, one essentially disregards all between-case variation (as it is all "absorbed" by these unit dummies), so only within-case variation is taken into account in estimating the effect of the independent variables[66]; in other words, using fixed effects, one can only answer the question how a *temporal* variation of the dependent variable depends on a *temporal* variation of independent variables (Beck 2008). This may create a problem if variables are changing over time very slowly, which is very frequently the case with institutional variables. Lastly, if the number of observations is not high enough, estimating a separate parameter for each case leads to inefficient estimates (so-called incidental parameters problem, Zorn 2018).

In this case, one can use a model which is called *random effects model*. This model also assumes that there is a time-invariant unit-specific component in the model; however, unlike in the fixed effects approach, it assumes that this component is normally distributed across entities and is correlated neither with the regression coefficients, not with the general error term. Thus, the model becomes:

$$y_{it} = \beta_0 + \beta_1 x_{1,it} + \beta_2 x_{2,it} + ... + \beta_n x_{n,it} + \nu_i + \epsilon_{it}$$

where ν_{i} is a time-invariant, entity-specific error component while $\varepsilon_{\mathrm{it}}$ is a general error term which is normally distributed both across entities and across time. Es-

[66] For this reason, a fixed effects model is also called a "within" model. There are also "between" models, which disregard the within-case variation and take into account only between-case one; however, they are almost never used in practice.

sentially, time-invariant, entity-specific error component just becomes part of a general error.

In this specification, time-invariant characteristics of units can be included in the analysis. Also, both within-case and between-case variation are considered in estimation procedure, which is preferable to an estimator which takes into account only between-case variation. However, this model gives unbiased results only if the assumption that entity-specific error is uncorrelated with regressors or with the general error holds true

If both a random effects model and a fixed effects can be estimated for the same dataset, it is possible to run a Hausman test (Hausman 1978) to identify whether there is a statistically significant difference between coefficients of the two models. If the difference is statistically significant, a fixed effect model is the one which is unbiased and which should be chosen. If there is none, both random effects model and fixed effects model are unbiased, however, a random effects model is more efficient and should be preferred for this reason[67]. However, Hausman test is a general specification test is biased towards rejecting the null hypothesis (thus, towards selecting a fixed effects model) in case of any additional specification problems, such as omitted variables, or errors in measurements (Zorn 2018); even if there is statistically significant difference between the two models, it may be still preferable to use random effects model as long as unit effects have low explanatory power (that is, when there are no obvious outliers), in order not to lose the advantages of random effects models (Beck and Katz 2001). Thus, I apply both models and assess if the results across models are consistent for the main variables of interest.

Both fixed effects model and random effects model deal with the problem of different intercepts between units of analysis. However, they do not take into account the time dimension, i.e. a possibility that error terms within units are serially correlated (i.e. that there is some dependency between $e_{i,t}$ and $e_{i,\ t\text{-}1}$ for every unit i in the analysis). Also, they do not take into account that there may be a heteroskedasticity caused by different error variance for different units, due to unit heterogeneity (that is, a difference in standard errors between cases). These issues may become a important as the number of time points becomes high enough (which

[67] In statistics, an estimator is called *efficient* if it has the least possible standard error and is called *unbiased* if the bias of an estimator is 0 (i.e. for this estimator, the mean of the sampling distribution is equal to the population mean). If there are several estimators which are equally unbiased, the one which is more efficient is preferable; however, if an estimator is biased, it does not make sense to assess whether it is efficient or not.

is the point in which the data becomes TSCS data rather than panel data). In the data for this particular research, the number of time periods is around 10 for WGI Rule of Law index and 17 for V-Dem index of the Rule of Law, which is exactly in between panel data and TSCS data, as defined by Beck and Katz (1995, 2004). Thus, it makes sense to also apply the models suitable for TSCS data.

To solve these problems, Beck and Katz (1995) suggested a following two-stage estimation procedure. On the first stage, one estimates a simple OLS regression for the panel data with AR(1) autoregression parameter for standard errors:

$$y_{i,t} = \beta_0 + \beta_1 x_{1,t} + \beta_2 x_{2,t} + ... + \beta_n x_{n,t} + \epsilon_{i,t}$$

$$\epsilon_{i,t} = \rho \epsilon_{i,t-1} + \nu_{i,t}$$

At this stage, the only difference between this model and pooled OLS is that an additional parameter ρ is estimated to account for serial correlation of error terms. It is technically possible to estimate a separate ρ for each panel but Beck and Katz (1995) do not recommend that: they claim that, if one makes poolability assumption in the first place (that is, that the relation between Xs and Y is the same regardless of the unit and time), then it is also logical to assume that the serial correlation of error terms is characterized by the same parameter. Also, estimating a separate ρ for every cross-sectional unit means estimating too many parameters based on too little data; for this reason, I estimate only a common ρ in my empirical analysis. On the second stage, to take into account for heteroskedasticity caused by possibly different variance for different cross-sectional units, one estimate standard errors which are robust in presence of this heteroskedasticity (so-called panel-corrected standard errors). The details of estimation procedure are available in Beck and Katz (1995). With this procedure, the coefficients from the first stage do not change; what changes is the estimation of standard errors (they typically become much larger). This model is widely used in country-level panel studies in general and in authoritarian studies in particular (see Wright 2008, Genschel et al. 2016, Charron and Lapuente 2011, among many others). For this reason, I also apply this model alongside with simple fixed and random effects models.

Note on interaction effects

Interaction effects between formal and informal institution are needed in order to test whether the effect of formal institutions is *conditional* on informal constraints,

in other words, whether, under higher levels of informal constraints, the positive effect of formal institutions on the rule of law becomes stronger[68].

If there was a fine-grained continuous measurement of both the level of formal institutionalization and the level of informal constraints, one could have used both measurements as continuous variables, construct a regression model with an interaction term between these two variables, and then plot marginal effects in order to see how the impact of formal institutionalization on the rule of law changes depending on the level of informal constraints. However, the measurements I am using for both phenomena are just ordinal and have only three possible values each (which correspond to low, medium, and high degree of formal institutionalization and informal constraints). While it is not uncommon to treat ordinal values as continuous in regression analysis (as it is frequently done for Likert scales, i.e. scales with values from 0 to 5 or 0 to 9), for the variables with only 3 possible values this is stretching. In the case of this study, it would require to make an assumption that the distance between non-institutionalized and semi-institutionalized regimes is the same as between semi-institutionalized and fully institutionalized, and the same goes for informal constraints. These assumptions do not look plausible because in both cases the middle categories are composed of heterogeneous types of regimes. As it was discussed in the methodological chapter, Polity IV index which could potentially operationalize institutional openness also has its flaws as it merges several theoretically distinct dimensions of political institutions in one index. Thus, it is methodologically more correct to use these variables as categorical. In order to identify whether the interaction effect between formal institutionalization and informal constraints is present, I am conducting a series of chi-square test of difference between regression coefficients. So, for unconstrained, semi-constrained, and constrained regimes, I compare the regression coefficients, pairwise, for:

1) non-institutionalized and semi-institutionalized regimes,

2) semi-institutionalized and institutionalized regimes,

3) non-institutionalized and institutionalized regimes

Based on the hypothesis stated in the theoretical chapter, my theoretical expectations are the following:

1) for unconstrained regimes, there is *no* significant difference between different levels of institutionalization,

[68]Technically, the opposite interpretation (i.e. under higher levels of formal institutionalization, the positive effect of informal constraints on the rule of law becomes stronger) is also plausible, as the interaction effects do not allow to distinguish between the two interpretations. However, from a theoretical perspective, it is the indicated interpretation which makes sense.

2) for semi-constrained regimes, there is *some* significant difference between different levels of institutionalization,

3) for constrained regimes, there is *highly* significant difference between different levels of institutionalization.

Summary

In this chapter, I formulated the research question and testable hypotheses for further analysis. I also described the methodology of the following analysis, paying particular attention to the panel nature of the data I will be dealing with, as well as to challenges of testing interaction effects between ordinal variables.

In the following chapter, I will conduct the empirical analysis of the impact of formal and informal authoritarian institutions on the rule of law in general. To do that, I will also discuss the operationalizations of the rule of law I will need to use and then conduct a regression analysis.

CHAPTER IV. EMPIRICAL ANALYSIS: RULE OF LAW

I start the empirical analysis by studying of the impact of both formal and informal authoritarian institutions on the rule of law in general, without distinguishing, for the moment, between property rights protection and human rights protection aspects.

Concerning informal authoritarian institutions (i.e. constrained, semi-constrained, and unconstrained regime types, recoded from original classification by Geddes 1999, Geddes et al. 2014), according to the theory outlined in the theoretical chapter, the expectation is that, if a dictator's decision-making is influenced and constrained by the top military or by the party leadership, it is more likely that the dictator's actions will be more predictable and more rule-abiding. This means a better state of the rule of law compared to the situation if the dictator is completely free in his decision-making. Concerning formal authoritarian institutions, such as parties, parliaments, and elections, according to theories, they are needed to make policy concessions to potential rival groups without risking dictator'spower and to create somewhat credible commitments that these concessions will be fulfilled (Gandhi&Przeworski 2006, Gandhi 2008), which means higher degree of the rule of law. As for interaction between formal and informal institutions, it is argued in the literature that formal institutions are binding for dictators only in regimes which have informal constraints (Wright 2008), thus, I can expect that a positive effect of formal institutions on the rule of law is stronger if a regime has informal constraints. Below, these hypotheses will be empirically tested.

Operationalization of the rule of law

A general definition of the rule of law used in this project was given in Chapter III: the rule of law is "the extent to which agents have confidence and abide by the rules of society, and in particular the quality of contract enforcement, the police and the courts, as well as the likelihood of crime or violence" (Kaufman et al. 2009). This definition is used to construct WGI Rule of Law index (ibid.), thus, it is logical to use this indicatior as operationalization of the rule of law in general.

WGI Rule of Law index index aggregates the data on each of the dimension of governance from dozens of sources, both expert surveys and mass surveys[69] and then

[69]The full list of sources used to construct the index of the rule of law can be found here:

combines them in a single index with global yearly mean of 0, standard deviation of 1 and range form -2,5 to 2.5. The individual sources operationalize things such as prominence of violent crimes, property rights protection and expropriation risks, enforcing the contracts, judiciary independence. For different countries, a different set of sources is used, depending on the availability of the data for the given country in these sources. This can be regarded as a disadvantage, as for different countries the index value can come from different data sources, however, precisely because Kaufman et al.(2007) use as many sources as possible, they manage to cover virtually all countries over the time period since late 1990s. It is also possible to access most of the sources individual sources online and free of charge, with some exceptions[70].

One potential concern the use of this index pertain is endogeneity, meaning that WGI Rule of Law index may already include indicators which operationalize either formal or informal authoritarian institutions. However, among a list of over 50 indicators which are included in the index, only two of them - "Separation of powers" from Bertelsmann Transformation Index (BTI) and part of "Liberal Component Index" from V-Dem databases – can be regarded as somewhat overlapping with the notions of formal or informal authoritarian institutions. All the other variables used in the construction of this index are covering efficiency and independence of justice system, property rights protection, and prevalence of different types of crime, all of which has little to do with presence or absence of formal institutions or informal constraints to the dictator. In addition, a notion of informal constraints for authoritarian regime is not the same as a notion of separation of powers as it is known in democratic countries, thus, some constrained regimes get worse scores than some unconstrained ones. For example, for 2010, China (which is a single-party regime) gets a BTI "Separation of powers" score of 3/10, while the score is for both Jordan (which is a monarchy) and Azerbaijan (which is a personalist dictatorship) is 4/10. Thus, the risk that endogeneity can bias the result is minimal.

In order to completely exclude the possibility of endogeneity which still may be associated with the use of the WGI Rule of Law index, I use an additional indicator of the rule of law, namely, "Equality before the law and individual liberty index" elaborated by "Varieties of Democracy" (V-Dem) project (Coppedge et al. 2018a). This index is composed from a number of indicators, such as: impartiality of

http://info.worldbank.org/governance/wgi/#doc

[70]For example, indicators included in International Country Risk Guide (ICRG), used in the construction of WGI Rule of Law index, is available only upon paid subscription

public administration, predictability of law enforcement, access to justice, physical integrity, property rights, freedom of religion, and freedom of movement. This is somewhat different from the World Bank operationalization, as it includes also individual liberties and excludes crime and violence; however, this is still consistent with the general narrow concept of the rule of law. Every individual indicator is coded by country experts, who are usually citizens or residents of countries being coded (no less than five coders per indicator, unless explicitly specified otherwise in the dataset), whose scores are then aggregated to ensure reliability. In the end, they obtain an index ranging from 0 to 1, 0 meaning the lowest degree of the rule of law and individual freedoms and 1 meaning the highest. Some details on criteria of expert selection and on aggregation procedure can be found in Coppedge et al. (2018b). As it becomes clear from this description, presence or absence of formal institutions or informal constraints on the dictator does not have any impact on the construction of this index as there are no components of this index related to institutional properties of the regime. Another benefit of this index is that, unlike WGI Rule of Law index, it is available for all country-years under study, which increases the number of country-years available for regression analysis. The Pearson's correlation between WGI Rule of Law index and V-Dem index is 0.54, meaning that these two varaibles, while related to each other, are not identical, thus, one can be certain that if the results of regression models with both variables are similar, this can genuinely validate the findings.

Data sources and data collection

Data on my main dependent variable and control variables is collected with the use of World Bank API[71] and Python (v. 3.6) scripts which allowed to scrape the data from the World Bank website and to merge it with Geddes et al. (2014) data on informal authoritarian institutions and with Przeworski et al. (2013) data on formal authoritarian institutions. As mentioned above, the data on "Equality before the law and individual liberty" index is obtained from 8th version of V-Dem dataset (Coppedge et al. 2018c).

As it is impossible to find any reliable data on North Korea and Somalia, these countries are dropped entirely from the analysis, as well as Afghanistan from 1996 to 2002 (a time period when Afghanistan was under Taliban rule and did not disclose any data). In addition, there is no data on GDP per capita (purchase parity)

[71] https://datahelpdesk.worldbank.org/knowledgebase/articles/889392-api-documentation

for Cuba (all country-years) and for Libya (1996-1998), so these observations are also dropped. Dropping North Korea and Cuba also removes the only two currently existing socialist economies from consideration, which is beneficial for the analysis in any case, since, as mentioned in the methodological chapter, for socialist economies the theoretical argument about the need to protect the rule of law in order to attract foreign and domestic investments does not hold.

In the World Bank databases, some data on oil and gas rents is missing. Thus, I used the data for oil and gas extraction from United States Energy Information Administration[72]. If, for the country-years missing in the World Bank databases, the figures of oil and gas extraction are 0 (or for oil extraction, less than 200 barrels a day), then the value of oil/gas rent for this country-year is coded as 0; if the figures are substantial, the data for the oil/gas rent for this country-year is left empty, since, with the available data, any estimates of oil/gas rents would be imprecise. When this procedure applied, however, only and 12 country-years (out of 993) were dropped from the dataset: Iraq (1996-2003) and Myanmar (1996-1999).

In total, after all the deletions, only 56 country-years out of 1037 (5,4%) were dropped, which is a totally acceptable number.

The data on informal authoritarian institutions is the dataset by Geddes et al. (2014). The data on formal authoritarian institutions is available at Political Institutions and Political Events (PIPE) dataset (Przeworski et al. 2013).

Prior to 2002, WGI index of the Rule of Law was estimated on a biannual, not annual bases, which leads to a significant number of missing observations (observations for this index are missing for 1997, 1999 and 2001 for all countries). I avoid imputing any of these missing values with single or multiple imputation algorithms (such as the ones suggested in Honaker & King 2010, Honaker et al. 2011), as it is not clear because validity of these methods critically depends on validity of their assumptions about the distibution of the data, which are hard to test. For this reason, these observations are omitted. As for V-Dem index of the rule of law, it is available for all 981 country-years under study.

Analysis

a) Distribution of autocratic country-years by institutions

[72] Available through the website www.indexmundi.com.

First, I show some descriptive statistics.

The final dataset contains 981 country-years, 81 countries, with average number of observations per case of 12.1, minimum of 1 and maximum of 17 observations per case.

Distribution of country-years by informal constraints (excluding country-years representing democracy, foreign occupation, civil war and provisional governments) for the time period from 1992 to 2008 is the following:

Table 3: **Distribution of informal constraints in 1992-2008, country-years**

Constrained	**Semi-constrained**	**Unconstrained**
375	130	476

As one can see, authoritarian regimes, most of them are unconstrained, constrained ones (single-party, military) are less prominent, and semi-constrained (all hybrids with a personalist element) are the most rare. It is also worth noting that autocratic country-years represent over 40% of all country-years in the dataset (excluding the country-years under war, foreign occupation, or provisional governments) – which again indicates that autocracies in the world are almost as prevalent as democracies, and this is one of the reasons why political scientists need to study autocracies as thoroughly as democracies.

The same table is presented for formal institutions:

Table 4: **Distribution of formal institutions in 1992-2008, country-years**

Institutionalized	**Semi-institutionalized**	**Non-institutionalized**
616	285	80

It is clear from this table that, in 1996-2008, virtually all authoritarian regimes got at least some institutions and in more than half of the cases these regimes got fully-fledged institutions, meaning parliaments, parties, and alternative elections. This can be explained both by the Western pressure to have seemingly democratic institutions (Levitsky & Way 2008) and by benefits that the institutions bring to the dictators (Gandhi & Przeworski 2005, Gandhi 2008, Wright 2008, Escribà-Folch 2009, among others).

As the intention of this chapter is to test the interaction between formal institutions and informal constraints, I provide below a cross-tabulation of the two categories, to make sure none of them is empty:

Table 5: **Cross-tabulation of formal and informal authoritarian institutions, country-years**

	constrained	**semi-constrained**	**unconstrained**
institutionalized	257	47	312
semi-institutionalized	106	73	106
non-institutionalized	12	10	58

As it becomes clear, while some categories are empirically rare (as one can see, there are very few country-years in which a regime is constrained or semi-constrained and at the same time is not institutionalized), none of the combinations is empirically impossible, thus, it is meaningful to study interaction effects.

b) Regression analysis: interaction of formal and informal authoritarian institutions

Further, I present the regression analysis, in order to identify if there is a statistically significant difference between formal and informal authoritarian institutions on the one hand and WGI Rule of Law index on another. I first test a separate impact of formal and informal authoritarian institutions and then test the interaction effect because, as I discussed in a theoretical chapter, formal authoritarian institutions are likely to play a different role in constrained and unconstrained regimes, thus, their impact on the rule of law may also depend on these informal constraints.

From all the models, categories which do not represent an authoritarian regime (democracy, foreign occupation, civil war, provisional government and their mixes) are excluded.

The justification for including every of the variables in the regression models is provided in the methodological chapter. Here, I only repeat the list of variables:

1. Logged GDP per capita (PPP, 2011 international dollars).

2. Logged population.

3. Infant mortality(deaths before 1 years of age per 1000 live births).

4. Regime types, recoded as "constrained", "semi-constrained" and "unconstrained"; "semi-constrained" is a reference category

5. Institutionalization, coded as "institutionalized", "semi-institutionalized", and "non-institutionalized"; "semi-institutionalized" is a reference category

6. Resource dependence (sum of oil, gas, and mineral rents).

7. Democratic legacy (dummy).

8. Regime longevity (years).

The columns represent random effects model, fixed effects model and AR(1)-PCSE model (in that order), first without interactions and then with them(in the same order). The results of the analysis are presented below in the following table.

Table 6: **Impact on authoritarian institutions on the WGI Rule of Law index: interaction effects**

	I	II	III	IV	V	VI
Logged GDP pc.	0.228***	0.159**	0.230***	0.249***	0.195***	0.231***
	(0.042)	(0.056)	(0.032)	(0.042)	(0.056)	(0.032)
Logged population	−0.129***	−0.472***	−0.096***	−0.124**	−0.423***	−0.095***
	(0.038)	(0.123)	(0.017)	(0.038)	(0.122)	(0.015)
Infant mortality	−0.002*	−0.005***	−0.004**	−0.002	−0.004**	−0.004***
	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
Resource	−0.007***	−0.004**	−0.007***	−0.007***	−0.004**	−0.007***
	(0.001)	(0.001)	(0.002)	(0.001)	(0.001)	(0.002)
Constrained	0.298*	0.136	0.325***	0.046	−0.233	0.128
	(0.140)	(0.257)	(0.062)	(0.154)	(0.276)	(0.073)
Unconstrained	0.017	−0.069	0.031	−0.077	−0.289	−0.027
	(0.134)	(0.240)	(0.051)	(0.147)	(0.261)	(0.099)
Institutionalized	0.088**	0.118***	0.044	−0.177	−0.149	−0.196
	(0.033)	(0.034)	(0.034)	(0.093)	(0.098)	(0.105)
Non-institutionalized	−0.033	−0.058	−0.064	−0.009	−0.064	0.048
	(0.070)	(0.070)	(0.073)	(0.157)	(0.161)	(0.089)
Regime duration	0.002	−0.000	0.005***	0.002	−0.001	0.005***
	(0.001)	(0.002)	(0.001)	(0.001)	(0.002)	(0.001)
Democratic legacy	0.226**	0.339**	0.128**	0.210**	0.337**	0.102**
	(0.081)	(0.106)	(0.043)	(0.081)	(0.104)	(0.032)
Inst. X Constr.				0.434***	0.431***	0.380***
				(0.112)	(0.117)	(0.096)
Inst. X Unconstr.				0.216*	0.224*	0.189
				(0.102)	(0.106)	(0.151)
Non-inst. X Constr.				0.356	0.385	0.145
				(0.228)	(0.228)	(0.276)
Non-inst. X Unconstr				−0.167	−0.122	−0.253
				(0.181)	(0.184)	(0.162)
Intercept	−0.614		−1.103*	−0.756		−1.006*
	(0.814)		(0.454)	(0.821)		(0.454)
R^2	0.230	0.153	0.513	0.259	0.190	0.530
Num. obs.	564	564	564	564	564	564

$^{***}p < 0.001$, $^{**}p < 0.01$, $^{*}p < 0.05$

All the models show a positive and statistically significant relation between logged GDP per capita and the state of the rule of law. As it was argued above, this is a two-way relation so the coefficients may be overestimated, however, even if it biases the result for other variables, the bias is downwards rather than upwards. The impact of infant mortality (which is used as a second proxy for economic development) is negative and significant for most models, which also confirms my expectations (as infant mortality is another proxy for economic development). The impact of resource dependence is, as expected, negative and highly significant for all the models. The impact of democratic legacy is, as expected, positive, while the impact of regime duration is not stable across models. The impact of population size is statistically significant for all models, and negative. This is counter-intuitive because, as Wright (2008) shows, smaller population is associated with higher probability of establishing a personalist regime, as in smaller countries it is more likely that the dictator does not have to rely on population in order to govern; thus, one would expect that smaller population decreases the need for the dictator to maintain the rule of law. A possible interpretation of the finding is that smaller countries generally rely more on international capital movement and benefit more from any measures that help to attract international capital (Genschel et al. 2016), thus, smaller countries may face higher incentives to maintain the rule of law. Another possible explanation is that smaller countries are more vulnerable to international pro-democratic pressure (Levitsky and Way 2010). I do not research further which of the two causal mechanisms is more plausible, as it goes beyond the research question.

Speaking of the main variables of interest, the findings are the following. In the models without interaction effects, the impact of formal institutionalization on its own or informal constraints on their own seems to be irrelevant for the rule of law, as the statistical significance of coefficients depends on the model choice. Once interaction effects are introduced, individual effects of formal and informal institutions remain insignificant, however, the interaction effect between being formally institutionalized and informally constrained becomes highly significant and huge in magnitude for all the three models: formally institutionalized and informally constrained autocracies increase the value of the WGI Rule of Law index by around 0.4 (measured in standard deviation units), or by around 8% compared to the reference category of semi-institutionalized and semi-constrained regimes, after controlling for other variables. However, other interaction effects are not statis-

tically significant for all models, meaning that there is no statistically significant difference between these categories and the reference category. Thus, it shows that only authoritarian regimes which are *both* formally fully institutionalized and informally fully constrained are different from all other authoritarian regimes; partial institutionalization (such as introduction of the legislature without parties or legislature with one party) or imposing partial constraints on the dictator does not seem to make any difference in terms of the rule of law compared no institutions or no constraints at all.

In order to still formally test the presence of interaction effects between formal institutionalization and informal constraints, I do the following. First, I calculate, using a random effects model and AR(1)-PCSE model calculated above[73], I show the intercepts for each of the 9 categories, obtained by intersecting categories for formal and informal institutions. Second, I test the difference between regression coefficients for non-institutionalized, semi-institutionalized, and institutionalized regimes, for three separate groups: constrained, semi-constrained, and unconstrained ones. p-values are reported. The theoretical expectations are outlined in Chapter III, in a note about interaction effects. The empirical results are presented in the following tables:

[73]With fixed effects model, it is not possible to do as this model does not estimate a general intercept – which in these calculations represent an intercept for semi-institutionalized and semi-constrained regimes.

Table 7: **Intercept values for different combinations of formal and informal institutions: WGI Rule of Law index, random effects model**

	Non-institutionalized	Semi-institutionalized	Institutionalized
Unconstrained regimes	-0.17	-0.08	0.22
Semi-constrained regimes	-0.01	-0.76	-0.18
Constrained regimes	0.36	0.05	0.43

Table 8: **Testing interaction effects between formal institutions and informal constraints: WGI Rule of Law index, random effects model (p-values)**

	Non-institutionalized vs Semi-institutionalized	Semi-institutionalized vs. Institutionalized	Non-institutionalized vs. Institutionalized
Unconstrained regimes	0.1653	0.1653	0.0529
Semi-constrained regimes	0.367	0.4885	0.3516
Constrained regimes	0.274	0.0858	0.7575

Table 9: **Intercept values for different combinations of formal and informal institutions: WGI Rule of Law index, AR(1)-PCSE model**

	Non-institutionalized	Semi-institutionalized	Institutionalized
Unconstrained regimes	-0.25	-0.03	0.19
Semi-constrained regimes	0.05	-1.01	-0.20
Constrained regimes	0.14	0.13	0.38

Table 10: **Testing interaction effects between formal institutions and informal constraints: WGI Rule of Law index, AR(1)-PCSE model (p-values)**

	Non-institutionalized vs Semi-institutionalized	Semi-institutionalized vs. Institutionalized	Non-institutionalized vs. Institutionalized
Unconstrained regimes	0.3816	0.3816	0.0091**
Semi-constrained regimes	0.0168*	0.089	0.0469*
Constrained regimes	0.9546	0.1119	0.3956

From these tables, one can see that the theoretical expectations do not hold. In theory, one would expect that, among constrained regimes, the difference between levels of institutionalization should be highly significant. However, the empirical results do not demonstrate that.

Thus, it turns out that, although, from the existing theories, we could expect that there would be more complex interactions between formal institutions and informal constraints, from the empirical findings it turns out that it is only dictatorships which are both formally institutionalized and informally constrained that are genuinely better in terms of the rule of law compared to other dictatorships.

The same analysis is conducted using V-dem index as the dependent variable. The order of models is the same as before:

Table 11: **Impact on authoritarian institutions on V-Dem Rule of Law index: interaction effects**

	I	II	III	IV	V	VI
Logged GDP pc.	0.024	0.048***	0.005	0.023	0.050***	0.004
	(0.012)	(0.014)	(0.013)	(0.012)	(0.014)	(0.013)
Logged population	−0.004	0.147***	−0.038***	−0.002	0.157***	−0.038***
	(0.013)	(0.025)	(0.011)	(0.013)	(0.025)	(0.010)
Infant mortality	−0.001***	−0.000	−0.001**	−0.001***	−0.000	−0.001***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Resource	−0.000	−0.001*	−0.001*	−0.000	−0.001*	−0.001**
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Constrained	0.075***	0.057**	0.056**	0.076***	0.039	0.095***
	(0.019)	(0.019)	(0.018)	(0.023)	(0.023)	(0.023)
Unconstrained	−0.050*	−0.115***	−0.004	−0.045	−0.127***	0.039
	(0.022)	(0.024)	(0.016)	(0.025)	(0.027)	(0.021)
Institutionalized	0.025**	0.026***	0.038***	0.037	0.027	0.100***
	(0.008)	(0.007)	(0.011)	(0.019)	(0.019)	(0.030)
Non-institutionalized	−0.012	−0.002	−0.018*	−0.040	−0.067*	0.020
	(0.011)	(0.011)	(0.009)	(0.028)	(0.027)	(0.020)
Regime duration	−0.001**	−0.003***	0.000	−0.001**	−0.003***	0.000
	(0.000)	(0.001)	(0.000)	(0.000)	(0.001)	(0.000)
Democratic legacy	−0.013	−0.013	0.014	−0.015	−0.020	0.020
	(0.018)	(0.018)	(0.022)	(0.018)	(0.018)	(0.021)
Inst. X Constr.				−0.006	0.009	−0.068*
				(0.023)	(0.022)	(0.028)
Inst. X Unconstr.				−0.017	−0.005	−0.077**
				(0.021)	(0.021)	(0.029)
Non-inst. X Constr.				0.003	0.058	−0.056**
				(0.033)	(0.032)	(0.020)
Non-inst. X Unconstr				0.043	0.082**	−0.039
				(0.031)	(0.030)	(0.022)
Intercept	0.448		1.125***	0.411		1.105***
	(0.248)		(0.304)	(0.250)		(0.278)
R^2	0.153	0.165	0.497	0.158	0.174	0.505
Num. obs.	981	981	981	981	981	981

$^{***}p < 0.001$, $^{**}p < 0.01$, $^{*}p < 0.05$

In this case, the pattern of interaction is even less clear that in case of WGI Rule of Law index. Thus, it does not make sense to test for the interaction terms in the same way as with WGI index.

c) Regression analysis: fully institutionalized and fully constrained regimes as a special case However, the fact that formally institutionalizerd and informally constrained regimes are better that all other regimes in terms of the rule of law, at least judging from WGI Rule of Law index, is also a relevant finding which requires further testing and robustness checks. Thus, I change the model and simply dichotomize authoritarian regimes, distinguishing between instititonalized constrained autocracies and all the others. I further run fixed effects model, random effects model, and AR(1)-PCSE model with a dummy variable for fully institutionalized and fully constrained regimes instead of separate variables for formal and informal authoritarian institutions, and with all the other variables as before.

To ensure the robustness of the findings and to avoid a possibility of endogeneity, I run the same three models using V-Dem index of the rule of law as a dependent variable. The first three columns are RE, FE, and AR(1)-PCSE models for WGI index, and the second three are the same models for V-dem index. The results are presented below:

Table 12: **Impact on authoritarian institutions on the WGI and V-Dem Rule of Law inices: dichotomous distinction**

	I	II	III	IV	V	VI
Logged GDP pc.	0.241^{***}	0.176^{**}	0.223^{***}	0.023	0.035^{*}	0.002
	(0.041)	(0.056)	(0.031)	(0.012)	(0.014)	(0.016)
Logged population	-0.107^{**}	-0.421^{***}	-0.076^{***}	0.008	0.113^{***}	-0.032^{*}
	(0.036)	(0.123)	(0.016)	(0.014)	(0.025)	(0.015)
Infant mortality	−0.002	-0.004^{**}	-0.004^{***}	-0.001^{**}	−0.000	-0.002^{**}
	(0.001)	(0.001)	(0.001)	(0.000)	(0.000)	(0.000)
Resource	-0.007^{***}	-0.004^{**}	-0.007^{***}	−0.000	−0.000	−0.001
	(0.001)	(0.001)	(0.002)	(0.000)	(0.000)	(0.000)
Fully institutionalized	0.305^{***}	0.286^{***}	0.297^{***}	0.070^{***}	0.074^{***}	0.039^{***}
	(0.053)	(0.058)	(0.032)	(0.011)	(0.012)	(0.012)
Regime duration	0.002	0.000	0.005^{***}	−0.001	-0.002^{**}	0.000
	(0.001)	(0.002)	(0.000)	(0.000)	(0.000)	(0.000)
Democratic legacy	0.206^{**}	0.304^{**}	0.092^{**}	−0.028	-0.039^{*}	−0.009
	(0.078)	(0.095)	(0.033)	(0.017)	(0.018)	(0.020)
Intercept	−1.016		-1.237^{**}	0.225		1.104^{**}
	(0.759)		(0.415)	(0.266)		(0.380)
R^2	0.243	0.159	0.516	0.107	0.096	0.461
Num. obs.	564	564	564	981	981	981

$^{***}p < 0.001$, $^{**}p < 0.01$, $^{*}p < 0.05$

As one can see, in this model, the impact of formal institutionalization and informal constraints is positive and statistically significant for all model specifications, both for WGI and V-dem indices, even if, for V-dem index, the results for other variables are inconsistent across different model specifications.

Finally, I have to control for a self-selection bias, that is, for the fact that authoritarian institutions are not assigned to authoritarian regimes randomly but are deliberately chosen by dictators or (in case of informal constraints) are heavily influenced by them. While I already control for observable factors which affect the need for institutions (such as economic development, resource rents and democratic legacy), it is still possible that, for example, that "benevolent" dictators which have higher propensity to establish formally democratic institutions and at the same time to improve the rule of law in the country; thus, one cannot be sure whether it is institutionalization or the "benevolence" of dictators that leads to better state of the rule of law.

To deal with that, they apply two-stage Heckman model (Heckman 1979), which is a statistical model elaborated to correct for self-selection bias. A classical example of application of Heckman model is Heckman and Macurdy (1980), where the scholar models wages of the working women. The main innovation of this study, compared to previous ones on the same topic, what that Heckman took into account that the choice by women whether or not to work was not random but depended (at least at times when the studies were written) on multiple factors, some of which are unobserved[74]. A failure to account for these unobserved factors which affect this self-selection into the workforce leads to biases in estimating the impact of different factors on wages. In order to deal with that, he invented a two-staged procedure. On the first stage, he runs a binary probit model with factors which, according to the theories, influenced a choice whether to work or not. On the second stage, he calculated inverse of Mill's ratio, which serves as a proxy of unobserved factors which affected female participation (that is, a proxy of a random error)[75] in the labor force and added this variable into a regular regression analysis. The factors which affect the probability of being selected in the sample (in this case, in the sample of working women) can be different from the factors which affect wages but they may be also similar; the model works in both cases.

[74]The intuition was that, if a woman could be more productive in a household than in the workplace, she preferred not to work; this, in turn, depended on her education, number of years of experience, number of children, and other factors, some of which cannot be observed.

[75]I omit the details of estimating inverse of Mill's ratio here, it can be found in Heckman (1979).

In case of authoritarian institutions, the situation is slightly different: while in the example of Heckman, the potential salary of women who chose not to work was not observable at all, in our case, the values of the rule of law are observed for all country-years, both when a given regime in a given year is an institutionalized constrained autocracy and when it is not. However, a problem of self-selection remains: since dictator heavily influence the choice of institutions and since not all factors influencing the choice of institutions are observable, it is still possible that, for one reason or another (for example, due to dictators' motives), dictators who choose to improve the rule of law in their countries tend to also prefer to open a legislature, allow for multiple parties and have regular elections, and, at the same time, improve the rule of law in the country. If this is the case, it might happen that the observable impact of institutions on the rule of law is in fact the impact of dictator's good motives, and that, on their own, institutions do not have any effect.

To solve this issues, I need to implement the same procedure which was implemented in many works assessing the impact of authoritarian institutions, such as Gandhi (2008, 2008a), Wright (2008), Escribà-Folch (2010), and others.

The procedure is quite complex, and the algorithm can be described like this:

1. estimate a probit model which estimate the impact of factors affecting the selection of institutions; in my case, it is a binary probit model where a dependent variable is being institutionalized constrained autocracy:

$$Pr(Institutions_{it} = j) = Z_{it}\alpha + \nu_{it}$$

   where i, t are conscripts of a country and year respectively, α is a vector of coefficients of the exogenous independent variables Z, which affect the probability of having institutions, ν is a random error;

2. calculate from this model an inverse of Mill's ratio, for both presence and absence of full institutionalization ($\lambda_{\mathrm{it},0}$, $\lambda_{\mathrm{it},1}$), which serves as a proxy of a random error of the probit model;

3. construct a regression model for each institution separately (i.e. a separate regression for country-years in which regime is fully institutionalized and not fully institutionalized), including an inverse of Mill's ratio for, respectively, presence or absence of full institutionalization as an explanatory variable; one

can use a simple linear regression or also a regression correcting for autocorrelation of errors[76] (AR(1)-PCSE model used above is suitable); this way, one gets unbiased estimates of coefficients, controlling for self-selection:

$$Y_{it}, 0 = \beta_0 X_{it}, 0 + \theta\lambda_{it}, 0 + \epsilon_{it}, 0$$

$$Y_{it}, 1 = \beta_1 X_{it}, 1 + \theta\lambda_{it}, 1 + \epsilon_{it}, 1$$

where i,t are subscripts of country and year and 0-1, and represent presence and absence of full institutionalization;

4. use the regression coefficients β_0 and β_1 from step 3 to calculate predicted value of the dependent variable ($\hat{Y}$) for *all the data;* in this way, one estimates what the value of Y would have been if all country-years had been fully institutionalized and what the values of Y would have been if all country-years had not been fully institutionalized:

$$\hat{Y}_{it}, 0 = \hat{\beta}_0 X_{it}$$

$$\hat{Y}_{it}, 1 = \hat{\beta}_1 X_{it}$$

where $\hat{Y}_{it,0}$ and $\hat{Y}_{it,1}$ are predicted values of the dependent variable under a counterfactual that every country-year is not fully institutionalized ($\hat{Y}_{it,0}$) or is fully institutionalized ($\hat{Y}_{it,1}$); note that X_{it} does not have a j subscript, which indicates that the coefficients β_0 and β_1 are applied for all the data to get predicted values of Y;

5. using a simple t-test, compare the averages of $\hat{Y}_{it,0}$ and $\hat{Y}_{it,0}$, to determine if the difference is statistically significant and has an expected sign.

Due to the length, all the calculations for the steps 1-4, here and thereafter, are presented in the Appendix[77]. The results of the step 5 are presented in the following tables:

[76] Unit effects models cannot be used because not all units which are present in the full data are also present in the two regression equations; thus, one would not be able to apply the coefficients obtained from these two equations to the whole dataset, which is what required at the step 4.

[77] See the first stage of the Heckman model in Table 31 and intermediate calculations for WGI and V-Dem in Table 32 and Table 33 respectively.

Table 13: **Selection-corrected WGI Rule of Law Estimates**

	OLS	AR(1)
Predicted average (fully institutionalized)	-0.40	-0.38
Predicted average (not fully institutionalized)	-0.78	-0.48
Difference	0.38***	0.10***

Table 14: **Selection-corrected V-dem Rule of law Estimates**

	OLS	AR(1)
Predicted average (fully institutionalized)	0.67	0.62
Predicted average (not fully institutionalized)	0.46	0.48
Difference	0.21***	0.14***

As one can see from these tables, corrrecting for self-selection does not change the conclusions. Institutionalized constrained regimes perform better than all the others according to WGI and V-dem index. Substantially, the difference is large for V-dem index (14%-21% depending on the model) and much smaller for WGI index (2%-7.6%) but is is statistically significant in both cases.

Summary

The results above contribute to the previous works on authoritarian regimes which presented the evidence that, contrary to a conventional wisdom, both formal and informal authoritarian institutions are relevant in authoritarian regimes, even if they are relevant in a different way than they are in democracies. However, the findings do not fully conform to theoretical expectations. While, according to theory, one would expect that the role of formal institutions has to be conditional on the degree of informal constraints, the empirical data suggests that is it only regimes that are *both* fully institutionalized (have a legislature, parties, and multiparty elections in which voters can choose between at least two parties) and informally constrained (i. e. belong to the category of military or single-party regimes) are different from the other autocracies in terms of the rule of law even after controlling for other factors. It seems that constraining the dictator partially or introducing only some nominally democratic institutions does not improve the rule of law.

I found that regimes which are formally institutionalized and informally constrained perform better that the others, and this difference is statistically significant and substantially large irrespective of the choice of the model. Thus, this finding can be considered robust. While there might be concerns about endogeneity be-

tween the institutionalization and the WGI Rule of Law index, there are no grounds for these concerns in case of V-Dem indicator, as the latter is constructed in a way that does not include any institutional variables. Correction for self-selection bias also does not change the results.

In this chapter, the rule of law is assessed as a whole, without a breakdown into its components. As it was argued in the theoretical chapter, it might be that the impact of authoritarian institutions on the property rights protection is stronger than on human rights protection, as autocracies have higher incentives protect property rights than human rights. It is also possible that, while the interaction effects predicted by the theory do not hold for the rule of law in a general sense, they may still hold for property right protection or human rights protection. This hypothesis is tested in the following two chapters.

CHAPTER V. DISAGGREGATING THE RULE OF LAW: THE IMPACT OF AUTHORITARIAN INSTITUTIONS ON HUMAN RIGHTS AND PROPERTY RIGHTS PROTECTION

After having measured the impact of authoritarian institutions on the rule of law at large, in this Chapter, I will disaggregate this concept. Specifically, the analysis that follows is directed at measuring the impact of authoritarian institutions on human rights and property rights protection, which are two of the key aspects of the rule of law as discussed in Chapter III. The purpose of the analysis is to test the hypothesis 4 from Chapter III, according to which the impact of formal and informal authoritarian institutions on property rights protection should be stronger than on human rughts protection since authoritarian regimes face higher incentives to protect property rights. Property rights are directly linked to economic performance, thus, the ruling group or the members of authoritarian parliaments and parties have an incentive to restrain dictator's predatory behavior if they are capable of doing so. In contrast, human rights protection does not seem to be directly consequential for economic development as investors normally pay little attention to the degree of human rights violation in the country where they invested as long as their property is protected. At the same time, since repression can serve as one of the tools of keeping in power (together with co-optation), weakening repressions may also weaken the regime.

The methodology used in this Chapter is the same as in Chapter IV. Below, I overview and discuss the indicators of human and property rights protection in order to justify my choice.

Human rights protection

a) Operationalization

Since the number of existing indicators of human rights protection is numerous and it is not possible to use all of them, one has to select a limited number of indicators suitable for this study. The following considerations are important in selecting an appropriate indicator of human rights protection.

First, since the focus of this project is on the impact of different authoritarian institutions, a useful indicator is the one which operationalize only the state violations of human rights. Obviously, human rights can be severely violated by non-state actors too (such as rebel groups or organized crime), however, if I use indicators which take into account activity of non-state actors, the results of the analysis would be less valid, as they would demonstrate the impact of authoritarian institutions on the general level of violence in the country rather than on the level of state-sponsored violence. Moreover, it also seems more reasonable to use aggregate indicators of human rights rather than indicators on separate rights (like, for example, indices capturing freedom of torture or freedom of political killings by V-Dem), since the information on human rights violations in many authoritarian countries is very imprecise. Authoritarian regimes frequently try to hide the episodes of human rights violation from the international audience or to present political persecutions as ordinary criminal cases. It is in fact very frequent in authoritarian regimes that people are persecuted for political motives are formally charged with non-political crimes. Even if these cases are too obviously forged or even if the selective application of the law to certain people and not others is too evident, it may be very hard to definitely prove political motivation behind these cases. For example one can take a case of imprisonment of M. Khodorkovsky, a former Russian tycoon who in early 2000s funded Russian opposition and was later imprisoned, allegedly for tax fraud. Even though it was too evident that the case was politically motivated (which was recognized, for example, by Amnesty International), ECHR in its decision (Khodorkovsky and Lebedev v. Russia) failed to recognize political motives behind the criminal case, although it proved a lot of other violations of European Convention of Human Rights that were present in that case. Thus, using more general indicators which operationalize the overall degree of human rights violations rather than the precise figures can reduce possible errors. Besides, since I treat human rights protection as part of the rule of law concept, which means impartial enforcement of legal norms, this means that it is only civil rights that have to be considered, since, strictly speaking, lack of social or political rights does not necessarily exclude civil rights protection. Historically, the ideas of equality before law and individual freedoms were implemented in Western countries much earlier that the ideas of political and social rights. For example, the Bill of Rights of the United States Constitution, which covers main civil liberties and guarantees of fair trial, was introduced in late XVIII century while universal suffrage was introduced only in 1920, and social rights were non-existent before the Great Depression. In addi-

tion, including political rights in the dependent variable would cause endogeneity problem, as voting rights and alternative elections are already part of the definition of a fully institutionalized authoritarian regime.

I review two widely used measurements of human rights protection for which data is available for long time period, and which fit the criteria mentioned above. These indicators are Political Terror Scale (PTS, Wood & Gibney 2010) and Physical Integrity index by Cingranelli and Richards Human Rights Data Project (CIRI, Cingranelli & Richards 2010)[78]. Both indicators capture the intensity of state repressions in the country, which is the clearest manifestation of civil rights violations. These indicators have been used in multiple studies, and both indexes are sometimes used together to assure robustness of the findings. They were applied (either one of them or both of them) to understand an impact of different factors on state repression and human rights violation, such as youth population (Nordas & Davenport 2013), autocratic regime longevity (Rorbaek et al. 2014), free market policies (De Soysa & Fjelde 2010), globalization (Harfer-Burton 2005), international human rights activists (Harfer-Burton 2008, Murdie & Davis 2012), and to answer multiple other research questions so they can be considered standard and established indicators of human rights protection in political science.

Both indicators fit the requirements outlined above: they capture only state-sponsored human rights violations, provide an aggregate summary of human rights situation in a given country-year, and take into account only physical integrity rights, that is, the rights not to be killed, tortured, or imprisoned for political beliefs by the state, in other words, the rights that are the most directly linked to the concept of the rule of law as defined in this project.

The first one, PTS, operationalizes the degree of state repression in a country in a given year, using a 5-point scale (1 meaning the lowest degree of political terror and 5 meaning the highest). The coding is done based on two sources: Country Reports on Human Rights Practices by the U.S. Department of State and Annual Report by Amnesty International; the reports are treated separately, and result in two different scores, PTS-S and PTS-A respectively. Coders are explicitly required to ignore their own feelings or their knowledge of cases and rely only on the reports while coding. The latter index contains more more missing values as U.S. Department of State reports include mode countries; however, PTS-S score can be biased

[78]These two articles appear in the same journal issue, and their authors are very critical of each other's work.

due to the fact that U.S. foreign policy preferences may affect the State Department reports (for example, Poe et al. 2001 compared the two indexes quantitatively and concluded that there is a systematic bias in the U.S. State Department reports in favor of U.S. friends and against U.S. foes, mostly against leftist regimes), even though they claim the bias was the highest during Reagan's presidency and that, later on, the two reports started to converge. Speaking about Amnesty International reports, it has been claimed in Ballesteros et al. (2007) that Amnesty International, while being very accurate on the description of specific events, fail to adequately reflect the dynamics of the situation with human rights and often indicates deterioration of the situation with human rights when it actually did not take place; for this reason, Ballesteros et al. (2007), having analyzed the Amnesty International reports on Columbia, warn against the usage of these reports in constructing quantitative indicators of human rights violations. Given that both U.S. State Department reports and Amnesty International reports may contain their own bias, it is necessary to treat both sources separately, to ensure that the findings are not caused by biases of the source.

Importantly, the index does not account for violence committed by non-state actors (like criminal gangs or insurgent groups) and also operationalizes only direct violations of physical integrity of citizens, not a general level of political freedom (the authors make an example of the USSR in the 1980s, where, in spite of all-embracive control over society by the state security forces, the actual degree of citizens' physical integrity violations was quite low, thus, the USSR had a score of only 2-3 during this time period). The underlying dimensions of coding political terror are: scope (type of violence, i.e. whether it is arrests, torture, or killings), intensity (frequency with which the acts of political terror occur), and range (proportion of population which is subject to abuse). However, there are no separate scores for each dimension, and all the three dimensions are taken into account simultaneously during the process of index construction. Since the range of political terror is one of the coding criteria, the coding depends on the country size. For example, an arbitrary imprisonment of 10 000 people in China would affect PTS score less than an arbitrary imprisonment of 10 000 people in Cuba.

CIRI approach, is also based on coding of the report by the U.S. Department of State and Amnesty International and also assesses state-sponsored repression. Both reports taken into account while coding, there are no separate scores for each document. CIRI and PTS scores are highly correlated (for the data used in

this project, correlation between PTS-S and CIRI score ranges from -0.73 to -0.83, depending on the type of correlation coefficient[79]), however, there are important differences. First, while PTS does not disaggregate between types of political terror, CIRI explicitly distinguishes between disappearance, killing, political imprisonment (for non-violent acts), and torture. All the four types of state-sponsored violence are coded separately, and, for each dimension, a country can get a score of 0, 1 and 2, which corresponds to, respectively, frequent (over 50 instances), occasional (between 1 and 50 instances), or zero occurrence of a given type of political terror in a given year[80]. The final index is a sum of all the four values. Second, CIRI does not make any "discount" for bigger countries, and, no matter how big the country is, the coding scheme is based on an absolute number of instances if they are available (so, even countries with good record of human rights protection, such as Australia or Canada or Denmark, are occasionally getting the scores of 1 instead of 2 if there is any single instance of breach of physical integrity in these countries in a given year). CIRI defends this decision on the normative grounds, claiming that, if one takes into account the country size while assessing the degree of human rights violations in the country, then one effectively assumes that a human life is worth less in a bigger country than it does in a smaller one, which contradicts to a principle according to which each life has an equal value. In the author's own words, their coding is based on standards established by the international law and not on relative position of one countries over others.

Among criticisms towards CIRI coding, mentioned in Wood & Gibney (2010), there are two main ones which are relevant for this project and which determine my choice of PTS score over CIRI index. The first criticism is that, while disaggregation of human rights violations into four categories by CIRI is an advantage over PTS score, a simple sum of subcomponents of CIRI index might be problematic. Essentially, the assumption behind this summing is that disappearance, killing, imprisonment, and torture have the same importance, which is unintuitive as politically motivated imprisonment is a less serious violation of physical integrity than a politically motivated murder. The second reason is that CIRI is coding human rights violations based on the absolute number of occurrences of a given type

[79] Minus sign just indicates that, in PTS score, the values range from best to worst and in CIRI score they range from worst to best; the value of Pearson correlation (suitable for interval variables) is -0.83 and the values of Spearman and Kendall's correlation (both are suitable for ordinal data) are, respectively, -0.83 and -0.73 (all for PTS-S scores)

[80] To be fair, Cingranelli&Richards (2010) make it clear that, in most cases, there is no precise information on human rights violations in many countries so the assessment is based more on qualitative description presented in the reports

of violations, which, although it is justifiable from a normative point of view, may create empirical problems. Based on absolute numbers, it is not possible to say whether a given regime relies on targeted repression to deter potential opposition or it has to use mass-scale state violence as the definition of "targeted" and "mass scale" repression is based on the share of people affected by it, not on its absolute number.

Thus, in the current chapter, only PTS score will be used as the dependent variable; both PTS-S and PTS-A will be used, so that individual biases of U.S. State Department and Amnesty International reports do not affect the result. PTS-S and PTS-A indexes are, as expected, strongly correlated but are not identical (Pearson's, Spearman's, and Kendall's correlation coefficients between the two indices are, respectively, 0.73, 0.72 and 0.65). Thus, the use of both PTS-S and PTS-A scores as separate dependent variables can genuinely be treated as a robustness check.

For assessing the impact of authoritarian institutions on the human rights protection, I use the same methodology as Chapter IV. A statistically correct model, which would fully take into account the ordinal nature of PTS would be an ordinal logit model with random effects; however, these models cannot be estimated because there are not enough observations to fit the model. Thus, I have to estimate linear models, assuming that a score with 5 possible values can be reasonably treated as interval.

Similarly to the methodology used to estimate the impact of authoritarain institutions on the rule of law at large, I first estimate fixed effects models, random effects models, and AR(1)-PCSE models with typologies of formal and informal institutions, with and without interaction. I also test the difference between the intercepts for different regime categories for models with interaction. Then, I run the same model using dichotomous distinction between the regimes which are fully institutionalized and fully constrained and all the others. Heckman correction is also made for the models with dichotomous distinction, to control for self-selection of authoritarian institutions. The same procedure is applied to both PTS-S and PTS-A scores, to ensure the robustness of the findings. Apart from PTS index, available in appendix to Wood & Gibney (2010), the data is the same as in Chapter IV, as well as the software packages.

b) Analysis

First, I start with treating formal and informal authoritarian institutions separately and with assessing their separate impact on human rights protection, as well as the impact of interaction effects. The results of the analysis are presented in the following tables, for PTS-S and PTS-A indexes respectively, and the models for both tables are ordered as before: fixed effects, random effects, add AR(1)-PCSE model, first without interaction effects and then with them. The sample of country-years is the same as in the previous chapters.

Table 15: **Impact on authoritarian institutions on PTS-S index: interaction effects**

	I	II	III	IV	V	VI
Logged GDP pc.	−0.168*	−0.173	−0.105*	−0.171*	−0.193	−0.109*
	(0.080)	(0.149)	(0.046)	(0.080)	(0.150)	(0.044)
Logged population	0.385***	0.895**	0.328***	0.385***	0.804**	0.328***
	(0.052)	(0.273)	(0.031)	(0.053)	(0.278)	(0.030)
Infant mortality	0.001	0.007*	0.005**	0.001	0.006*	0.005**
	(0.002)	(0.003)	(0.002)	(0.002)	(0.003)	(0.002)
Resource	0.005	0.001	0.005	0.005	0.001	0.005
	(0.003)	(0.004)	(0.003)	(0.003)	(0.004)	(0.003)
Constrained	−0.315*	−0.241	−0.124	−0.084	0.081	−0.020
	(0.159)	(0.225)	(0.131)	(0.200)	(0.269)	(0.151)
Unconstrained	0.162	0.921***	0.060	0.318	1.057***	0.134
	(0.167)	(0.269)	(0.118)	(0.199)	(0.305)	(0.141)
Institutionalized	−0.097	−0.191*	−0.024	0.267	0.110	0.206
	(0.074)	(0.082)	(0.094)	(0.190)	(0.204)	(0.221)
Non-institutionalized	0.122	0.116	0.282*	0.234	0.169	0.109
	(0.117)	(0.123)	(0.138)	(0.282)	(0.298)	(0.287)
Regime duration	−0.004	0.013*	−0.006***	−0.003	0.016**	−0.007***
	(0.002)	(0.006)	(0.001)	(0.002)	(0.006)	(0.001)
Democratic legacy	−0.004	−0.270	0.090	0.028	−0.216	0.112
	(0.137)	(0.200)	(0.134)	(0.140)	(0.203)	(0.126)
Inst. X Constr.				−0.472*	−0.528*	−0.246
				(0.226)	(0.246)	(0.232)
Inst. X Unconstr.				−0.393	−0.277	−0.284
				(0.214)	(0.228)	(0.228)
Non-inst. X Constr.				−0.375	−0.536	−0.127
				(0.332)	(0.356)	(0.431)
Non-inst. X Unconstr				−0.050	0.125	0.403
				(0.321)	(0.336)	(0.343)
Intercept	−1.676		−1.605*	−1.802		−1.642*
	(1.249)		(0.740)	(1.263)		(0.712)
R^2	0.231	0.075	0.354	0.234	0.084	0.362
Num. obs.	978	978	978	978	978	978

$^{***}p < 0.001$, $^{**}p < 0.01$, $^{*}p < 0.05$

Table 16: **Impact on authoritarian institutions on PTS-A index: interaction effects**

	I	II	III	IV	V	VI
Logged GDP pc.	0.051	0.255	−0.033	0.050	0.245	−0.034
	(0.090)	(0.172)	(0.059)	(0.089)	(0.172)	(0.060)
Logged population	0.386***	0.771*	0.335***	0.395***	0.738*	0.348***
	(0.059)	(0.314)	(0.037)	(0.059)	(0.318)	(0.035)
Infant mortality	0.006**	0.014***	0.005*	0.007**	0.014***	0.005*
	(0.002)	(0.004)	(0.002)	(0.002)	(0.004)	(0.002)
Resource	0.002	0.003	0.002	0.003	0.003	0.001
	(0.004)	(0.004)	(0.003)	(0.004)	(0.004)	(0.003)
Constrained	−0.159	−0.193	−0.076	0.039	0.059	−0.155
	(0.174)	(0.239)	(0.121)	(0.216)	(0.286)	(0.136)
Unconstrained	0.176	0.849**	−0.010	0.338	0.941**	0.084
	(0.186)	(0.300)	(0.134)	(0.219)	(0.338)	(0.138)
Institutionalized	−0.258**	−0.303**	−0.113	0.302	0.288	0.128
	(0.085)	(0.095)	(0.105)	(0.220)	(0.240)	(0.198)
Non-institutionalized	−0.099	−0.080	0.134	−0.375	−0.393	−0.500
	(0.133)	(0.141)	(0.185)	(0.311)	(0.331)	(0.335)
Regime duration	−0.003	0.008	−0.004*	−0.003	0.011	−0.005**
	(0.002)	(0.006)	(0.001)	(0.002)	(0.007)	(0.002)
Democratic legacy	0.072	−0.091	0.100	0.093	−0.050	0.095
	(0.152)	(0.223)	(0.125)	(0.153)	(0.226)	(0.117)
Inst. X Constr.				−0.635*	−0.820**	−0.097
				(0.259)	(0.285)	(0.236)
Inst. X Unconstr.				−0.634*	−0.622*	−0.385
				(0.248)	(0.269)	(0.213)
Non-inst. X Constr.				−0.080	−0.210	0.560
				(0.369)	(0.398)	(0.464)
Non-inst. X Unconstr				0.446	0.560	0.855*
				(0.355)	(0.375)	(0.363)
Intercept	−3.818**		−2.335*	−4.123**		−2.538**
	(1.403)		(1.015)	(1.401)		(0.968)
R^2	0.192	0.066	0.256	0.204	0.084	0.266
Num. obs.	915	915	915	915	915	915

$^{***}p < 0.001$, $^{**}p < 0.01$, $^{*}p < 0.05$

Speaking of the control variables, the only variable which has a significant positive effect on PTS index for all models (that is, a negative effect on human rights protection) is logged population – which, in this case, can only be explained by a higher vulnerability of smaller countries to the Western pressure to respect human rights (Levitsky and Way 2010). For most models, the effect of logged GDP per capita and/or infant mortality is also significant and go in expected direction.

Speaking about the main variables of interest, the pattern is even more mixed than in case of indicators of the rule of law, which have been examined in Chapter IV. Both for PTS-S and PTS-A index, there interaction term between formally institutionalized and informally constrained regimes is statistically significant and negative, as expected – but only for fixed and random effects models, not for AR(1)-PCSE ones.

In order to identify if, nevertheless, the initial hypotheses of the current research about interaction effects between formal and informal institutions can hold in case of human rights protection, I test the difference between institutionalized, semi-institutionalized, and non-institutionalized regimes for three separate groups, namely, for constrained, semi-constrained, and unconstrained regimes. The theoretical expectations, as in the case of the rule of law, are the following:

1) for unconstrained regimes, there should be no significant difference between different levels of institutionalization,

2) for semi-constrained regimes, there should be some significant difference between different levels of institutionalization,

3) for constrained regimes, there should be highly significant difference between different levels of institutionalization.

This is done for PTS-S and PTS-A indices, for random effects models and AR(1)-PCSE models (it cannot be done for fixed effects models because they do not have a general intercept).

Table 17: **Intercept values for different combinations of formal and informal institutions: PTS-S, random effects model**

	Non-institutionalized	Semi-institutionalized	Institutionalized
Unconstrained regimes	-0.05	0.32	-0.39
Semi-constrained regimes	0.23	-1.80	0.27
Constrained regimes	-0.37	-0.08	-0.47

Table 18: **Testing interaction effects between formal institutions and informal constraints: PTS-S, random effects model (p-values)**

	Non-institutionalized vs Semi-institutionalized	Semi-institutionalized vs. Institutionalized	Non-institutionalized vs. Institutionalized
Unconstrained regimes	0.0442*	0.0442*	0.2958
Semi-constrained regimes	0.1145	0.1114	0.9138
Constrained regimes	0.5302	0.2938	0.7718

Table 19: **Intercept values for different combinations of formal and informal institutions: PTS-S, AR(1)-PCSE model**

	Non-institutionalized	Semi-institutionalized	Institutionalized
Unconstrained regimes	0.40	0.13	-0.28
Semi-constrained regimes	0.11	-1.64	0.21
Constrained regimes	-0.13	-0.02	-0.25

Table 20: **Testing interaction effects between formal institutions and informal constraints: PTS-S, AR(1)-PCSE model (p-values)**

	Non-institutionalized vs Semi-institutionalized	Semi-institutionalized vs. Institutionalized	Non-institutionalized vs. Institutionalized
Unconstrained regimes	0.211	0.211	0.0294*
Semi-constrained regimes	0.0243*	0.0195*	0.7266
Constrained regimes	0.8386	0.5106	0.7554

Table 21: **Intercept values for different combinations of formal and informal institutions: PTS-A, random effects model**

	Non-institutionalized	Semi-institutionalized	Institutionalized
Unconstrained regimes	0.45	0.34	-0.63
Semi-constrained regimes	-0.38	-4.12	0.30
Constrained regimes	-0.08	0.04	-0.64

Table 22: **Testing interaction effects between formal institutions and informal constraints: PTS-A, random effects model (p-values)**

	Non-institutionalized vs Semi-institutionalized	Semi-institutionalized vs. Institutionalized	Non-institutionalized vs. Institutionalized
Unconstrained regimes	0.0148*	0.0148*	0.0031**
Semi-constrained regimes	0.0087**	0.0022**	0.0407*
Constrained regimes	0.814	0.1001	0.1378

Table 23: **Intercept values for different combinations of formal and informal institutions: PTS-A, AR(1)-PCSE model**

	Non-institutionalized	Semi-institutionalized	Institutionalized
Unconstrained regimes	0.85	0.08	-0.38
Semi-constrained regimes	-0.50	-2.54	0.13
Constrained regimes	0.56	-0.16	-0.10

Table 24: **Testing interaction effects between formal institutions and informal constraints: PTS-A, AR(1)-PCSE model (p-values)**

	Non-institutionalized vs Semi-institutionalized	Semi-institutionalized vs. Institutionalized	Non-institutionalized vs. Institutionalized
Unconstrained regimes	0.0989	0.0989	0.0011**
Semi-constrained regimes	0.0502	0.0101*	0.0849
Constrained regimes	0.1738	0.8568	0.1771

As it is possible to see here, the initial theoretical expectations again do not hold. There does not seem to be any hierarchy between non-institutionalized regimes, semi-institutionalized regimes, and institutionalized regimes, irrespective of the degree of informal constraints.

Since from the regression table one can see that institutionalized constrained regimes seem to have a significant impact on PTS index, I introduce a dummy variable for institutionalized constrained regimes instead of separate variable for each regime category, same way it was done in Chapter IV. I then estimate the same three linear models (fixed effects, random effects, and AR(1)-PCSE models, in that order) for PTS-S (models I, II, III) and PTA-A(models IV, V, VI) indexes. The results are present in the following table:

Table 25: **Impact on authoritarian institutions on PTS-S and PTS-A indices: dichotomous distinction**

	I	II	III	IV	V	VI
Logged GDP pc.	-0.161^{*}	-0.076	-0.090^{*}	0.068	0.369^{*}	-0.016
	(0.079)	(0.148)	(0.043)	(0.090)	(0.169)	(0.061)
Logged population	0.350^{***}	1.099^{***}	0.314^{***}	0.373^{***}	1.003^{***}	0.337^{***}
	(0.051)	(0.267)	(0.024)	(0.058)	(0.304)	(0.031)
Infant mortality	0.001	0.004	0.006^{***}	0.007^{**}	0.013^{***}	0.006^{**}
	(0.002)	(0.003)	(0.002)	(0.002)	(0.004)	(0.002)
Resource	0.004	-0.002	0.006^{*}	0.002	0.001	0.002
	(0.003)	(0.004)	(0.003)	(0.004)	(0.004)	(0.003)
Fully institutionalized	-0.347^{***}	-0.536^{***}	-0.149^{*}	-0.344^{**}	-0.564^{***}	-0.063
	(0.099)	(0.124)	(0.066)	(0.111)	(0.138)	(0.093)
Regime duration	-0.003	0.002	-0.005^{***}	-0.003	-0.004	-0.003^{*}
	(0.002)	(0.005)	(0.001)	(0.002)	(0.006)	(0.001)
Democratic legacy	0.059	-0.066	0.157	0.120	0.123	0.116
	(0.134)	(0.193)	(0.117)	(0.151)	(0.215)	(0.131)
Intercept	-1.161		-1.577^{*}	-3.829^{**}		-2.655^{**}
	(1.196)		(0.629)	(1.364)		(0.917)
R^2	0.224	0.046	0.350	0.181	0.047	0.253
Num. obs.	978	978	978	915	915	915

$^{***}p < 0.001$, $^{**}p < 0.01$, $^{*}p < 0.05$

As it becomes clear from these tables, full institutionalization combined with full informal constraints has a negative effect on both PTS-S and PTS-A scores for all the models, after controlling for other variables. This effect is statistically significant in all models with PTS-S score, but is not significant for PTS-A score for AR(1)-PCSE models. Unfortunately, while one can formally test whether fixed or a random effects model should be preferred (Hausman test), it is no simple formal way to check whether one should prefer fixed/random effects models or AR(1)-PCSE because these models are applied to different types of data. As mentioned in Chapter III, unit effects models (fixed/random effects) models are used in *panel* data (where the number of time units is 10 or less) while AR(1) are used in t*ime series cross-sectional (TSCS)* data, where the number of time units is 20 or more. In the data used for this study, the number of years per each country is, average, 15, which makes it a middle case between panel data and time series cross-sectional data (following Beck and Katz 1995, Beck and Katz 2004); so, there is no simple way to identify whether it is crucial to take into account temporal autocorrelation of errors and panel-wise heteroskedasticity. In any case, the evidence of the impact of full institutionalization of the authoritarian regime on the degree of political repressions is negative in all models and statistically significant for most models, which allows to qualify this finding as relatively robust.

Similarly to what I did in the previous chapter, it is necessary to account for self-selection bias in authoritarian institutions. The results of the models with Heckman correction, both for simple linear regression and with regression corrected for temporal autocorrelation of errors, for PTS-S and PTS-A indices, are presented below (only the final step)[81]:

Table 26: **Selection-corrected PTS-S estimates**

	OLS	AR(1)
Predicted average (fully institutionalized)	2.92	2.91
Predicted average (not fully institutionalized)	3.05	3.07
Difference	0.13***	0.16***

[81] See the first stage of the Heckman model in Table 31 and intermediate calculations for PTS-S and PTS-A indices in Table 34 and Table 35 respectively (all in the Appendix).

Table 27: **Selection-corrected PTS-A estimates**

	OLS	AR(1)
Predicted average (fully institutionalized)	2.92	2.99
Predicted average (not fully institutionalized)	3.00	2.90
Difference	0.08*	0.09**

As one can see, after correction for self-selection, formal institutionalization and informal constraints have a statistically significant impact on the state of human rights protection. As one can see, these regimes tend to be less repressive than the others. Substantially, however, the difference is small: it is 2.6-3.2% for PTS-S index and 1.6-1,8% for PTS-A index.

Property rights protection

a) Operationalization

Indicators of property rights protection are harder to find in open access than indicators for human rights protection because the latter are used by businesses (especially be transnational corporations) which take decisions on whether or not to invest in a given country based on these indices. Thus, data are not always publicly available, and the creators of property rights protection indices also do not code countries backwards (meaning that, if they start coding country-years, for example, in 2000, they do not code country-years before 2000). For these reasons, it turned out to be impossible to use several highly reputable indicators of property rights protection. For example, "International Property Rights Index" (IPRI), which contains sub-indicators on both physical and intellectual property protection for most countries[82] is, unfortunately, available only starting from 2006 onwards. Also, for the earlier editions of this index, the data is not available for Middle East, Central Asia, and most African countries. Thus, the use of this index in this project is impossible, since the data on my main independent variables is available only up to 2008. A country risk assessment provided by a Belgian political risk insurance company "Credendo Group" (formerly, Belgian Export Credit Agency, or ONDD), which includes assessment of expropriation risks, is currently not available longitu-

[82] An overview of IPRI methodology can be found at: https://ipri2017.herokuapp.com/IPRI_Structure

dinally; their official website features only the data for 2018[83]. The same problem is with the data by World Economic Forum, which provides the data (including the data on property rights protection) only from 2007 onwards. The data from International Country Risk Guide (IRCG) which contains indicators related to property rights protection and risk of expropriation from 1980 onwards [84] is available only on commercial basis [85]

To the best of my knowledge, the only indicator which is both freely available and covers a sufficient number of country-years under study is the Index of Economic Freedom by the Heritage Foundation and Wall Street Journal (Miller & Holmes 2009). This is the index composed of 10 (as of 2009, currently 12) indicators, operationalizing different aspects of economic freedom in most countries in the world on an annual basis. For each aspect, expects assign a score ranging from 0 to 100, where 0 means the worst score and 100 means the best. The methodological description also contains a qualitative description of what the situation with the property rights in the country have to be in order to qualify for a given score (i.e there is a short description of what it means that the country's score is within the range of 91-100, 81-90, 71-80, and so on). The overall index is a simple average of all the components.

This index has been widely used in a scholarly literature. For example, it has been used for assessing the impact of economic freedom on economic growth (de Haan & Strum 2000), on entrepreneurial activity (Aidis et al. 2010, Estrin et al. 2013), or on FDI influx (Bengoa & Sanchez-Robles 2003). Thus, it can also be considered a reputable indicator acknowledged in social sciences.

In this study study, I am interested in the property rights component, which, according to their codebook, represents legal protection of property rights, enforcement of laws protecting property, access to justice in case of property rights violation, enforcement of contracts, and risks of expropriation. The index is constructed by expects based on several publications issued by the Economist Intelligence Unit, U.S. Department of Commerce and U.S. Department of State (Miller & Holmes 2009). As for endogeneity, there are no components in the index which would rep-

[83] According to papers which have been using their data previously (e.g. Jensen & Young 2008 or Jensen & Johnston 2011), it was publicly available in a longitudinal format at the website www.ducroire.be . However, it is not available any longer, and an attempt to request this data from Credendo Group itself did not lead to any result.

[84] An overview of ICRG indicators is and methodology is available at : https://www.prsgroup.com/wp-content/uploads/2012/11/icrgmethodology.pdf

[85] Even if it is possible to get this data for the current research, it would not be allowed to share it in the replication material, which would diminish the replicability of the research.

resent the formal or informal authoritarian institutions, thus, there are no reasons to believe the relation between authoritarian institutions and the property rights component of HF index may be endogenous.

b) Analysis First, I analyze the impact of interaction between formal and informal authoritarian institutions on Heritage Foundation indicator. The models are, as before, random effects, fixed effects, and AR(1)-PCSE, fith without interaction effects and then with them.

Table 28: **Impact on authoritarian institutions on HF index: interaction effects**

	I	II	III	IV	V	VI
Logged GDP pc.	8.038***	−6.359**	10.494***	8.396***	−5.725*	10.731***
	(1.619)	(2.351)	(1.499)	(1.602)	(2.371)	(1.427)
Logged population	−5.692***	−57.863***	−2.436**	−5.192***	−57.127***	−2.060**
	(1.180)	(5.069)	(0.796)	(1.162)	(5.085)	(0.737)
Infant mortality	0.098*	−0.375***	0.137**	0.110*	−0.362***	0.130**
	(0.043)	(0.052)	(0.042)	(0.043)	(0.052)	(0.040)
Resource	−0.350***	0.001	−0.289***	−0.361***	−0.006	−0.331***
	(0.054)	(0.054)	(0.072)	(0.054)	(0.054)	(0.072)
Constrained	3.377*	4.677**	4.884*	1.249	3.382	3.738
	(1.622)	(1.543)	(1.925)	(3.894)	(3.446)	(2.982)
Unconstrained	3.398	−0.110	1.510	1.796	−1.422	2.695
	(2.500)	(2.181)	(1.761)	(5.067)	(4.453)	(2.225)
Institutionalized	−3.481	−14.376	−2.590	−7.798	−17.239	−7.461*
	(4.717)	(10.519)	(2.708)	(5.310)	(11.218)	(3.567)
Non-institutionalized	−9.829*	−27.087**	−4.830*	−7.623	−26.388*	−2.329
	(4.668)	(9.880)	(2.143)	(5.305)	(10.682)	(2.737)
Regime duration	−0.135**	−0.534***	0.049*	−0.130**	−0.556***	0.046*
	(0.046)	(0.095)	(0.022)	(0.045)	(0.096)	(0.021)
Democratic legacy	−0.646	2.352	−0.702	−1.045	2.137	−1.144
	(3.047)	(4.397)	(1.748)	(3.014)	(4.404)	(1.322)
Inst. X Constr.				7.367	3.954	7.739*
				(4.697)	(4.237)	(3.096)
Inst. X Unconstr.				7.319	11.015	3.015
				(8.359)	(7.206)	(2.374)
Non-inst. X Constr.				−1.349	−0.475	−1.916
				(4.582)	(4.151)	(2.966)
Non-inst. X Unconstr				−0.820	−1.336	−3.382
				(6.058)	(5.330)	(3.138)
Intercept	70.040*		−15.001	58.873*		−22.108
	(28.027)		(26.433)	(27.763)		(24.643)
R^2	0.154	0.371	0.502	0.163	0.376	0.522
Num. obs.	710	710	710	710	710	710

$^{***}p < 0.001$, $^{**}p < 0.01$, $^{*}p < 0.05$

As Table 28 shows, the results are clearly inconsistent, and the difference between random effects models and fixed effects models is particularly drastic. The effect of logged GDP per capita and of logged population is quite small in random effects models but is dramatically strong for fixed effects models. The opposite is true for resource dependence: the effect of resource dependence is not significant for fixed effects models and significant for the two others. What is worse, the effect of infant mortality on IRCG index is positive and significant for random effects model and AR(1)-PCSE model (which is to be expexted, since infant mortality is a proxy for economic development, and better economic development should be negatively related to the risk of expropriation) but is *negative* and significant for fixed effects model. The most likely explanation for these discrepancies is that in a short time period under consideration (less than 10 years for both indicators), socioeconomic and demographic variables have have very little within-case variation because they tend to change very slowly. Since fixed effects models (as mentioned in Chapter IV) essentially remove all between case variation from consideration, even slight, and, probably, accidental changes in these variables from one year to another may dramatically influence the coefficients.

As for the main explanatory variables, the coefficients seem unstable and barely significant. For this reason, it does not make sense to check the difference between raw intercepts, as it is done with human rights protection indicators.

From previous findings of this study, however, it is possible to gather that there is a substantial difference between institutionalized constrained autocracies and autocracies with any other formal or informal authoritarian institutions in terms of the rule of law in general as well as in terms of human rights protection. This gives grounds to test the same relationship for the property rights protection indicator. The models are, as previously, fixed effects, random effects, and AR(1)-PCSE, in that order. The next table represents the results of this analysis:

Table 29: **Impact on authoritarian institutions on the HF index: dichotomous distinction**

	I	II	III
Logged GDP pc.	7.862***	−7.056**	10.120***
	(1.661)	(2.365)	(1.368)
Logged population	−5.404***	−59.195***	−2.381***
	(1.181)	(5.066)	(0.572)
Infant mortality	0.115**	−0.349***	0.131***
	(0.042)	(0.052)	(0.039)
Resource	−0.333***	0.015	−0.250***
	(0.053)	(0.053)	(0.067)
Fully institutionalized	7.945***	8.677***	6.316***
	(2.166)	(2.288)	(1.537)
Regime duration	−0.160***	−0.427***	0.033
	(0.047)	(0.089)	(0.024)
Democratic legacy	−2.230	−2.845	−1.898
	(3.082)	(3.976)	(2.017)
Intercept	60.890*		−13.908
	(26.846)		(19.279)
R^2	0.151	0.356	0.493
Num. obs.	710	710	710

$^{***}p < 0.001$, $^{**}p < 0.01$, $^{*}p < 0.05$

As Table 29 shows, even if the impact of other factors remains unstable across model specifications, the impact of insititutionalized constrained autocracies is positive and highly significant: these regimes on average have 6-7% better score of Heritage Foundation indicator that others, controlling for other relevant factors.

Finally, in line with previous tests, I control for self-selection. The results of the final step are presented below[86]:

Table 30: **Selection-corrected HF estimates**

	OLS	AR(1)
Predicted average (fully institutionalized)	44.4	46.2
Predicted average (not fully institutionalized)	37.4	36.8
Difference	7.0***	9.4***

As Table 30 shows, controlling for self-selection does not affect the conclusions: formally institutionalized and informally constrained regimes are still performing better in terms of property rights protection than all the others. Substantially, the difference is bigger than for human rights protection (it is 7-9.4% depending on the model, after controlling for self-selection, versus a maximum of 3.2% for human rights protection indicators). Even though there is an impact of formal institutionalization and informal constraints both on human human rights protection and property rights protection, the impact on the latter appears to be stronger.

Summary and discussion of results

In the theoretical chapter, I suggested that, compared to the property rights protection, human rights protection should not be affected to the same extent, if at all, by formal institutions and informal constraints. The initial expectations was that protecting the property rights was important for country's economic development and also relevant for those for members of authoritarian parliaments or parties, as they need to protect their own property; thus, the ruling group or members of formal institutions would have strong incentives for better property right protection. In contrast, I expected that the benefits of improving situation with human rights protection were not obvious for the ruling group or members of formal institutions. Hence, I did not expect that formal or informal authoritarian institutions can affect human rights protection. Overall, my expectation can be considered *confirmed*:

[86]See the first stage of the Heckman model in Table 31 and intermediate calculations for HF index in Table 36 (all in the Appendix).

the strength of impact of formal institutionalization and informal constraints on property rights protection is three times stronger than on human rights protection. However, it is worth discussing why the effect on the latter, even if small, is still present, contrary to what I originally expected.

One potential explanation for the significant effect of authoritarian institutions on human rights protection indicators may be that people who belong to the ruling group or to formal authoritarian institutions are afraid of repressions against themselves. Violent purges against elites are very frequent in autocracies. One can think of expulsion from the party and later execution or murder of the top-level party officials in the USSR in 1930s[87] or purges in Maoist China during the "cultural revolution", or, later after his death, repressions against those who organized this "cultural revolution"[88]. Thus, while the ruling group or members of authoritarian institutions may not be necessarily against repression against ordinary people or against the opposition which is not co-opted, it would seem reasonable for them to restrain dictators' capability to repress to protect themselves from repression.

Another explanation for the significant impact of authoritarian institutions on human rights protection can be found in Wright & Escribà-Folch (2009). They study the impact of international human rights shaming campaigns on dictators' turnover. They provide some preliminary quantitative evidence that international shaming campaigns of human rights violations (measured by UN Human Rights Council resolutions) decreases the amount of foreign aid provided by international donors and decrease foreign trade, which diminishes dictators' possibility to redistribute spoils and signals dictators' weakness to domestic audience. Thus, intensifying repressions can have a real economic effect as well, contrary to what I claimed in Chapter III, based on some anecdotal evidence. In personalist regimes, that leads to a lower chance of regular dictator's exit (meaning voluntary resignation or losing elections) but a higher chance of an irregular dictator's exit (in other words, of a coup), as in these regimes there is hardly any other way to remove the dictator. In non-personalist regimes, however, this leads to a higher chance of a regular dictator's exit (meaning resignation or ousting by dictator's own party). Thus, they claim, a credible threat of regular ousting in party or military regimes can constrain dictator's repressive behavior. Wright & Escribà-Folch (2009) demonstrate it with

[87] Among the most prominent: Leon Trotsky, Grigorij Zinoviev, Lev Kamenev, Nikolai Bukharin, all of them were, in certain periods of time, Politburo members and high-rank state officials. Many of their supporters in the party were also punished, up to execution.

[88] The most famous was the trial against the "Gang of Four", a group of four top-level party activists who had a prominent role during the "cultural revolution": Jiang Qing, Zhang Chunqiao, Yao Wenyuan, and Wang Hongwen.

an example of Iran where international pressure on the country, combined with a domestic pressure of a moderate faction within the ruling elite, forced Iranian President Mahmud Ahmadinejad (who at that time faced new elections and has all chances of losing) to release an Iranian-American journalist Roxana Saberi, who had been arrested before allegedly for buying alcohol. These two potential explanations can account for why, according to to the findings of the current study, regimes which are formally institutionalized and informally constrained tend to repress to a lesser extent, controlling for other factors.

Overall, the empirical study of the impact of authoritarian institutions on human rights and property rights protection demonstrates that this impact is statistically significant for both property rights and human rights protection. It also demonstrates that the impact of authoritarian institutions is substantially larger for property rights protection. Overall, these findings confirm my theoretical expectations, even though the actual relation between authoritarian institutions on different components of the rule of law turns out to be different from the one hypothesized.

CONCLUSIONS

After having examined the impact of formal and informal authoritarian institutions on the rule of law at large, as well as on its human rights protection and property rights protection components, I now summarize and elaborate on the main findings.

A huge scholarship shows that authoritarian institutions have an effect on economic development, on foreign investment, and on citizens' welfare in authoritarian regimes. Both formal institutions and informal constraints have a positive impact on the regime performance. The goal of this project was to go deeper than merely asserting these differences, and to try to capture the causal mechanism which links authoritarian institutions and their performance [89]

I hypothesized that it was the rule of law which was the link between authoritarian institutions and regime performance. This hypothesis was based on the literature in institutional economics (starting from North 1987, 1989) which, firstly, asserted that econometric development primarily depended on institutions, and, secondly, claimed that the most important institutions which generate economic growth were the rule of law and property rights protection. [90]

I adopted an essentially dichotomous distinction of democracy and autocracy based on the procedural criteria. I provided a number of reasons for disregarding indices of democracy, such as Freedom House, Polity IV, Voice and Accountability, and Tatu Vanhanen index of polyarchy index, both because they are all incompatible with the procedural criteria of democracy and because, as I demonstrated, the use of all these indices leads to obvious empirical mistakes in distinguishing democracies and autocracies. I chose not to rely on the notion of "hybrid" or "competitive authoritarian" regimes as the criteria for distinguishing between "pure" authoritarian regimes and "competitive" authoritarian (or "hybrid") regimes is vague, and, if applied rigorously, would classify many established democracies as hybrid regimes for some relatively minor flaws. I also decided not to use the famous typology of Juan Linz who dinstinguished between totalitarian and authoritarian regimes, because this typology was hardly useful for the time frame I studied. Choosing

[89] I am aware of the fact that, without in-depth qualitative analysis of particular cases, it is not possible to trace *actual*causal mechanisms that translate authoritarian institutions into better or worse state of the rule of law and its components. However, using quantitative methods, it was possible find more direct evidence of causal mechanisms which link the authoritarian institutions and regime performance.

[90] This link has been extensively proven both quantitatively (e.g. Rodrik et al. 2004) and qualitatively (e.g. Acemoglu & Robinson 2012), which led me to bracket the quest for additional evidence of this relationship.

between the two operationalizations of democracy and autocracy which are both based on procedural understanding of democracy and are essentially dichotomous I chose the classification of Geddes et al. (2014). Even if Geddes' classification is less parsimonious and clear-cut compared to the classification criteria of Adam Przeworski, Geddes' classification makes better use of contextual data, which makes the overall coding to be more accurate.

I developed a classification of authoritarian regimes based on the level of formal institutionalization and the level of informal constraints. Based on the degree to which the ruling group (the military or the party) keeps its organizational autonomy and can constrain the decision-making of the dictator, I distinguished between unconstrained, semi-constrained, and constrained regimes. Based on presence of legislature, parties, and alternative elections, I distinguished between non-institutionalized, semi-institutionalized and institutionalized autocracies. These classifications were based on existing literature (primarily, Geddes et al. 2014, Gandhi & Przeworski 2006) but, compared to the classifications used in other works, were substantially modified: I coded the regimes by the degree of formal institutionalization and by the degree of informal constraints, leaving aside the question of the nature of the ruling group. Doing so, I obtained a classification of authoritarian regimes with two clearly defined dimensions which produced 9 resulting categories which are mutually exclusive and totally exhaustive.

Based on previous literature, I formulated four hypotheses about how the different combination of formal and informal institutions led to different outcomes in terms of the rule of law. I suggested that the impact of formal institutions was conditional on informal constraints. Namely, I expected that, in unconstrained regimes, the impact of formal institutionalization of the rule of law would be non-existent while in constrained regimes, the effect of formal institutionalization would be positive and significant. I could hypothesize that based on other research, for example, Wright (2008) or Wright & Escribà-Folch (2011), who theorized that the impact of formal authoritarian institutions on, respectively, economic growth and the likelihood of democratization after the regime failure, depended on whether a given regime is personalized or not.

The results of empirical analysis I conducted can be summarized as follows.

First, this dissertation contribute to already existing evidence that authoritarian institutions genuinely matter for regime performance. Conventional wisdom tells us

that authoritarian parliaments, parties, and elections, are merely window-dressing which have no effect on real decision-making, and that dictators' support group is always handpicked and can be replaced at dictator's will. However, the literature on authoritarian institutions has long shown that these institutions make a huge difference in authoritarian regimes, even though they do not play the same role as they do in democracies. This study lends support to this scholarship.

In this research, I found out that my initial hypotheses about the interaction between formal and informal institutions did not hold true. I did not find empirical evidence that interaction effects between formal and informal authoritarian institutions are significant; in other words, there was no evidence that formal institutions mattered more for the rule of law or any of its aspects when informal constraints were present. However, it became clear from the initial results that institutionalized constrained regimes had, on average, better degree of the rule of law than all the other regime types under study, and that this difference was statistically significant even after controlling for other variables. Using two different operationalizations of the rule of law and controlling for socioeconomic variables and for potential self-selection of institutions, I demonstrated that institutionalized constrained autocracies performed significantly better than other types of autocracy. These findings remained robust across different model specifications.

I also hypothesized that the impact of authoritarian institutions on property rights protection should be stronger than on human rights protection, as for the ruling group or for groups co-opted into authoritarian parliaments or parties the incentives for improving property rights are higher. In the theoretical chapter, I mentioned several examples of authoritarian regimes in which widespread state-sponsored human rights abuse coexists with strong property rights protection, like contemporary China or Myanmar. Once I tested the available indicators of human rights protection and property rights protection, it turned out that the impact of formal institutionalization and informal constraints on property rights protection is indeed around three times stronger than on human rights protection. However, the latter is also statistically significant, meaning that authoritarian institutions still decrease the level of regime repressiveness. From that, it may be concluded the ruling group or co-opted groups may be willing to avoid repressions against themselves, popular backlash, or potential economic consequences of violating human rights (which, according to Wright & Escribà-Folch 2009, are still present, at least in case if human rights violations are internationally exposed) thus, in a situation

in which they can influence the dictator's decision-making, they are likely to also deter the dictator from violating human rights.

Thus, the findings suggest that two conditions have to be fulfilled simultaneously in a given dictatorship genuinely improve the situation with the rule of law. First, a given authoritarian regime has to have a parliament, multiple parties, and multiparty elections in which the voters have a choice between at least two parties. Second, in a given authoritarian regime a ruling group (the party or the military) must be genuinely able to constrain the decision-making of the dictator. If either of the condition is unfulfilled, the dictatorships become indistinguishable from each other in terms of rule of law in general, as well as in terms of property rights protection and human rights protection.

The fact that not all of my theoretical expectations were satisfied can be explained in several ways. On the one hand, part of the problem is that the regimes which I put in the categories of semi-institutionalized or semi-constrained regimes are in fact very heterogeneous: for example, both the Chinese regime with a legislature, one party and no elections, and U.A.E., which have a legislature without parties, fall under the same category of semi-institutionalized regimes. Similarly, I coded all hybrids with a personalist element as "semi-constrained", even if they are as different as a military-personalist regime in Musharraf's Pakistan (until 2008) and party-personalist regime in Milosevic's Serbia/Yugoslavia (1990-2000). Given this heterogeneity, it is perhaps not surprising that there is no clear pattern that these regimes would follow in terms of the rule of law, human rights protection or property rights protection. On the other hand, the reason behind the limited support for some of my hypotheses may be simply not enough variation in the data rather than a theoretical flaw. The number of non-institutionalized regimes has been very small, thus, an inference on these regimes had to be based on a small number of cases. This is because, by 1990s, most dictatorships introduced at least some formal institutions, both because of the Western pro-democratic pressure and because it became clear for dictators that formally democratic institutions can actually *strengthen* their power rather than undermine it; thus, in the data, there are very few country-years classified as non-institutionalized. If more country-years were analyzed, it might have been possible to find more empirical support to my hypotheses.

The motivation for the decision to include only country-years from 1992 to 2008

was threefold. By this selection of my sample, I ensured better availability of reliable data, removed the need to control for democratic or autocratic pressures and removed the socialist economies from consideration. However, precisely because of that, one had to make inference based on a very small number of observations for some categories. Thus, further research would need to extend the time frame of the analysis, including all country-years for which the data is available. To do this, it would be necessary to explicitly control for both external pressures and for particularities of socialist countries. Dealing with this question could be the avenue for the future research, which could further improve scholarly understanding of how authoritarian regimes differ from each other and how they function.

The dissertation thus makes a number of theoretical and empirical contributions.

One of its theoretical contributions is a classification of authoritarian regimes based on degree of formal institutionalization and the degree of informal constraints. In this particular research, my theoretical expectations about how exactly the interaction of these two dimensions leads to different levels of the rule of law, property rights protection and human rights protection were not met. I expected that the impact of the level of formal institutionalization on the rule of law and its components was higher when informal constraints were also present; I did not find evidence to support this claim. However, the typology developed in this dissertation may be still relevant for those scholars who to study the impact of authoritarian institutions on other phenomena of who want to replicate the analysis conducted in this dissertation using data for other country-years. The procedure which I used for coding regimes based on the level of formal institutionalization and the level of informal constraints is simple and transparent, as it is based on recoding publicly available datasets by Geddes et al. (2014) and Przeworski et al. (2013). Thus, future scholars should not encounter difficulties if they choose to use this typology for their studies. A more important theoretical contribution of this thesis is demonstrating that authoritarian institutions affect economic performance via the rule of law. This theoretical argument follows, on the one hand, from the scholarly works on authoritarian regimes, and, on the other hand, from the literature on institutional economics. Combining these two streams of literature allowed to improve the existing theories on authoritarian institutions. The dissertation's main empirical contribution was to demonstrate that, even after controlling for other factors and taking into account possible self-selection of institutions, a combination of formal institutionalization and informal constraints improves the state of

the rule of law overall, as well as the state of human rights protection and property rights protection. Even though neither theoretical nor empirical contribution of this thesis represent a breakthrough in understanding authoritarian institutions, they contribute to further improvement and validation of existing theories, which is an important accomplishment.

Unfortunately, understanding how authoritarian regimes function is relevant not only scientifically. Overall, the number of dictatorships is high, and growing. Recent developments in a number of countries, including Poland, Hungary, and Turkey, demonstrate that even countries with a relatively long history of democracy can autocratize, and this trend seems to be continuing. Even in a time period covered in this study (1992-2008), which can be considered a "golden age" of liberal democracy, the share of autocratic country-years has been around 40%. In recent years, the share of autocracies has grown well above this figure and it keeps growing, which will make it increasingly impossible to avoid interactions with non-democratic regimes. Thus, the scholarship on how autocracies differ from each other, what their patterns of behaviour are, and what to expect from them will become increasingly relevant not only for political scientists but also for policymakers, businesses, and ordinary people.

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APPENDIX

Heckman models: stages omitted in the chapters

In Chapters IV and V, to control for potential self-selection of authoriarin institutions, two-stage Heckman model was used; the necessary steps to estimate the model are provided in Chapter IV. However, in Chapters IV and V, only the results of the fifth step are reported. Below, I report the results from intermediate steps:

1) Table 31: the first stage of Heckman model, which is a binary probit model estimating the probability of having institutionalized constrained regime in a given country-year. The first stage was used for calculating an inverse of Mill's ratio for presence and absence of full institutionalization and full constraints (not shown) for all further models.

2) Tables 32-36: estimations of regression models for each sub-sample of the data (respectively, a sub-sample of institutionalized constrained regimes and a sub-sample of all other regimes) which contains all the control variables used in the Chapters IV and V, as well as an inverse of Mill's ratio for, respectively, being and not being fully instititonalized and fully constrained. This is calculated for every dependent variable separately, and, for every variable, both simple OLS model and AR(1)-PCSE models were calculated. These coefficients were then used to calculate the predicted variables of the dependent variable for all the data; in this way, I estimated what the values of the dependent variables would have been if all country-years were, respectively, under institutionalized constraned regime and under any other authoritarian institutions (see step 4, p. 99 in Chapter IV). Since, for these calculations, significance tests are irrelevant, I do not report significance levels in the models.

For tables 32-36, the models are the following:

I - OLS, subsample of regimes which are not fully institutionalized and not fully constrained;

II - OLS, subsample of institutionalized constrained regimes;

III - AR(1)-PCSE, subsample of regimes which are not fully institutionalized and not fully constrained;

IV - AR(1)-PCSE, subsample of institutionalized constrained regimes.

Table 31: **Self-selection of authoritarian institutions: first stage (binary probit model, common for all DVs)**

	DV: institutionalized constrained autocracy
Logged GDP pc.	0.274^{***}
	(0.072)
Logged population	0.087^{**}
	(0.033)
Infant mortality	0.007^{***}
	(0.002)
Resource	-0.025^{***}
	(0.005)
Democratic legacy	-0.288^{*}
	(0.131)
Intercept	-4.533^{***}
	(0.985)
AIC	1096.110
BIC	1125.441
Log Likelihood	-542.055
Num. obs.	981

$^{***}p < 0.001$, $^{**}p < 0.01$, $^{*}p < 0.05$

Table 32: **Self-selection of authoritarian institutions: second stage (linear models for each institutional outcome), WGI index**

	I	II	III	IV
Logged GDP pc.	0.207	3.254	0.090	1.931
	(0.095)	(0.985)	(0.054)	(0.436)
Logged population	−0.071	0.735	−0.062	0.254
	(0.034)	(0.323)	(0.021)	(0.166)
Infant mortality	−0.005	0.077	−0.006	0.041
	(0.003)	(0.027)	(0.002)	(0.010)
Resource	−0.008	−0.283	−0.000	−0.164
	(0.007)	(0.091)	(0.003)	(0.036)
Regime duration	0.005	0.002	0.006	0.005
	(0.001)	(0.003)	(0.000)	(0.001)
Democratic legacy	−0.045	−2.577	0.125	−1.260
	(0.107)	(1.059)	(0.085)	(0.486)
IMR, not fully inst.	0.634		0.560	
	(0.797)		(0.392)	
IMR, fully inst.		13.644		8.035
		(4.808)		(1.914)
Intercept	−1.411	−58.381	−0.596	−31.661
	(1.051)	(20.097)	(0.601)	(8.903)
R^2	0.556	0.758	0.518	0.616
Num. obs.	420	144	420	144

Table 33: **Self-selection of authoritarian institutions: second stage (linear models for each institutional outcome), V-Dem index**

	I	II	III	IV
Logged GDP pc.	0.108	0.790	−0.003	−0.046
	(0.038)	(0.267)	(0.017)	(0.240)
Logged population	−0.004	0.139	−0.017	−0.120
	(0.014)	(0.086)	(0.013)	(0.095)
Infant mortality	0.001	0.021	−0.001	−0.002
	(0.001)	(0.007)	(0.001)	(0.006)
Resource	−0.011	−0.075	−0.001	0.004
	(0.003)	(0.025)	(0.001)	(0.022)
Regime duration	0.000	0.001	0.000	0.003
	(0.000)	(0.001)	(0.000)	(0.002)
Democratic legacy	−0.052	−0.604	−0.024	0.230
	(0.045)	(0.287)	(0.026)	(0.240)
IMR, not fully inst.	−0.679		−0.035	
	(0.322)		(0.102)	
IMR, fully inst.		3.731		−0.190
		(1.314)		(1.115)
Intercept	−0.043	−13.413	0.882	3.177
	(0.423)	(5.434)	(0.328)	(5.038)
R^2	0.137	0.550	0.474	0.510
Num. obs.	724	257	724	257

Table 34: **Self-selection of authoritarian institutions: second stage (linear models for each institutional outcome), PTS-S**

	I	II	III	IV
Logged GDP pc.	0.130	−2.753	0.148	−2.244
	(0.151)	(1.355)	(0.191)	(1.147)
Logged population	0.352	−0.338	0.342	−0.144
	(0.054)	(0.437)	(0.073)	(0.350)
Infant mortality	0.013	−0.070	0.012	−0.055
	(0.004)	(0.037)	(0.006)	(0.031)
Resource	−0.013	0.267	−0.013	0.216
	(0.012)	(0.125)	(0.015)	(0.108)
Regime duration	−0.004	−0.011	−0.005	−0.012
	(0.001)	(0.003)	(0.001)	
Democratic legacy	0.175	2.483	0.060	1.900
	(0.175)	(1.461)	(0.252)	(1.206)
IMR, not fully inst.	−2.006		−1.810	
	(1.265)		(1.682)	
IMR, fully inst.		−13.202		−10.808
		(6.677)		(5.728)
Intercept	−3.440	49.702	−3.401	38.990
	(1.666)	(27.610)	(2.156)	(23.151)
R^2	0.350	0.525	0.350	0.472
Num. obs.	721	257	721	257

Table 35: **Self-selection of authoritarian institutions: second stage (linear models for each institutional outcome), PTS-A**

	I	II	III	IV
Logged GDP pc.	0.049	−3.609	0.051	−2.848
	(0.176)	(1.517)	(0.173)	(2.202)
Logged population	0.304	−0.598	0.325	−0.339
	(0.061)	(0.494)	(0.062)	(0.731)
Infant mortality	0.009	−0.098	0.008	−0.076
	(0.005)	(0.041)	(0.006)	(0.061)
Resource	−0.004	0.352	−0.004	0.280
	(0.013)	(0.140)	(0.013)	(0.205)
Regime duration	−0.002	−0.013	−0.002	−0.013
	(0.001)	(0.004)	(0.001)	(0.003)
Democratic legacy	0.311	3.551	0.153	2.805
	(0.203)	(1.636)	(0.212)	(2.304)
IMR, not fully inst.	−0.244		−0.547	
	(1.463)		(1.403)	
IMR, fully inst.		−18.036		−14.411
		(7.483)		(10.813)
Intercept	−2.707	67.979	−2.886	52.301
	(1.923)	(30.987)	(1.988)	(45.266)
R^2	0.240	0.396	0.239	0.399
Num. obs.	680	235	680	235

Table 36: **Self-selection of authoritarian institutions: second stage (linear models for each institutional outcome), HF**

	I	II	III	IV
Logged GDP pc.	10.014	75.423	6.623	21.709
	(2.934)	(23.700)	(2.886)	(25.671)
Logged population	−3.931	16.282	−2.791	−1.104
	(1.066)	(7.722)	(0.841)	(8.696)
Infant mortality	0.090	1.830	0.058	0.377
	(0.089)	(0.645)	(0.083)	(0.729)
Resource	−0.304	−6.195	−0.028	−1.255
	(0.223)	(2.192)	(0.204)	(2.381)
Regime duration	0.048	−0.016	0.040	0.074
	(0.018)	(0.060)	(0.024)	(0.136)
Democratic legacy	4.330	−57.681	0.440	−5.556
	(3.418)	(25.401)	(3.014)	(28.248)
IMR, not fully inst.	30.443		21.941	
	(24.768)		(21.455)	
IMR, fully inst.		289.888		50.564
		(116.426)		(124.310)
Intercept	0.188	−1258.122	13.137	−192.537
	(32.705)	(483.622)	(31.092)	(529.532)
R^2	0.377	0.717	0.447	0.628
Num. obs.	515	195	515	195

Software packages

The used packages in Python are: “pandas” (McKinney 2010), “numpy” (van der Walt et al. 2011), and the packages from the standard Python library. The used packages in R are: “car” (Fox & Weisberg 2013) “plm” (Croissant and Millo 2008), “panelAR” (Kashin 2014), “sampleSelection” (Toomet & Henningsen 2008), “texreg”(Leifeld 2013), and “xtable” (Dahl et al. 2018).

Replication materials

The final dataset with variables description is available at URL: https://github.com/alexeygridnev/two-stage-heckman-model-pol-sci/blob/master/Data.csv.

An example of applying two-staged Heckman model with WGI Rule of Law index as the dependent variable is available at URL: https://github.com/alexeygridnev/two-stage-heckman-model-pol-sci/blob/master/Script.R.

A script for downloading the data from the World Bank website using the World Bank API is available here: https://github.com/alexeygridnev/World-Bank-API-to-csv/blob/master/Script.py.

Should you be interested in other data or scripts, do not hesitate to contact me via email: alexeygridnev93@gmail.com .