DEPARTMENT OF POLITICAL SCIENCE

UNEQUAL PILLARS

Examining Inequality and Protest Among Autocracies

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ABSTRACT

The goal of this thesis is to analyze the relationship of economic inequality to protest occurrence alongside other factors across autocratic regimes.

Earlier work has done much to explore the diversity of autocracies and their policy outcomes. Others have examined how economic inequality may affect resources and grievances. And the relationship of technology with protest participation has been considered. However these have rarely been examined in unison. The relationship of inequality with protest across autocracies remains under-examined, as do the effects of coercion and technology.

I combine these elements into one analysis of autocratic countries between 1990 and 2014. I examine the correlation between inequality and protest events alongside regime categories, the use of coercion, ICT usage among the population, and other variables identified as relevant. In order to investigate these connections, I perform a regression analysis using panel-corrected standard errors. My data is derived from a variety of cross-sectional time-series datasets.

My empirical analysis shows that economic inequality and regime type do not appear to be statistically significant overall in their interactions or main effects. According to the data, only regime coercion and ICT penetration show significant relationships with protest. My findings suggest that any impact of economic inequality alone is outweighed by the effects of improved human rights standards and new technologies. Alternatively, they may indicate the importance of other types of inequality or different moderating elements. The significance (or lack thereof) of my findings might also reflect relationships with protest incidents more than their size or longevity.

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1. Introduction

In recent years, both news media and academic discussions have linked economic inequality with political unrest. News headlines have claimed that “most” popular protest may be linked with global economic inequality (Massing 2020), while others have observed it alongside other factors like political restriction and corruption (BBC 2019). A 2019 UN Human Development Report highlights how economic factors are interlinked with inequalities that threaten human development, affecting people's opportunities and choices (UN News 2019). National preferences for more equal income have increased from the 2000s to the 2010s worldwide regardless of political orientation, at the same time a wave of protest has been observed from 2010 onwards (UNDP 2019, 23; Korotayev, Meshcherina, and Shishkina 2018).

That is not to assume that these are directly connected, but one is certainly plausible: the idea that inequality drives revolution and dissent predates the earliest philosophers (Muller 1985, 47; Nagel 1973). Previous research has highlighted the diverse linkages of economic inequality. Among others, it is shown to have connections with political protest, violence, and even terrorism.[1] Significant attention has also been given to its relationship with democratization and democratic backsliding.[2]

Autocracies - non-democracies - are relevant to examine in pursuit of a more stable and egalitarian world. The creation and ending of authoritarian regimes can help us better understand how democracies are built and maintained. Beyond cautionary examples, they offer insights into the nature of successful institutions. Examining how they gain - and lose - the support of citizens can help us understand the elements needed for good governance. Studying why some autocracies outperform others offers insight into how institutions may succeed or fail to work in the interests of a broad range of citizens, and why democracy sometimes fails to achieve ideal policy outcomes (Besley and Kudamatsu 2007). By examining protest and other elements, we are able to connect institutional structures and policies with an observable metric for popular legitimacy - public dissent. By extension, we can draw conclusions regarding democratic representation and ideals.

This insight is increasingly relevant in today’s context. The nature of authoritarian leadership is changing, posing a threat to any assumptions about democracy. As observed by John Keane, dictators are gaining durability and increased support from a broad middle-class base (Keane 2020). Keane characterizes this as a “fundamental challenge to power-sharing democracy” (Keane 2020), remarking how dictatorships have adapted democratic institutions and tactics to gain support. Similarly, scholars have warned against a current wave of de-democratization undermining equality and creating a global crisis (Diamond 2019; Lührmann et al. 2019; Maerz et al. 2020). A wave of autocratization is occurring that

[1] See: Nagel 1973; Muller 1985; Houle 2018; Krieger and Meierrieks 2019; Bodea, Elbadawi, and Houle 2016; Houle 2016a; Grasso and Giugni 2016; Solt 2015; 2008.

[2] See: Brancati 2014; Acemoglu and Robinson 2006; Haggard and Kaufman 2012; Houle 2016b; Bonica et al. 2013; Sirowy and Inkeles 1990; Öniş 2016.

undermines democratic regimes while adopting many of their attributes (Lührmann and Lindberg 2019). Deeper attacks on democratic ideals are becoming more commonplace (Maerz et al. 2020; Lührmann et al. 2020). Despite this, pro-democracy mobilization has also increased within the past decade, creating a countering force for democratization and resistance - including within autocracies (Maerz et al. 2020).

In analyzing protest in autocracies, we can seek out lessons to strengthen democracy where it exists and encourage its growth where it does not. Protest offers a way to measure popular legitimacy, democratic activism, and social discontent. By understanding how protest is motivated or suppressed in different contexts, we can work to better understand how democratic movements arise. Through the differences in protest among autocracies we can connect this with other elements, by extension learning how good governance may be crafted and sustained in the future.

In order to do so, we require clear data to make these connections. Owing to several gaps in the literature, it is still unclear whether economic inequality is significant to explain variation in protest across autocracies.

While protest and inequality have been examined throughout the literature, bivariate measures of democracy have often treated autocracies as a largely homogenous group. Of those which have acknowledged variation, many have focused on comparing autocracies to democracies. Notable events like the Arab Spring and the associated protest wave have, in some aspects, overshadowed larger analysis. There is still a limited amount of research examining protest events across non-democratic regime types. The relationship of protest with other factors such as economic inequality and technology usage has been inadequately considered. To what degree economic inequality motivates protests across autocracies is largely under-researched.

The relevant literature is also becoming dated. Although existing research provides excellent foundations of knowledge, the pace of change within the past few decades requires new data. Considering the trends of autocratization mentioned earlier, this is especially crucial. Not only has economic globalisation changed our society, but this wave of autocratization is accelerating worldwide (Maerz et al. 2020). In order to fully interpret world events in this context, it is vital that we have the most current information.

Relatedly, much of the previous research of authoritarian regimes also takes place before or earlier during the growth of internet technologies worldwide. Not only does this present a noticeable gap when considering the use of mobile phones in protest actions from Hong Kong to Belarus, but it means that findings from decades ago may be less comparable with today's context.

The research question I seek to answer is: *How does inequality explain variation in protest levels among autocracies?* Through investigating the relationship of mass mobilization with inequality alongside other factors, I make the following contributions to the literature:

First, I examine autocracies exclusively, paying attention to the institutional and structural differences used to categorize them. I consider the impact of income inequality alone, how this may interact with various regime type categories, and how it may compare to other relevant variables. Second, I use a recent dataset of protest occurrence, limiting my analysis to between 1990 and 2014. Finally, I introduce the element of technology alongside other variables identified as relevant in the literature. I consider not only the presence of communications technology, but its relationship to the total population.

In addressing these research gaps and examining variations of protest across autocratic regime types, I aim to contribute to future research on the structural causes of these variations.

In order to answer this research question, I hypothesize based on existing literature that economic inequality is likely to have an overall negative relationship with protest. This might be conditioned by the type of political regime. I also consider that the use of coercion and information technology are likely to affect protest occurrence. I hypothesize a negative relationship for coercion and protest, but a positive one for information technology and protest.

To investigate these connections, I conduct a regression analysis using cross-sectional time-series data drawn from a variety of sources. I examine the correlation of inequality to protest events alongside regime type categories, the use of coercion, ICT usage, and other variables identified as relevant.

The results of my empirical analysis show that the only significant relationships found are mobile device usage and regime coercion measured as respect for physical rights. Economic inequality and regime type do not appear to be statistically significant according to my data.

My findings suggest that national economic inequality as measured is less significant than believed. Instead, improved human rights and the proportion of mobile device usage appear more important. Any impact of economic inequality alone appears outweighed by these effects. Key interactions of inequality that lead to mobilization may not lie with the regime structure itself, but be found in other institutional aspects instead. Or my results may suggest that other types of inequality are more important, such as inequalities within groups. A final possibility is that the significance (or lack thereof) of my findings reflect relationships with protest occurrence, but not necessarily protest size or longevity.

I begin by analyzing previous literature. Next, my theoretical framework is discussed, before proceeding into my research design. Here I give an overview of my data sources and variables. I show the results of my analysis, discussing my results, possible limitations, and directions for future research. I then provide some closing thoughts in my concluding statement.

2. Literature Review

Starting with an overview of how political protest is discussed throughout the literature, I discuss the role of collective grievances, resources, and opportunity structures. I next examine economic inequality as a potential grievance, discussing how it may motivate or deter protest. I examine the importance of autocratic regime types, and separately explore the use of regime coercion. Finally, I note the role of technology as an important variable, and discuss other elements to consider.

2.1 Protest

To begin, the literature offers several definitions of political protest.[3] *Protest* can be defined as collective and disruptive manifestations which seek to give political bargaining power to relatively powerless people (Eisinger 1973, 13).

Discussing American Civil Rights protests during the 1960s, Lipsky conceptualized protest as political action against objectionable policies or conditions which seeks resolutions from political or economic systems while working *within* them, characterized by its unconventional nature (Lipsky 1968, 1145). Summarized in a different fashion by Dalton and van Sickle, protest exists on a continuum, seeks to enact social and political change from the *outside* of traditional institutions, and constitutes unconventional political action but may include some illegal acts (Dalton and van Sickle 2005, 3).

Comparing these two differing definitions shows that protest movements may be viewed either as a tool for disadvantaged groups to pressure a government, or as an extension of political participation used by those who are already active (Dalton and van Sickle 2005, 2).

Although some analyze violent and non-violent protest actions separately, it is clear that they are interrelated.[4] Eisinger outlines how protest differs from simple dissent or political violence itself: First, mass mobilization is inherently a *collective* action relying on group resources and carried out by those directly concerned, not third parties (Eisinger 1973, 13). Protest is also a tool for actors to make political demands, while attempting to maximize their impact and minimize any incurred costs (Eisinger 1973, 13). Third, protest relies on the *implicit* threat of violence, rather than the *explicit* threat or main intent of political violence (Eisinger 1973, 13). It manipulates implied *fears* of disorder and violence among opposition, but maintains permissibility and popular legitimacy by not acknowledging violence as the central tool (Eisinger 1973, 13–14).

The literature offers insights into the mechanism at work - how grievances arise and what might affect their development into protest actions. Most protest literature may be grouped

[3] Referred to in this thesis as *protest*, *mobilization, protest action*, *collective action,* etc.

[4] In this analysis I include both violent and non-violent events.

into four broad frameworks: **Grievance** and **Resource Theories**, **Political Opportunity Structures**, and assorted **cultural** explanations.

The focus of early literature, **Grievance Theory** considers protest as a response to unmet individual-level needs or a sense of relative deprivation where people feel unequal (Grasso and Giugni 2016, 665). These *grievances*[5] form a shared central issue. Proposed resolutions are formulated as *demands* expressed by citizens (Klein and Regan 2018, 488). If citizens perceive these as unmet by the existing political structure, they act outside of the conventional political arena in an effort to challenge it.

Such inequalities may encompass economic, social, cultural, and political dimensions; between individuals or horizontally between collective groups (Brown and Langer 2010, 29). Commonly cited grievances include ethnic, religious, political, regional, or economic inequality (Collier 2004, 570; Brown and Langer 2010, 28–29). These inequalities may be systemic or less systemic, such as a contested election, economic crisis, or regime violence that creates "a shared moral outrage" and overcomes problems of collective action (Gandhi and Lust-Okar 2009, 415).

The salience of grievances depends on the society, the political system, the economy and the social structure (Brown and Langer 2010, 29). When individuals believe protest participation helps provide desired public goods; feel a sense of moral obligation; or anticipate positive (or negative) social incentives, political involvement will be affected (Opp and Roehl 1990, 103). Inequalities that successfully appeal to all of these factors are more likely to succeed in forming a mobilized coalition.

But these examples broadly categorize *potential* points for grievances in every society. Citizens still need the tools and environment with which to successfully mobilize. This is where other literature builds on grievance theories in considering these aspects.

Resource Theory expands on relative deprivation, since it requires not only collective deprivation, but collective resources (Dalton and van Sickle 2005; Grasso and Giugni 2016; McCarthy and Zald 1977). Popular protest is facilitated by a resource base sufficient enough for action, which might be found in a strong civil society or socio-economic wealth (Dalton and van Sickle 2005, 7; Grasso and Giugni 2016).

McCarthy and Zald observed how this reliance might affect conditions of protest movements and differ from grievance-based perspectives in three ways: that supporters might have different values and motivations from those most affected by a grievance; that strategies are influenced by competition and cooperation rather than simple force or persuasion; and actors utilize the environment and infrastructure around them (McCarthy and Zald 1977, 1216–17).

[5] Defined as a mismatch between "the goods and conditions of life to which people believe they are rightfully entitled [...] and the goods and conditions they think they are capable of getting and keeping." (Gurr 2015, 24).

This leads to the framework of **Political Opportunity** theories, in which protest behavior is affected by political institutions (Dalton, Van Sickle, and Weldon 2010, 52; Magaloni and Wallace 2008, 8–9; Meyer 2004; Grasso and Giugni 2016). Mobilization requires more than just dissatisfaction and resources - it requires structures for adequate opportunity.[6]

The open or closed nature of the political environment matters: how accessible political institutions are affects citizens' opportunities and participation cost (Dalton and van Sickle 2005, 8; Eisinger 1973; Meyer 2004, 128). State capacity and competence might also affect opportunities for protest through creating grievances or promoting democratic political engagement (Dalton and van Sickle 2005, 8; Eisinger 1973, 28).

These elements point towards a missing component - the role of the political regime and how power is maintained. I explore this further in a later section.[7]

Theories on **cultural** frameworks highlight a sociological perspective. Primarily in studies of protest among democracies, Dalton and Van Sickle summarize literature discussing the role of social culture, noting values that promote political participation and challenge authority (Dalton, Van Sickle, and Weldon 2010, 59–60). Historic national culture (such as in France), values of modernization (such as post-materialism), and political ideologies at the far-left or far-right extremes correspond with greater protest (Dalton, Van Sickle, and Weldon 2010, 9). This perspective is less relevant to my thesis, being more sociological with a largely European focus, but is mentioned here for inclusion.

Although they compete in aspects, I consider these theoretical frameworks to be compatible perspectives of how protest participation evolves. They are parallelled throughout the literature, and explain why certain factors are significant in some instances but not in others. They express the view that protest mobilization is shaped more by resources and institutions than grievances alone (Dalton, Van Sickle, and Weldon 2010, 9).

Garrett acknowledges all three frameworks, noting that mobilizing resources, opportunity structures, and issue framing are all relevant in transforming grievances into protest (Garrett 2006, 203–4). Mobilizing structures enable collective action, and include social organizations and networks as well as available protest methods (Garrett 2006, 203–4). Opportunity structures are environmental, including the accessibility of the political system, attitudes and cohesion of regime leadership, and likelihood of state repression (Garrett 2006, 203–4). The framing process describes the narrative and context used to justify dissent (Garrett 2006, 203–4). This mirrors the factors shaping mobilization at the protest-level, and point towards the role of the *political environment.*[8]

[6] See: Section 2.3: Regimes.
[7] See: Section 2.3: Regimes.
[8] Defined as a combination of the current political structure, the attitude of the present regime, the unique social structure, and present social stability (Eisinger 1973, 11).

Protest behaviour requires more than just dissatisfaction - it requires coordination, and is moderated by how national context interacts with individual characteristics (Dalton, Van Sickle, and Weldon 2010, 52; Magaloni and Wallace 2008, 8–9). Protest is inherently a product of the equilibrium between a regime and their citizens. Actions taken on either side are determined not only by the resources of a movement, but the openings, barriers, capabilities, and resources of the political system (Eisinger 1973, 11–12).

This relationship introduces problems of collective action and information exchange. The literature does an apt job of summarizing these two aspects. Mobilization is a collective action process: actors must select goals and strategies that increase support, successfully engage third parties, and maximize their chances of success in winning concessions (Lipsky 1968, 1114).

The process of collective action combines the current mobilization level, the perceived capacity of the protest movement and opposition, the likely attitude and response(s) to demands by the state, and the total level of uncertainty regarding all of these (Klein and Regan 2018, 486–87). Scholars note that differences in policy preferences, anticipated benefits, and (in)tolerance for violence can create divisions (Gandhi and Lust-Okar 2009, 411).

Actors also evaluate expected *costs*: regime behaviours that impede collective action (Klein and Regan 2018, 287). These constitute regime *coercion*, in contrast with *co-optation* that promotes support or cooperation with the regime (Klein and Regan 2018, 287; Gandhi and Przeworski 2006; Gerschewski 2013; Guriev and Treisman 2015).[9] Within autocracies, dissent may transform into mobilization when the collective gain from exposure of citizen's sincere preferences outweighs the risks of protest or benefits of cooperation (Magaloni and Wallace 2008). Coordination is needed to resolve these cost/benefit equilibriums, which connects to the issue of information.

The role of *information* in the protest environment includes both direct and indirect signals (Garrett 2006; Stein 2016; Goebel 2013). Information is a vital resource for both protestors and the incumbent regime. Information enables protest actors to fulfill the 'collective' requirement of collective action, but protest itself acts as a bargaining process to communicate information to both sides (Klein and Regan 2018). Since each side would prefer to avoid any actions which are too costly, protest is a process of using information to gauge and respond to the expected attitudes of the other side.

Actors on both sides must coordinate with each other in various capacities. They seek to gain information about opposition, calculate risk, estimate the likelihood of success, and control information that might shape eventual outcomes (Stein 2016; Guriev and Treisman 2015; Magaloni and Wallace 2008). Incumbent leaders seek to maintain their rule, and protest

[9] See: Sections 2.3: Regimes and 2.4: Coercion.

actors seek to mobilize and win concessions. Because of this, successful coordination is needed among actors on either side.

The relative ease or difficulty of information access has a moderating effect on these citizen/regime interactions (Stein 2016, 1:1–3). Protest threatens stability because both the true size of the supporting coalition as well as that of the opposition are fluid and ultimately unknowable (Gallagher and Hanson 2009, 671). In non-democratic regimes, secrecy and uncertainty obscures both the strength and disposition of the leadership and citizens alike (Stein 2016, 1:1–3; Schedler 2013).

This lack of reliable information can lead to collective action problems and conflict (Stein 2016, 1:1–3). Both sides therefore have an interest in obtaining perfect information (Klein and Regan 2018): for protestors, accurate knowledge of the regime's response and capacity; for regimes, the attitudes of citizens and support for the incumbent versus any opposition. Elements which affect these information asymmetries can alter the advantage of one side over the other (Bove and Rivera 2015).[10]

In sum, protest arises when a shared grievance exists with sufficient opportunity and resources to mobilize. The subject of the protest itself (affecting public attitudes), the political environment (which influences resources and opportunity), and the information available (which is in itself a resource) are all relevant in affecting the choices and behavior of actors. Throughout this thesis, I explore each of these in turn, starting with a specific grievance - economic inequality.

2.2 Economic Inequality

In connecting mobilization with a grievance, it makes sense to explore economic factors due to the salience of the issue, its relationship to resources, and the availability of data. *Economic inequality*[11] may be likely to impact individuals and create dissatisfaction regardless of regime type, and is linked to global protest actions and populist movements (Korotayev, Meshcherina, and Shishkina 2018; Rodrik 2018; Korotayev, Bilyuga, and Shishkina 2018; Griffin and De Jonge 2014).

Historic highs of anti-government demonstrations, riots, and general strikes have occurred after 2010 (Korotayev, Meshcherina, and Shishkina 2018, 336–38). Although triggered by the Arab Spring, scholars have connected this destabilising wave with economic inequality, along with financial deregulation and technology (Korotayev, Meshcherina, and Shishkina 2018). This highlights the relevance of exploring the effects of inequality in a more contemporary time frame.

[10] See: Section 2.5: Information and Communication Technology.

[11] Defined as the unequal distribution of wealth, whether between individuals of comparable status or throughout a population as a whole (Nagel 1973). I use both *inequality* and *economic inequality* to refer to this concept.

Particularly, economic inequality has been highlighted in connection with post-1980s economic policies (Korotayev, Meshcherina, and Shishkina 2018). But there are limited studies of authoritarian regimes during this timeframe, which I address.[12] To compensate for this, conclusions can be drawn from the extant literature.

By focusing on a specific grievance, the literature shows how the different theoretical frameworks of mobilization actually apply.

A conflict-focused view corresponds to perspectives of grievance theory - inequality may increase political polarization and citizen engagement (Solt 2008, 49–50; 2015, 1314–16). Poor economic performance, unemployment, and dissatisfaction with economic conditions may drive democratic mobilization and regime transitions (Brancati 2014; Geddes 1999). Economic inequality allows citizens to blame the incumbent regime for class-based grievances and polarizes citizens (Brancati 2014, 1505–6; Griffin and De Jonge 2014). Some note that this may have more to do with *perceptive* rather than subjective inequality (Griffin and De Jonge 2014; Gimpelson and Treisman 2018; Houle 2018; Østby 2008). Others find that increased inequality leads to demobilization, but that *change* in economic circumstances may increase mobilization (Kurer et al. 2019).

Inequality has been theorized to underlie movements that are not explicitly economic in nature. Rodrik illustrates a mechanism where two cleavages exist within society: elite membership based on wealth and power, and non-elite membership based on group identities such as ethnicity and religion (Rodrik 2018, 24). This means that political movements focused around other factors (such as these group identities) may actually be rooted in underlying economic effects (Rodrik 2018). Inequality may then underlie larger trends regardless of the event-level focus.

Although economic concerns might create grievances, this does not mean that they generate more protest. Within the environment of an autocracy, there is a clear imbalance of power favoring the regime elite - identities of wealth and power as conceptualized by Rodrik (Rodrik 2018). It seems reasonable that increased economic inequality might tip the balance in favor of the most influential citizens, and risk demobilizing an already-disadvantaged populace.

Under political opportunity and resource frameworks, economic grievances might not create protest (Debs 2010; Acemoglu and Robinson 2006). Here, mobilization would depend more on available economic resources or access to political opportunity (Solt 2008, 49–50; 2015, 1314–16). Mobilization may be lower among the poorest; who are deprived of economic resources and without access to political avenues (Nagel 1973; Gilli 2012; Debs 2010; Acemoglu and Robinson 2006).

Houle finds evidence of this in their global analysis. They use similar data to this thesis and

[12] See: Section 3: Theoretical Framework.

their findings hold when controlling for regime type (Houle 2018). Their results show that economic inequality not only destabilizes established democracies, but that inequality leads to political exclusion of low and middle-income citizens in autocracies and democracies alike (Houle 2018).

Although limited to democracies, Solt provides similar evidence. They find that higher levels of income inequality appear to reduce protest participation, overall political discussion, and participation in elections among all but the wealthiest citizens (Solt 2015; 2008). Notably, Solt finds support only for opportunity-based theories of political protest - grievance and resource theories are not supported (Solt 2015). They show that increased inequality leads to lower political engagement among poorer individuals, since unequal wealth corresponds to unequal resources and ability for political engagement (Solt 2008, 49–50; 2015, 1314–16). If - as Rodrik illustrated - wealth and power are synonymous with elites, then greater inequality serves only to increase their resources.

These perspectives support theories that economic inequality weakens the already-disadvantaged position of non-elite citizens. Greater economic inequality may give some incentive to protest for greater resources - but gives the wealthy disproportionate motivation and resources to confront challenges to elite status (Haggard and Kaufman 2012, 495). If income inequality reflects policy preferences among citizens, then inequality in favor of the elite reflects an advantage in crafting policy that benefits them (Gandhi and Przeworski 2006, 18; Houle 2018, 681).

Others theorize a curvilinear relationship for grievance- resource- and opportunity-focused perspectives, where mobilization occurs in the middle. Here, mobilization by the poorest faces insurmountable obstacles, but the wealthy have plentiful political resources (Dalton and van Sickle 2005; Grasso and Giugni 2016; McCarthy and Zald 1977; Acemoglu and Robinson 2006). Protest is lowest when these factors are distributed most equally or unequally, and highest when imbalanced so that neither side can achieve their desired resources (Nagel 1973). But a negative effect is still noted - and any curvilinear relationship globally might potentially be skewed due to the inclusion of liberal democracies with higher per-capita income.

Collectively, the academic literature provides a wealth of contradictory and often-inconclusive evidence. Inequality may decrease protest and political engagement (Solt 2015; 2008), may increase conflict and mobilization (Brancati 2014; Korotayev, Meshcherina, and Shishkina 2018), or might have a curvilinear effect (Korotayev, Bilyuga, and Shishkina 2018; Acemoglu and Robinson 2006; Nagel 1973) This is complicated by a lack of literature examining inequality among dictatorships, which I later discuss alongside other research gaps.[13] Setting aside these limitations and considering the existing literature, the effect on protest appears to be generally negative, but *observed to be positive only when moderated by certain conditions*.

[13] See: Section 3: Theoretical Framework.

One possible explanation for this is because of how economic elements are endemically linked to the ruling regime itself. Not only are economic grievances the result of specific policies and behaviours, but the context in which political protests occur is determined by where they occur. As noted in the theoretical frameworks for protest, the actions taken by groups and individuals are determined not only by the resources available to their movement, but the openings, barriers, capabilities, and resources of the political environment it takes place within (Eisinger 1973, 11–12).

Kurer et al. notes how protest may be conditioned by the existing political environment (Kurer et al. 2019). They connect this to independent political institutions, and how an active political environment may compensate for individual-level demobilization (Kurer et al. 2019). This relates directly to the concept of institutional differences, which I discuss in the following section. Differences between regime types shape grievances themselves, the protest environment, and potential outcomes.

As observed in the next section, Hanson provides evidence of differing inequality outcomes across regimes. Inequality should be lower when elites spend greater resources on vertical accountability (to the citizens), but repression may be used both in combination or as an alternative to higher spending (Hanson 2013, 24). This affects outcomes - within autocracies, redistribution which reduces income inequality may reduce domestic terrorism, because it addresses the underlying grievances with state institutions (Krieger and Meierrieks 2019, 135). Such efforts and their outcomes depend on institutional availability dictated by regimes - those possessing a wider institutional base require greater depth of support and are likely to distribute benefits more widely (Gallagher and Hanson 2009, 668).

In summary, the literature provides mixed evidence for the effects of inequality on protest. Frequently it appears to suppress resources and mobilization, but positive relationships are observed under certain conditions and when analyzing specific events. Clearly inequality relates to the political environment as well. This gives reason to believe that among autocracies, it may differ between regimes and their associated political environment, which I explore in the following section.

2.3 Regimes

Since political protest occurs in relationship to a political *regime,*[14] it is relevant to examine the nature of autocratic regimes and their political environment. Regimes may be *democratic* or *non-democratic.*[15] A country is democratic if it refrains from violence in resolving political conflicts, avoids disregarding electoral rules and civil liberties, and chooses executive

[14] I define *regime* as a set of formal and informal rules which form the procedural institutions that select leadership, determine political access, and are accepted by major political actors (Wilson and Piazza 2013, 942; Geddes 1999, 116).
[15] Referred to in this thesis as *autocracies or dictatorships, authoritarian* or *non-democratic*, etc.

leadership in fair competitive elections or constitutional succession (Wahman, Teorell, and Hadenius 2013, 22; Svolik 2012). It ceases to be a democracy when it disregards key mechanisms such as electoral rules or civil liberties (Svolik 2012, 16). Non-democratic regimes are those whose executive leadership and policies are not chosen in competitive and fair direct elections or normal constitutional succession (Wahman, Teorell, and Hadenius 2013, 22).

Autocracies have two distinctive qualities: "the absence of an independent authority that would enforce mutual agreements and the ever-present potential for violence" (Svolik 2012, 16), although dictators may *choose* to comply with agreements and show commitment to power-sharing (Boix and Svolik 2013, 301).

The regime type itself is a product of historical, geographical, economic, and political conditions (Gallagher and Hanson 2009, 667). It reflects decision-making interests which determine government policies and behavior (Geddes, Wright, and Frantz 2014, 314–15). The literature shows that not all autocracies fit the stereotype of being uniform and repressive - among some, arguably democratic institutions exist (Wilson and Piazza 2013, 941; Geddes 1999; Boix and Svolik 2013; Svolik 2012). However, it also shows that autocratic institutions are arbitrary, and differ from democracies in three ways: elections are not certain to force out incumbents, legislatures are not truly democratic, and legislative processes can be overruled by leaders (Gandhi and Przeworski 2006, 22).

Authoritarian regimes balance horizontal pressures of elites against the power of citizens to mobilize against them, confronting similar obstacles to democracies (Haggard and Kaufman 2012, 497; Acemoglu and Robinson 2006; Teo 2019, 4; Hanson 2013). Autocracies benefit from a broader set of tools for coercion, co-option, and control to maintain this power balance (Gallagher and Hanson 2009, 667). They use these to maintain power, respond to opposition, and encourage the loyalty of their citizens and supporters (Magaloni and Wallace 2008; Gerschewski 2013; Boix and Svolik 2013; Gandhi and Przeworski 2006; Svolik 2012).

By examining the nature of co-optation and coercion, the literature shows how differences between regime types influence their capacity and use of both to cause different outcomes.

As defined, *co-optation* offers benefits to potential opposition in exchange for their personal investment in the political game, mostly via institutions such as parties, legislatures, and elections. They can be used to signal credible commitment by the regime (Stein 2016, 1:11), offer power-sharing via coalitions (Magaloni and Wallace 2008) and otherwise build support, channel political engagement, and defuse rebellion (Gandhi and Przeworski 2006, 21).

These offer alternatives to protest for citizens dissatisfied with the regime, providing an opportunity (real or perceived) for support and participation by dissenting actors (Frantz and Kendall-Taylor 2014, 337; Bove and Rivera 2015, 457). Under sufficiently repressive regimes where protest actions would be unlikely to succeed, even ineffective institutions offer opportunity for participation by elites and non-elites alike (Gandhi and Lust-Okar 2009, 410).

Political parties and legislatures help reduce conflict within the ruling coalition by raising awareness of discontent and negotiating demands; offering an alternative path to violence for opposition actors; and providing information about differing demands and preferences (Bove and Rivera 2015, 460). Legislatures are an environment where dissent can be expressed without appearing as resistance, so compromises and agreements may be achieved (Gandhi and Przeworski 2006, 14). Therefore an absence of mobilization may not always represent the absence of dissent, but can reflect its co-opting or channeling into other aspects of the regime (Gandhi and Lust-Okar 2009).

If tools of co-optation make up one side of a spectrum, the tactics of *coercion* discussed in the literature constitute the other.[16] Coercion may be used both to substitute or reinforce co-optation (Hanson 2013; Gandhi and Lust-Okar 2009). Coercion includes violent and non-violent forms targeted at groups or individuals - arrest and imprisonment, physical abuse, assassinations, political or physical restrictions, surveillance, harassment, or censorship (Wilson and Piazza 2013, 943; Bove and Rivera 2015, 457; Gerschewski 2013). These impose costs on protestors that discourage collective action.

Guriev and Treisman note that the power of dictators depends in part on their perceived competence or lack thereof (Guriev and Treisman 2015, 3). Wintrobe also observes that autocracies in fact *prefer* to rule on the basis of support - but maintain the use of repression (the "propensity for violence" discussed by Svolik) when they are unlikely to receive it (Wintrobe 2005; Svolik 2012).

This echoes a third component - legitimation - conceptualized by Gerschewski. Regimes can employ a combination of public legitimation, repression, and co-optation to counter destabilization from elite and non-elites who dissent (Gerschewski 2013, 18). Legitimation includes not only ideological support, but how well the regime delivers via public goods, the economy, and society to gain support of the citizens (Gerschewski 2013, 18–20).

According to Gerschewski, protest represents an absence of specific support among part of the population (Gerschewski 2013). To compensate for this weakened legitimacy, regimes have the choice of responding with either repression or co-optation. This preference for co-optation or coercion depends on their institutional capacity and costs for each (Guriev and Treisman 2015, 3–4; Gandhi and Przeworski 2006). Which options are available to the regime depend on its composition (Wilson and Piazza 2013, 942). The literature suggests that regimes may use legitimation to build popular support from citizens, repression to restrict opposition, and co-optation to encourage cohesion and elite support (Gerschewski 2013, 28).

This leads to the subject of how regimes are categorized. They differ in their bases of support, policy-making processes, executive succession, and behavior when interacting with

[16] I explore coercion separately in the following section.

their citizens and opponents - and may be categorized accordingly (Geddes 1999, 121).

Here the literature establishes some categories and associated qualities:

Monarchies are led by royal lineage following accepted practice or the constitution (Hadenius and Teorell 2007, 146; Wahman, Teorell, and Hadenius 2013, 25). This would include Persian Gulf states, for instance, but not Sweden. They have strong co-optive power, but often rely more on personal connections than party membership (Gandhi and Lust-Okar 2009, 409). Monarchies may have higher feelings of citizen loyalty; and engage in greater rent-sharing due to higher-than-average wealth (Magaloni and Wallace 2008, 16; Gandhi and Lust-Okar 2009, 413; Gandhi and Przeworski 2006, 20). Hanson cautions that monarchies may concentrate resources at the top and lack deeper societal linkages found in other regimes (such as multiparty systems) (Hanson 2013, 13).

Military regimes rule through use of military force, directly or via civilian leadership (Hadenius and Teorell 2007, 146). This does not include freely-elected executives with a military background (Hadenius and Teorell 2007, 146). The literature considers them the most unstable of regime types, prone to inter-elite division (Wilson and Piazza 2013, 945; Ulfelder 2005, 318–19). They are less capable of co-opting due to having shallow institutions, often lacking parties or a working legislature, and rely more upon military membership and the threat of violence (Svolik 2012, 123–27; Wilson and Piazza 2013, 945). They are more likely to favor coercion, lacking resources for co-optation but possessing the military as a tool . Hanson again differs here, observing that repression may be cheaper for military regimes but they still require internal unity and some popular legitimacy (Hanson 2013, 14).

Electoral regimes which have popular elections for parliament or executive office are differentiated into three types: *no-party*, *one-party*, and *multiparty* regimes.

No-party regimes are extremely rare, and may hold elections but prohibit political parties (although multiple candidates may still exist) (Hadenius and Teorell 2007, 147; Wahman, Teorell, and Hadenius 2013, 26).

One-party regimes prohibit all parties except for the incumbent from participating in elections (Hadenius and Teorell 2007, 147; Wahman, Teorell, and Hadenius 2013, 26). They may allow non-party candidates or non-independent ‘satellite’ parties to exist (Hadenius and Teorell 2007, 147). They are less limited by bureaucracy and may use strategies of both coercion and co-optation - but only to a point, since they often lack independent political organizations and multiple parties (Wilson and Piazza 2013, 945; Magaloni and Wallace 2008, 14). They enable greater popular participation for citizens while ensuring a dominant position for the incumbent regime (Svolik 2012, 193; Geddes 1999). Some note that dissent may be affected by their lack of political diversity, corresponding to limited political opposition and poor regime responsiveness (Magaloni and Wallace 2008, 14).

Multiparty (or *Limited Multiparty*) regimes regularly engage in presidential or parliamentary

elections which include opposition or independent candidates (Hadenius and Teorell 2007, 147; Wahman, Teorell, and Hadenius 2013, 26). While the elections may not be fully free and fair, they still provide an element of competition between individual candidates and their opposition (Hadenius and Teorell 2007, 147; Wahman, Teorell, and Hadenius 2013, 27). Protests may be more common because political organizations and opposition parties mean elites are more responsive to the loyalty of protestors (Magaloni and Wallace 2008, 14–15).

So why is regime type important, and how is protest affected by their structure? The answer is because their different structures affect capacities for co-optation and coercion, and thus different outcomes. This is supported throughout the literature.

Hanson illustrates how regime institutions both reflect pressure from citizens and elites, and determine the capacity and preference for co-optation or coercion (Hanson 2013; Gallagher and Hanson 2009). Redistributive outcomes - and thus economic inequality - are determined by whether a regime focuses on co-optation that responds to horizontal pressures from elites or vertical pressures from the public (Hanson 2013, 7). Hanson shows that inequality levels are lower among regimes that spend resources to strengthen vertical accountability rather than horizontal (Hanson 2013, 24). Institutional characteristics - and regime categories - are directly connected to the policies that determine economic inequality levels (Hanson 2013). Teo provides further evidence that electoral competition, party ideology, and party institutionalization contribute to differing inequality between regime types (Teo 2019).

Analyzing terrorism - itself a form of political dissent - Wilson and Piazza present similar evidence. Tools available to regimes are endemic to the type of regime, it's internal structure, and bases of support (Wilson and Piazza 2013, 942). They conclude that not only is the combination of co-optation and coercion linked with terrorism, but *that regime type itself* strongly explains different levels of terrorist activity across regimes. Regime type categories are proxies for the capacity and use of coercion or co-optation (Wilson and Piazza 2013, 952–53).

Examining repression, Davenport finds similar significance (Davenport 2007b). One-party regimes are consistently less likely to engage in violent or non-violent repression (Davenport 2007b). This is explained by one-party regimes having co-optive institutions that offer alternatives to repression via involving citizens politically. Military regimes are found to respect civil liberties more, but commit more violent repression - due to the pre-existing reliance on the military as noted by Svolik (Davenport 2007b; Svolik 2012). This highlights how - unlike co-optation - coercion is not limited by the absence of institutions, but may present complementary alternatives. I explore this element independently in the following section.

In addition to these examples, there are numerous other precedents analyzing autocracies across regime type categories.[17] But this remains a prominent gap in the research in my view, which I discuss later.[18]

In summary, the literature supplies categories for regimes, and illustrates differing capacities for coercion or co-optation. From this perspective regime-type differences transfer from macro-level institutions and policies, to create observable outcomes. These outcomes can influence what grievances are produced, to what degree, and affect the cost/benefit analysis for both the incumbent regime and opposition. In turn, this can influence the levels of protest among regimes. The literature offers examples to illustrate this complex issue, providing endless perspectives for examination.

2.4 Coercion

The political environment that protests occur within provides only one piece of the puzzle. While the tools available for co-optation depend largely on the institutions and structures present, coercion offers a wide range of alternatives to complement or replace co-optation.

The capacity for co-option for autocracies may be limited by their institutions (or lack thereof) that enable it; in contrast the use of repression is constrained by their presence instead. For more democratic countries, elections, veto players, and constraints on executives may limit the use of coercion (Wilson and Piazza 2013, 942).

But this is largely because it's the least preferable option - not because it is unavailable. As noted, autocracies lack an independent authority to enforce agreements and possess an ever-present potential for violence (Svolik 2012, 16). Gandhi and Lust-Okar remark that regimes may prefer co-optation to avoid the risk of public outrage further mobilizing opposition (Gandhi and Lust-Okar 2009, 414). Research by Guriev and Treisman finds that strategies of co-optation, propaganda, and censorship are the most preferred - to the degree made possible by the regime's institutions (Guriev and Treisman 2015, 3–4). When successfully employed, they make targeted repression unnecessary. Their findings also note that violent coercion is a measure of last resort that signals vulnerability and a lack of alternatives (Guriev and Treisman 2015, 4).

This makes it arguably more independent of institutions than co-optation - and it is frequently measured as such. For instance, in evaluating how autocracies employ coercion, Frantz and Kendall operationalize measurements of empowerment rights (non-violent coercion) and physical integrity rights (violent coercion) by using two independent indexes (Frantz and

[17] See: Gandhi and Przeworski 2006; Hanson 2013; Wilson and Piazza 2013; Geddes 1999; Geddes, Wright, and Frantz 2014; Svolik 2012; Gallagher and Hanson 2009; Hadenius and Teorell 2007; Wahman, Teorell, and Hadenius 2013 among others.
[18] See: Section 3: Theoretical Framework.

Kendall-Taylor 2014).

Much of the literature argues for a negative relationship. Svolik finds that existing inequality encourages the use of repression in a dictatorship to prevent poorer classes from dominating the incumbent elite (Svolik 2012). Gerschewski observes that coercion inherently suppresses protest (Gerschewski 2013) and studies including democracies note that state repression may limit protest even in relatively open environments (Carey 2006, 8–9). Notably, empirical findings suggest that while coercion suppresses protest, not all regime types are equally effective (Ortiz 2013).

Others suggest a reciprocal relationship. Moore finds that when the state responds to violent protests with violent coercion, dissidents may substitute nonviolent methods, and when the state responds to nonviolent dissent with violent coercion, protests may increase their use of violence (Moore 1998). This is supported by Carey, who observes a reciprocal relationship, between repression and protest (Carey 2006, 8). Another such cross-national study found that coercion reduced the chances of future mobilization, but that protest increased the likelihood for coercion (Ortiz 2013).

Similarly, some find an inverted or curvilinear relationship - Opp and Roehl note that increasing repression decreases protest participation by increasing costs; that increased repression adds positive incentives to protesting; and that these incentives decrease after a certain point (Opp and Roehl 1990). This is partially supported by Muller, who found support for an inverted U-curve relationship between political violence and regime coercion, along with a positive relationship of political violence and economic inequality (Muller 1985).

Other literature suggests mixed effects may be possible. Examining terrorism among authoritarian regimes, Wilson & Piazza found that repression may increase the costs of collective action against the state and the ideological benefits of resistance, but harms the economy (creating grievances) and lowers the opportunity cost for dissent (Wilson and Piazza 2013, 943).

One reason for these mixed results may be the relative gap in the literature that coercion represents. Not only is the relationship of coercion and protest greatly under-researched, but comparisons of coercion among autocracies is limited.[19]

In summary, the literature appears contradictory and divided on the effects of coercion, although a negative relationship seems most compelling when considering the inherent power imbalance within autocracies. Literature focusing on repressive regimes finds a lack of understanding of when regimes can deter protest, when repression is effective, and when it may increase violence (Pierskalla 2010, 135). Even in studies of democracies - arguably more well-studied than autocracies - whether repression actually reduces dissent and mobilization, and under what conditions, is acknowledged to be under-researched

[19] See: Section 3: Theoretical Framework.

(Davenport 2007a, 10). This presents another gap in the existing literature that this thesis contributes to.

At its core, coercion attempts to collectively influence collective action. But along with the effects of coercion, a lack of reliable information for either side to make informed decisions can lead to collective action problems (Stein 2016, 1:3). Given the tremendous developments of the past 30 years, it is necessary to consider the subject of information technologies.

2.5 Information and Communication Technology

Over the past 30 years (in particular the most recent decade) information and communication technology (ICT)[20] has changed how we engage with each other and the world.

The importance of emerging media and new ICT as it relates to protest movements has only recently begun to be addressed in the literature on a cross-national level, beyond case-studies of prominent events.[21] ICT poses benefits and drawbacks for both regime leaders and opposition. From a democratic perspective, ICTs have made dictatorship less durable by increasing information access along with costs for censorship and co-optation (Guriev and Treisman 2015, 5). ICTs serve to increase information access among the public but may be used by regimes to consolidate control (Stein 2016; Goebel 2013).

While authoritarian leaders require information to monitor both internal (elite) and external (non-elite) threats, citizens require information to determine their level of support or opposition to the incumbent (Stein 2016, 1:2–3). ICT implementation offes regimes a choice between gaining associated economic benefits (and thereby improved legitimacy), increased information, and potential for increased citizen mobilization (Stein 2016, 1:13).

Through protesting, citizens base their choice of actions on their beliefs about perceived characteristics of the regime, and communicate this aggregated information to the regime - this mechanism is even stronger under increased media freedoms (Casper and Tyson 2014, 563). This could partially explain why more protest is permitted among some regimes than others, as well as why some allow higher levels of media freedom: because it serves to alleviate the “Dictator's Dilemma” by providing a collective measurement of citizens’ true preferences and allowing the regime to respond accordingly (Wintrobe 2005, 7).

ICT can act as a moderating factor, enabling sharing of information throughout groups and loosely-affiliated networks, creating opportunities as well as risks for both regime leaders and potential opposition (Stein 2016, 1:3). While they can stimulate the economy and encourage

[20] *Information and communication technologies* (ICTs) include technologies such as digital networks, satellite systems, cellular phones, traditional telephones, computers, radio, television, email and the Internet or World Wide Web (Garrett 2006, 202; Goebel 2013, 385–86).
[21] See: Garrett 2006; Goebel 2013; Christensen and Groshek 2019; Weidmann and Rød 2019 among others.

democratic freedoms, they also help consolidate authoritarian rule and increase repression (Goebel 2013).

They may also reflect the limitations for co-optation and coercion among regimes. For instance, if options for co-optation are restricted, regimes can restrict online media as a substitute (Gandhi and Lust-Okar 2009, 412–13; Guriev and Treisman 2015, 4). If co-optation through state resources is unachievable, incumbents can attempt to suppress opposition and influence elections by limiting the media and controlling information (Gandhi and Lust-Okar 2009, 412–13; Guriev and Treisman 2015, 4).

ICTs have been shown to affect participation levels, mass mobilization itself, and collective organization (Garrett 2006, 203–4). ICT has been associated with both increased political protest and associated repression (Christensen and Groshek 2019; Stein 2016, 1:30–31). It can affect mobilization by lowering participation costs and encouraging unity among opposition actors (Garrett 2006, 204–7; Ruijgrok 2017). It can help accelerate and diffuse mobilization across a greater geographic distance, increase availability of information, and allow new types of mobilization (Garrett 2006, 207–10; Ruijgrok 2017). This may be despite obstacles posed by regime censorship. In one anecdote from protests in Belarus, activists remarked how encrypted chats serve as a main source of information for activists unable to trust state media (Daria Litvinova 2020). Relatedly, ICTs help overcome coordination problems by facilitating decentralized and non-hierarchical organizations (Garrett 2006, 210–12; Ruijgrok 2017).

Not all findings agree, Brancati claims that ICT may have little to no effect on protest activity, and does not make pro-democracy movements more likely to occur (Brancati 2014). They find that ICTs may do more to increase the size and longevity of protests, but may not determine their occurrence in the first place (Brancati 2014, 1525). In the absence of such technologies, protests would perhaps have been organized through other means and occurred anyway (Brancati 2014, 1525).

Others note that ICT can be used by governments for surveillance, censorship, and propaganda (Goebel 2013; Guriev and Treisman 2015). It may also increase the regime's ability to monitor elite actors, popular demands, and improve regime responsiveness thereby increasing public support (Goebel 2013, 390–400). In other words, to improve what Goebel terms "legitimacy-relevant outputs" (Goebel 2013, 400). But - this does not mean that it decreases protest.

In their authoritative study of technology and protest within autocracies, Weidmann and Rød find that multiple actors simultaneously benefit from ICT, and that control of ICT implementation is asymmetrical (favoring the regime) (Weidmann and Rød 2019). They observe that city-level Internet penetration is correlated with less frequent protests, but that it may sustain protest actions once begun (Weidmann and Rød 2019). This is similar to Brancati's findings (Brancati 2014). They find that while ICT diffuses *information* about repression, it does not make it more effective (Weidmann and Rød 2019). Finally, they note

while digital repression can act as a substitute for traditional coercion, this can backfire by significantly increasing protest mobilization once started (Weidmann and Rød 2019).

Others also find positive associations with increased mobilization (Christensen and Groshek 2019). They highlight the important distinction that while ICT usage may increase both protest and repression, it does exactly that - *increase both*. Although ICT technologies may be *used* for repression, it does not appear to decrease protest overall. Among autocracies, ICT usage showed a positive relationship with anti-government demonstrations - and media freedoms were not statistically significant (Christensen and Groshek 2019). This would appear to suggest that while not inherently democratic, ICT usage is significant to greater protest occurrence.

Importantly, this role of ICT may be strong enough that it may make comparisons before its widespread adoption less comparable. If ICT presents a significant moderating factor affecting protest and informational mechanisms, findings prior to widespread ICT adoption may not be directly comparable to the environment of today.[22] At the very least, it means that additional research is needed to say for sure.

But in general, the literature strongly suggests that ICT is likely to increase information access and increase mobilization by resolving coordination problems. It may affect repression, but previous research shows that this appears to be in concert with increased protest, not instead of it.

2.6 Other Factors

There appear to be strong relationships between protest occurrence and inequality, political regimes, and technology, but there remain additional factors to consider. These are mentioned in the literature and show sufficient theoretical significance, even if outside of my central focus.

GDP Per Capita

First, the level of economic wealth in a country should be considered, since the level of economic wealth affects how much there is to be distributed as a whole. Insufficient GDP per capita may contribute to instability, and some findings point towards an increased increased risk of protests and political destabilization until a certain threshold is reached (Korotayev, Bilyuga, and Shishkina 2018).

Natural Resources Rents

The sources of economic wealth may also be important. Regimes relying on resources like oil or minerals have little or no need for cooperation, less need for parties, and may rely more on rent distributions to gain citizen loyalty (Gandhi and Przeworski 2006). They show greater overall stability - possibly due to a higher quality of life for their citizens (sufficient to deter

[22] I address this and other research gaps in Section 3: Theoretical Framework.

democratization) and resources to buy-off the military to prevent coups (Wright, Frantz, and Geddes 2015). This wealth functions as an independent pool of resources for the regime, and may correspond to higher coercion, since regimes rely less on revenue from citizens and feel less obligation towards them (Hill and Jones 2014).

Population & Urbanization

The capacity for mobilization plays a role, since a country with a smaller population will not have the ability to have as many or as sizable protests. *Where* people live may be important, and urbanization is another potential confounder. Regimes often implement policies that benefit citizens living in cities at the expense of those living rurally (Wallace 2013). Cities have denser and higher populations and associated communication networks - which can magnify grievances and concentrate any mobilization (Wallace 2013, 632). This means that denser urban populations have more potential to threaten regime stability compared to dispersed rural ones, and so become a priority for regimes. This urban-biased preference ultimately leads to concentration instead of expansion, improving short-term stability and economic growth at the cost of increased unrest (Wallace 2013, 632–33).

Cultural Diversity

The composition of society - in particular division along ethnic or cultural lines, may potentially affect protest. It may introduce coordination problems that harm mobilization, or increase risks of violent unrest due to citizen exclusion and polarized policy preferences (Magaloni and Wallace 2008, 24; Bodea, Elbadawi, and Houle 2016).

Unemployment

Unemployment is another potentially significant grievance likely to intersect with economic inequality. Higher unemployment may increase pre-existing feelings of relative deprivation and the likelihood to engage in protest action (Grasso and Giugni 2016, 675). It may also prompt individuals to conceptualize it in a more collective way - viewing unemployment as a greater political problem rather than an individual one (Grasso and Giugni 2016, 675; Kurer et al. 2019, 873). Unemployment among youth especially is linked with increased protest participation (Korotayev, Meshcherina, and Shishkina 2018). It may also lower the cost for protesting through the desperation and limitations created by joblessness.

In summary, the literature identifies per-capita GDP, rents derived from natural resources, the total population and their distribution, cultural fragmentation, and national unemployment as potential confounders to consider. This list is not exhaustive, but represents notable elements frequently observed in research on protest and political unrest.

3. Theoretical Framework

Throughout the literature, I have identified important elements concerning collective action, the political environment, and information exchange. To answer my research question I examine the ways in which all of these elements may correlate and interact with one another. Here, I present my theoretical framework, before discussing my research design and data sources.

For this thesis, I choose to limit my analysis to non-democratic regimes between 1990- 2014. This serves to focus the scope of my research, and address the urgency of the current political climate. By analyzing protest in autocracies, we gain insights into the successes and failures of governance, and may craft better policies that encourage democracy.

It also addresses extant gaps in the literature. First, there is still a relatively limited amount of research examining protest events comparatively across non-democratic regime types.[23] Autocracies have often been excluded from analysis, treated as homogenous groups, or considered only in comparison with democracies.

For example, Houle mainly makes global comparisons, examining autocracies in only one of the publications cited, and there the focus is primarily on democratization (Houle 2018; 2016a). Gimpelson and Treisman, Griffin and De Jonge, Jo and Choi, and Krieger and Meierrieks all rely on global comparisons (Gimpelson and Treisman 2018; Griffin and De Jonge 2014; Jo and Choi 2019; Krieger and Meierrieks 2019). Østby's analysis, although still significant, is limited to only 36 countries experiencing civil conflict between 1986–2004 (Østby 2008). And although I argue that findings by Solt and Kurer et al. are still comparable, they rely on cross-national surveys of democracies (Solt 2015; 2008; Kurer et al. 2019). Of those focusing on inequality, Acemoglu and Robinson, Hanson, and Teo were some of the few to examine autocracies exclusively (Acemoglu and Robinson 2006; Hanson 2013; Teo 2019). Others (such as Guriev and Treisman or Gerschewski) provide excellent models for regime behaviour, but do not test this across countries (Guriev and Treisman 2015; Gerschewski 2013).

Contrasting autocracies and democracies equally may provide insightful results - for instance that democracies are equally as likely as other regime types to employ coercion when faced with popular protest, even if particularly unsuccessfully (Carey 2006). But this fails to acknowledge the fundamentally undemocratic structure of autocracies, and skews significant results in favor of those with the largest number of observations - democracies and relatively liberal multi-party democracies. Comparisons that employ a simple binary "Dictatorship/Democracy" characterization (such as Gallagher and Hanson) also fall into this trap. Not all democracies are equally democratic, but neither are the institutions of Cuba particularly comparable to the Saudi monarchy. Analyzing autocracies independently

[23] For instance: Ulfelder 2005; Gandhi and Przeworski 2006; Stein 2016; Magaloni and Wallace 2008; Svolik 2012; Weiner and Federico 2017; Goebel 2013; Gerschewski 2013; Casper and Tyson 2014; Guriev and Treisman 2015 among others.

provides a better comparison that acknowledges their variations despite their un-democratic nature.

Second, much of the most relevant literature is beginning to be outdated. The terminus for many studies is in the mid-2000s, and the majority ranges from the 1950s to early 2000s. This is problematic because findings may say more about global trends in the past and less about the state of affairs today. More importantly, we have no way to detect such skewed results without more up-to-date analysis.

Even more contemporary data falls short of incorporating recent events such as the Arab Spring movement in 2010. Magaloni and Wallace, for instance, analyze protest and authoritarian survival only from 1950 to 2000 (Magaloni and Wallace 2008). Ortiz's discussion on regime/repression interactions is between 1948-1982 (Ortiz 2013). Hanson's contributions range from 1960-2000 and 1965-2005, respectively (Hanson 2013; Gallagher and Hanson 2009). Wilson & Piazza also offer a more up-to-date dataset, from 1970-2006 (Wilson and Piazza 2013). Svolik's analysis remains authoritative and exhaustive, covering 1946 to 2008, but ends short of being able to include the wave of protests from 2010 onwards (Svolik 2012).

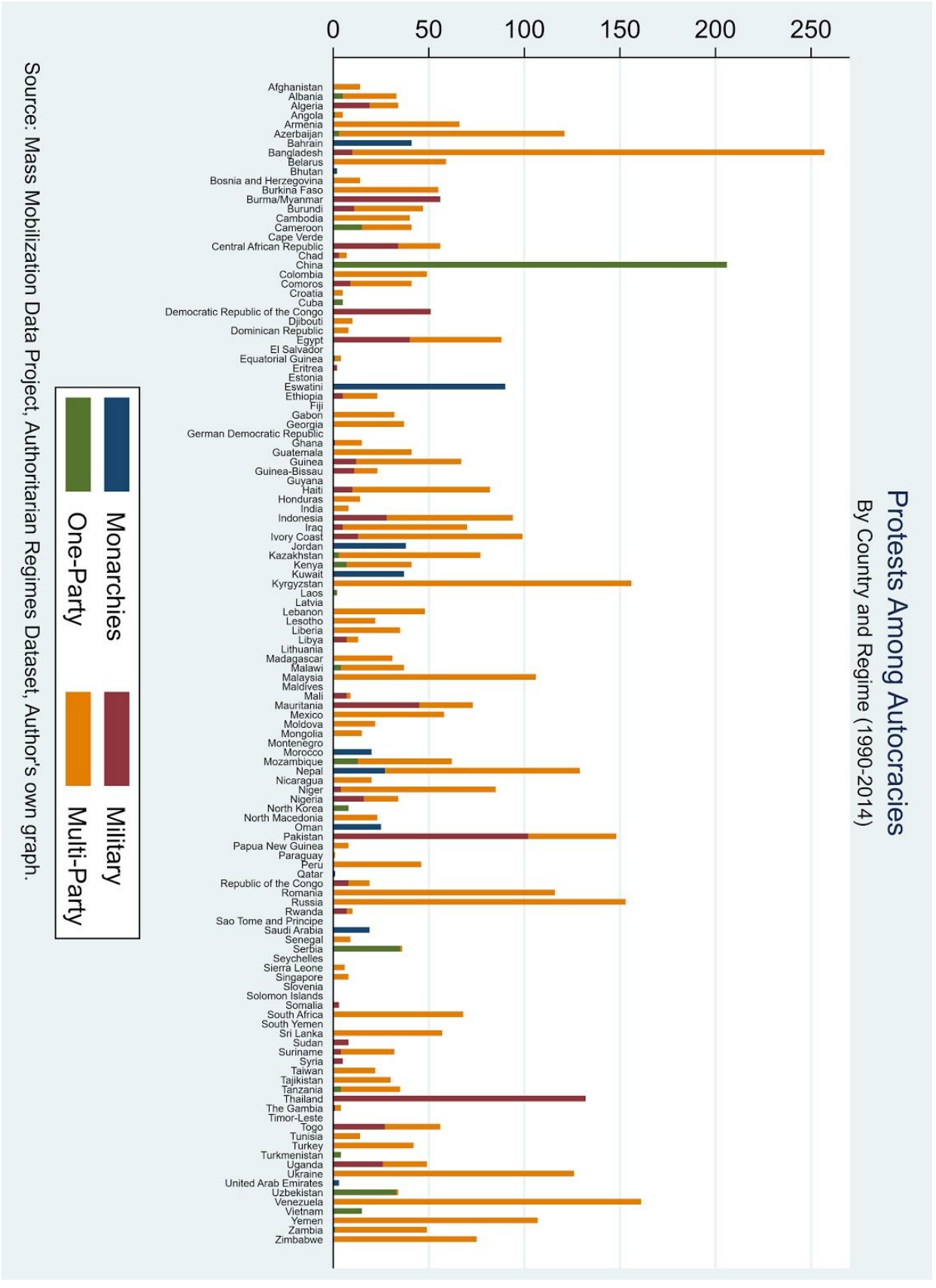
Third, it is possible that globalization and technology have significantly altered the landscape in more recent years. Despite the research gap that ICT represents, much previous research takes place before or earlier during the growth of ICT and internet technologies worldwide. Not only does this present a noticeable gap when considering the widespread use of mobile phones in protest actions, but it means that findings from decades ago prior to ICT growth may be less comparable with today's context.

I seek to contribute to each of these gaps by performing a contemporary analysis that builds on the existing literature. I ask whether increased inequality creates an observable grievance that drives protests across autocracies, as is often theorized? Does it deprive citizens of the resources to mobilize? Or is any impact obscured by the effect of other elements? This leads to my main research question:

RQ: How does inequality explain variation in protest levels across autocracies?

As shown in Figure 1, there is considerable variation in protests among the same countries under different regime types. Multi-party regimes are both the most numerous in category and in total protests. But military regimes such as Myanmar and Thailand account for a noticeable amount, as do monarchies like Bahrain, Eswatini, and Jordan. Apart from China (arguably a unique case), the protest occurrence in one-party systems appears comparatively low. While some variation is likely explained by changing grievances themselves, I explore the idea that any relationship to protest is conditioned by inherent differences between regime categories Additionally, I consider the likely impact of other factors found relevant in the literature: the regime type, the level of coercion, and the use of information technology.

FIGURE 1. Protests Across Autocracies by Country & Regime Category.



In doing so, I consider the impact on protests collectively. I do not address directly the goals of the incumbent regime or their opposition in this thesis, nor the topic of protest events. Analyzing these in detail would require focusing on a specific regime at the protest event level. Since I am more interested in general trends and variations, I focus instead on larger institutional characteristics and motivations.

I choose to examine economic inequality since economic factors are likely to be salient, and it has been widely-cited in relation to global protest and populism. I consider it likely to impact individuals and create grievances regardless of regime type. This allows me to explore how inequality interacts with the environment of different autocratic regimes.

Examining global inequality among autocracies as shown in Figure 2, there appears to be a historical correlation between high inequality and low protest: protest appears to increase as inequality decreases over time. The opposite also appears to be true, that when inequality has increased, protest has decreased.

This relationship is supported by existing findings from the literature, including research on effects among democracies. Based on this, I reach the following hypothesis:

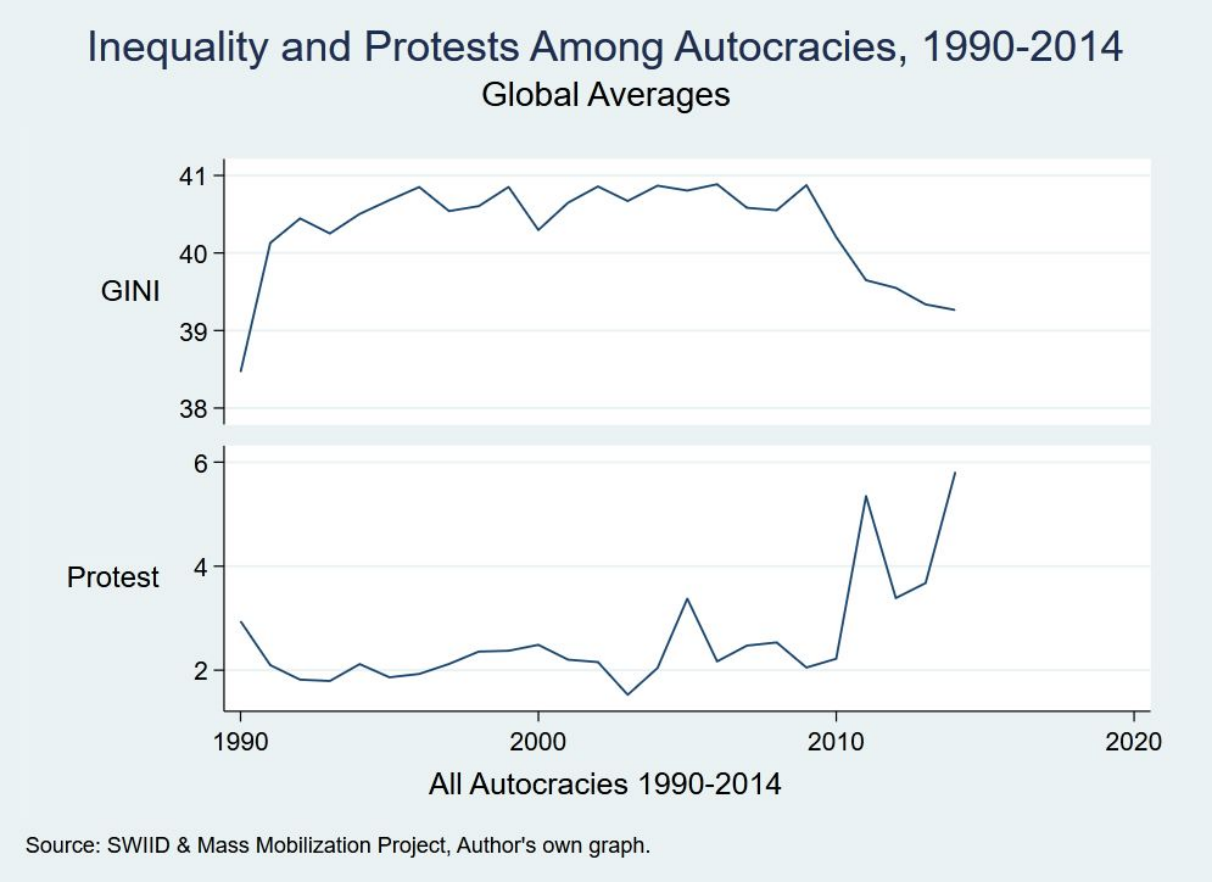
H1. Inequality among autocracies has a negative relationship with mass mobilization.

After evaluating the evidence, I consider a negative relationship to be most likely.

First, this hypothesis is consistent with resource and opportunity based theories of protest. Inequality increases the resources of those at the top which may be used to restrict dissent by the poor, while limiting the resources available to dissenting actors. The resources of political power and coercive tools possessed by those at the top may have a negative effect which overrides any positive relationship that might exist. The resources of those at the bottom may be insufficient to enable any real action.

Second, this may be particularly likely among autocracies due to the un-democratic power imbalance already present (Schedler 2013). I accept that outliers are possible and expected - but these are remarkable because of their irregular occurrence, not in spite of it.

FIGURE 2. Protests & Inequality Among Autocracies (Global)



Compelling evidence shows that economic inequality leads to increased political inequality. It does so by limiting the resources available to poorer citizens, polarizing political preferences, and impeding political participation by all except the wealthiest (Houle 2018; Solt 2015; 2008). That economic inequality increases political inequality was found to hold true by Houle even when the level of democracy was controlled for - political rules and policies are skewed in favor of the wealthy and powerful (Houle 2018; Solt 2015; 2008). If - as Rodrik and others have illustrated - wealth and power are synonymous with regime elites, then greater inequality serves only to increase their strength and resources (Rodrik 2018; Schedler 2013).

And although Solt's findings concerned democracies, given the differences of power structures and political engagement, it seems likely that if such an effect is observed among liberal democracies, this mechanism is likely *stronger* among autocracies.

Based on this evidence, I choose to take the opposite view of more conflict-focused theories, considering the importance of resources for mobilization. I consider this to be especially relevant within autocracies which disproportionately favor the elite, despite using concessions to maintain their rule.

I accept that there is evidence that the effect of income inequality may have more to do with *perceptive* rather than subjective evaluations of inequality.[24] But this requires sufficient data which is often unreliable or unavailable for many autocracies. In the absence of a good variable to measure public perception, a measurement of the relative *change* in inequality over time might partially capture this. While not the focus of this thesis, I will attempt to acknowledge this by using an alternate variable in a supplemental model.[25]

Following my first hypothesis, I ask whether or not regime type influences the effect of inequality on protest. Does it lead to mobilisation, or suppress political engagement? But though inequality levels unquestionably affect individuals, it does not necessarily drive them to action. I consider the likely effects on citizen resources and power in an authoritarian context. After reviewing the literature, the following hypothesis seems most plausible:

H2 - Regime type interacts with inequality to influence mass mobilization.

As shown in Figure 1 and Figure 3, different countries and regime types exhibit substantial variation in protest occurrence. Figure 3 shows how these protest fluctuations are distributed among regime categories across years. Based on previous findings by Hanson and others, differences between regime categories may influence the capacity and use of both co-optation and coercion, and result in differing outcomes.[26] Existing research also establishes a strong precedent for analyzing these outcomes through the lens of regime categories.[27]

Keeping this in mind, I consider regime categories to function as a proxy for state capacity to engage in coercion or co-optation tactics. The presence and composition of political institutions in a regime (such as parties or legislatures) affects incentives for political action and provides options for resolution. These differences not only affect macro-level policies that generate different outcomes such as inequality, but they determine the structures available to those disadvantaged by such policy results.

I have mixed expectations for how this relationship presents among different regime types. Structures that co-opt can redirect, absorb, or resolve the political energies and discontent that would otherwise lead to protest. Perhaps more likely, co-optation may lead to a positive relationship with mobilization, by helping normalize dissent in a manner that leads to higher protest.

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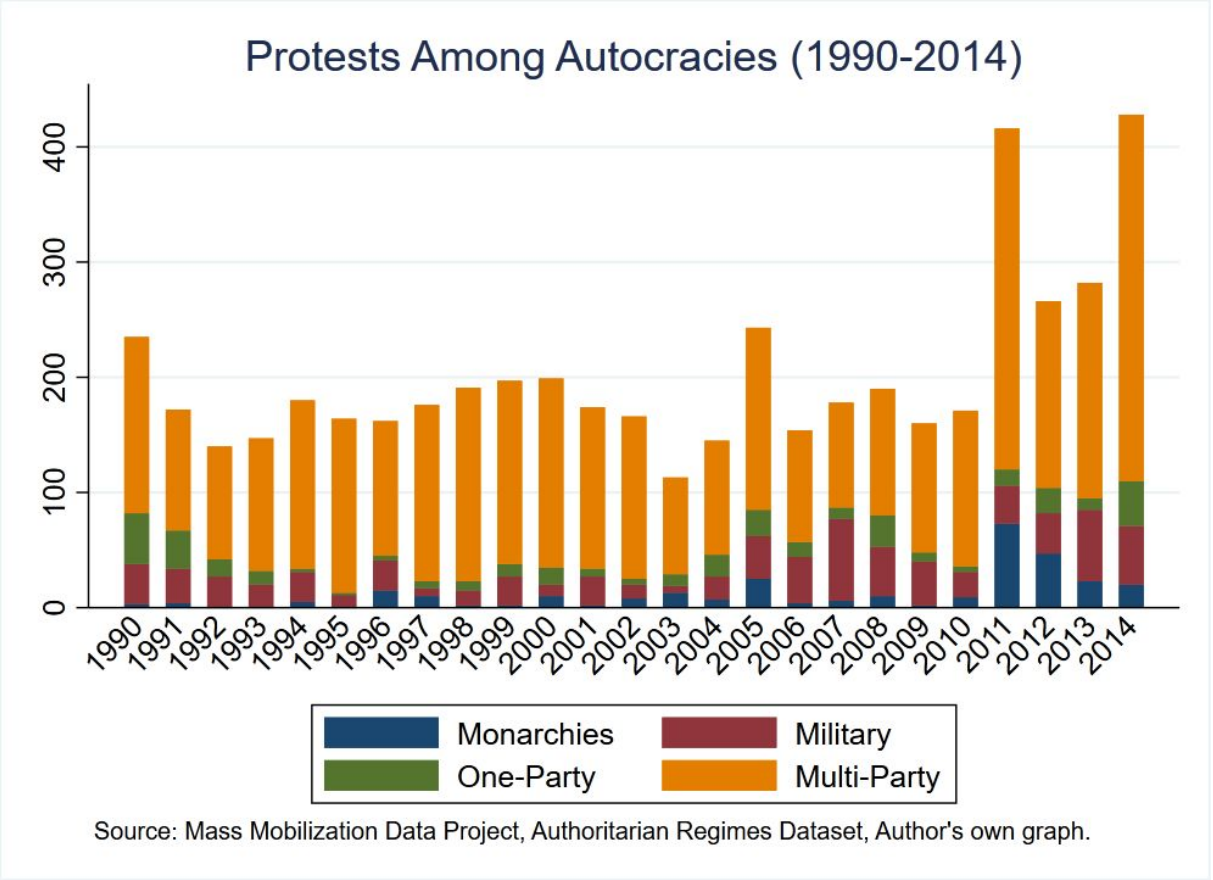
[24] See: Griffin and De Jonge 2014; Gimpelson and Treisman 2018; Houle 2018; Østby 2008.
[25] This variable uses the difference between the yearly GINI coefficient and that of the previous year. These results are provided in Appendix A5.
[26] See: Hanson 2013; Gallagher and Hanson 2009; Wilson and Piazza 2013; Aksoy, Carter, and Wright 2012.
[27] See: Gandhi and Przeworski 2006; Hanson 2013; Wilson and Piazza 2013; Geddes 1999; Geddes, Wright, and Frantz 2014; Svolik 2012; Gallagher and Hanson 2009; Hadenius and Teorell 2007; Wahman, Teorell, and Hadenius 2013 among many others.

FIGURE 3. Protests Across Autocracies by Year & Regime Category



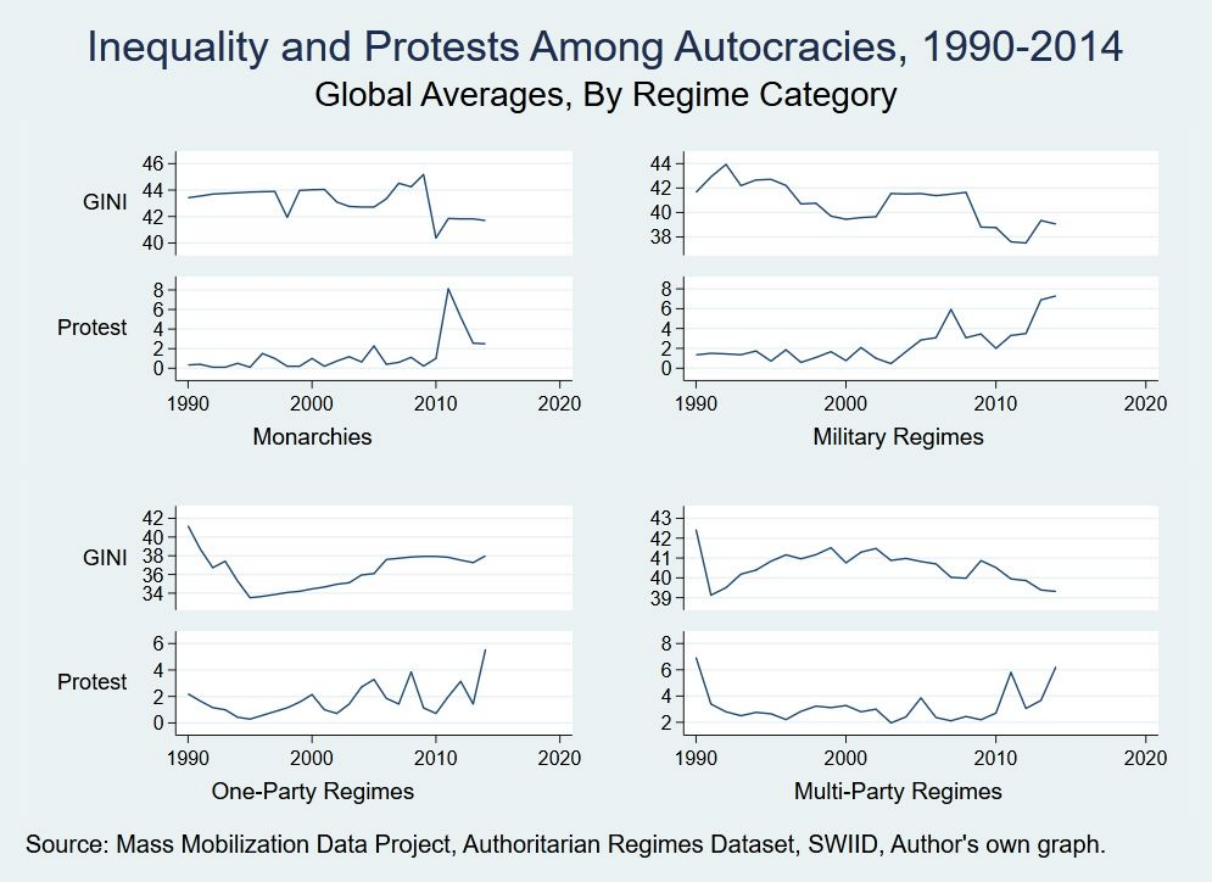
Source: Mass Mobilization Data Project, Authoritarian Regimes Dataset, Author's own graph.

Examining Figure 4 shows the average level of inequality between regime categories along with the average level of protest. Protest appears to differ even for comparable levels of GINI; the negative effect theorized in **H1** may not uniformly affect regimes.

As Kurer notes, democracies embody certain rights of resistance for citizens to mobilize collectively, protest grievances, and replace elite members (Kurer et al. 2019, 867). Although this thesis is concerned with non-democracies, it seems reasonable that regimes possessing characteristically democratic institutions might embody these qualities, albeit to a lesser extent. This, along with coercion, may explain part of the variation shown in Figure 4.

Based on previous findings, protest is likely to be lowest by default in single-party regimes, slightly higher among military regimes, and highest among multi-party regimes that possess more democratic institutions. There is likely to be limited effect for monarchies, who have more wealth and rely less on citizen-derived rents (Hill and Jones 2014; Gandhi and Przeworski 2006). This corresponds with existing research on terrorism, redistribution, and civil conflict (Hanson 2013; Wilson and Piazza 2013; Fjelde 2010). Inequality would therefore compound this relationship.

FIGURE 4. Protests & Inequality Among Autocracies



But my goal is only to investigate a moderating effect of regime types; deeper investigation would be needed to explain the specifics of these differences and adequately separate causation from correlation for each regime type.

To provide distinction between the many different regime types, I use the categories provided by Hadenius, Teorell, and Wahman. I choose this categorization for several reasons.

First, because it focuses on how political power is maintained, and I am examining protest which is inherently a challenge to power. It separates regime types according to their institutional makeup in a manner consistent with that used in previous research, and captures the unique nature of monarchies and multi-party electoral autocracies. Second, because it does not focus as much on regime transition and survival, since this is not the focus of my thesis. It is also balanced in its coding decisions, evaluating the fact that regimes may have characteristics of more than one type. Finally, this regime type dataset best captures the country/year period needed for my analysis when joined with other datasets.

Although there is a risk in attempting to categorize regimes, I argue that it still represents qualitative frameworks that capture measurable aspects - the use of Freedom House and Polity scores, or hereditary succession, for instance. How well labeled institutions match up

in actual practice is a subject that has more to do with country-level performance than institutional classification, and would be better addressed in future research.

I am not examining the component of legitimation (as conceptualized by Gerschewski) as an independent variable for several reasons. Partly due to the methodological challenges acknowledged by Gerschewski - there exists no singular agreed-upon metric for measuring legitimacy (Gerschewski 2013). While indicators of government performance exist and are reliable, measuring public attitudes is more difficult. For my thesis, this also leads to potential issues of collinearity: Gerschewski cites protest data as a potential measurement for popular legitimation (or its absence) (Gerschewski 2013, 20). Therefore any independent variable capturing the legitimacy of a regime as defined by Gerschewski would risk encompassing my main dependent variable. Gerschewski's research also focused more on regime stability, which is not the main focus of this thesis.

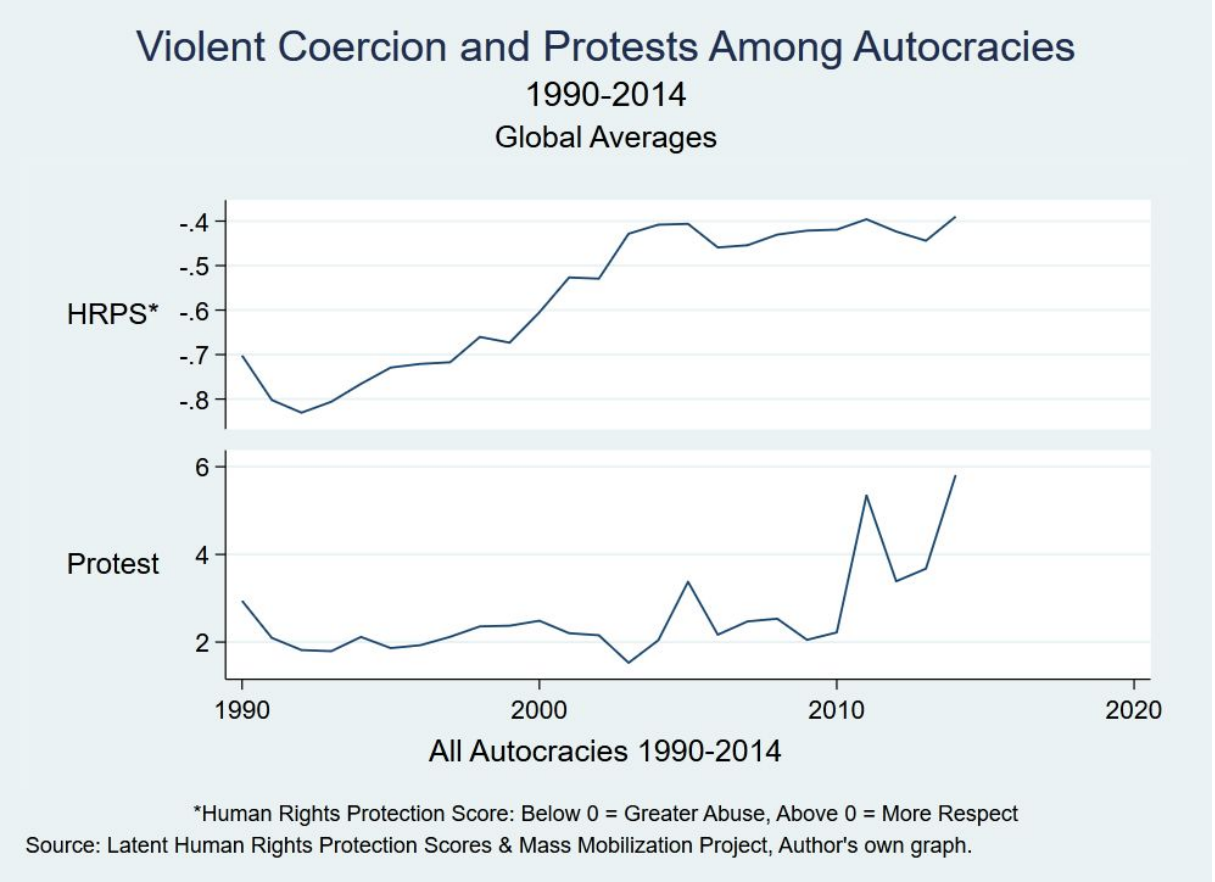
Despite this I acknowledge that legitimation plays an important role in any discussion of protest. I consider legitimation to be partially represented in my thesis by the concept of grievances and protest. But this concept focuses only on the "specific" form of support discussed by Gerschewski - whether a regime adequately meets the demands of its citizens (Gerschewski 2013, 20). My thesis does not encompass Gerschewski's concepts of "diffuse" legitimation - the longer-term public support for the actual ideologies, claims, or ideals that the regime represents (Gerschewski 2013, 20). This thesis primarily assumes differences in co-optation and coercion tactics, capturing legitimation only peripherally.

Since co-optation is dependent upon institutions that are arguably captured by regime type, I choose to examine coercion separately. Using objective measurements of respect for human rights can help to capture and isolate any effects of coercion, while the regime structure itself reflects the co-optive institutions present and existing bases of power.

Examining historical trends among autocracies as shown in Figure 5, there appears to be a clear correlation between protest occurrence and violence coercion as measured by respect for human rights standards. Figure A1[28] shows how this relationship varies between regimes, although it is measured independently from them.

[28] See: Appendix A3.

FIGURE 5. Protests & Coercion Among Autocracies



Based on this and my evaluation of the evidence in the literature, I reach the following hypothesis:

H3 - Coercion has a negative relationship with mass mobilization, independent of regime type.

At least in the short-term, repression should deter protest through increasing the costs of collective action against the state and leveraging the power of the regime. This is supported by findings of Svolik, Gerschewski, Carey, and Ortiz (Svolik 2012; Gerschewski 2013; Carey 2006; Ortiz 2013).

I accept that the literature is mixed in its conclusions about the relationship between coercion and protest. There exists strong evidence for a more reciprocal relationship - however this is complex and contested (Ortiz 2013; Pierskalla 2010; Hill and Jones 2014). And this is often with regards to political violence (Moore 1998; Pierskalla 2010; Carey 2006; Ortiz 2013), which is outside the scope of this analysis.

Especially in the context of an authoritarian regime, I theorize that sufficient coercion tends to deter mobilization. This is plausible when considering the power of the incumbent regime -

their lack of independent accountability and capacity for violence. However, I acknowledge that outliers are to be expected, if citizens have a sufficiently strong focal point and unifying environment. By accounting for coercion, we can more clearly see when protest is suppressed, redirected, or permitted.

I consider this to be regardless of regime type under this model, because measurements of coercion are capturing the actual *use* of state repression (via estimated levels of human rights), not the capacity of a particular regime. In controlling for coercion separately, I also consider it to be the default tactic for authoritarian regimes. This acknowledges Svolik's view of the inherent potential for violence within authoritarian regimes (Svolik 2012), and conceptualizes coercion as being less limited than co-optation. Co-optation relies on institutions and is limited by their absence, but coercion can be used as complement or replacement. Co-optation encourages cooperation, which may revert to the use of control when that fails. This is supported by research that conceptualizes coercion as the least-preferable and costliest of tactics, but co-optation as only possible to the extent that institutions permit (Guriev and Treisman 2015).

While coercion may include both violent and non-violent measures, in my thesis I focus on violent repression. This is because specifically nonviolent repression is harder to quantify and might require closer event-level analysis - curfews, censorship, etc. could be in response to events themselve. Additionally, some measures of non-violent political restrictions are already captured by regime type (a lack of political parties, for example).

Since this thesis concerns protest activity over the period of 1990-2014, the literature shows it is necessary to consider technology as a moderating factor. This addresses an existing gap in the literature, and controls for an important potential confounder. The use of information technology may be an extension of the unique political environment of different regime types. By including the use of ICTs, I can explore the ways in which the presence and quality of information signals affect protest across regimes, but separate that from the effect of the regime institutions themselves.

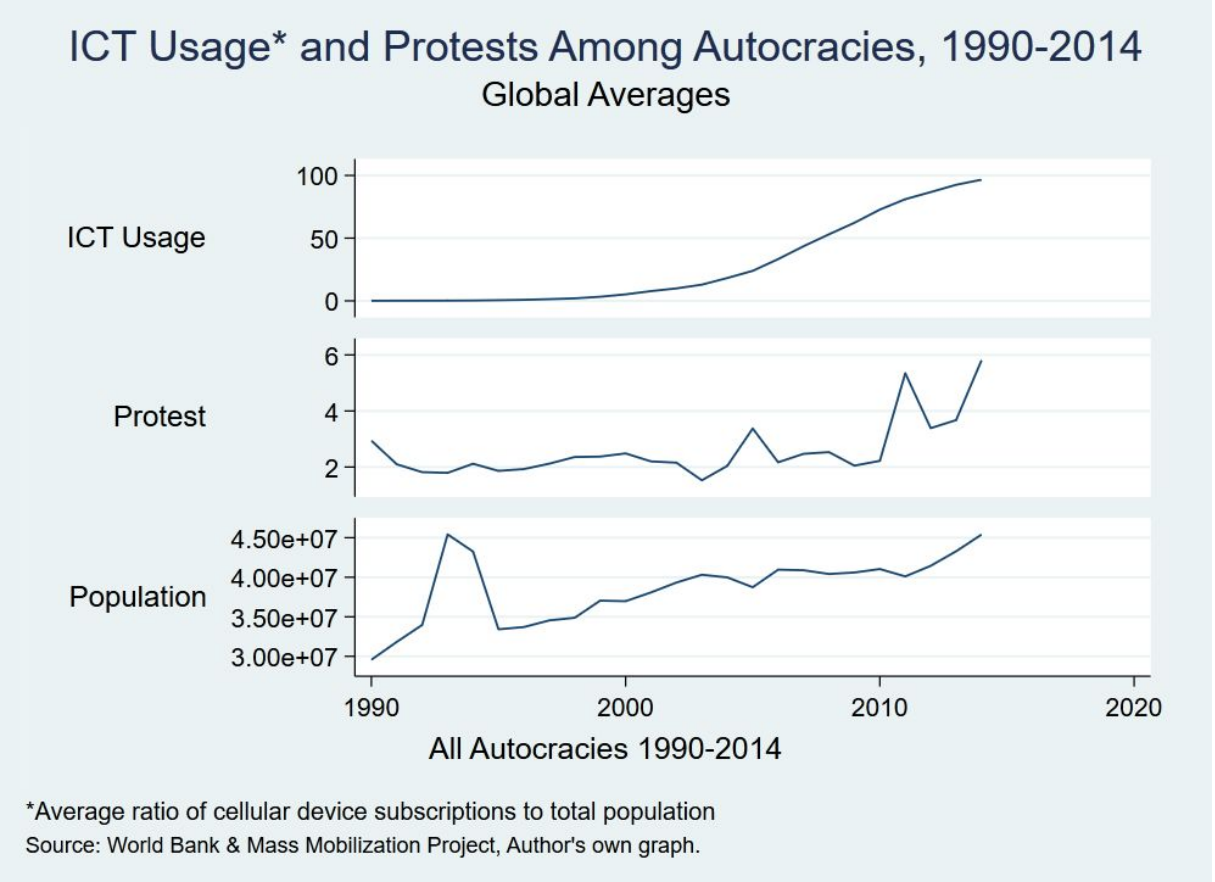
As shown in Figure 6 here and Figure A2[29] in the Appendix, there appears to be a strong relationship between the average number of protest events per year, and the overall ratio of ICT usage among the population. This seems to be more correlated with ICT than the population alone. Based on this and the evidence previously summarized in the literature, I reach the following hypothesis:

H4 - ICT usage has a positive relationship with mass mobilization independent of regime type.

Though the literature points in both directions, this hypothesis seems most supported when considering protests among different regime types over time.

[29] See: Appendix A3.

FIGURE 6. Protests & ICT Use Among Autocracies



Overall, ICTs serve to increase information access, can increase mobilization resolving coordination problems, but can be used by regimes to consolidate control (Stein 2016; Goebel 2013). Internet penetration has been positively associated with increased protest events on average in a given year when compared with democracies (Stein 2016, 1:30–31). This relationship holds even when the higher average number of protests under authoritarian regimes is controlled for (Stein 2016, 1:30–31). It should be noted that I am examining technology as an *enabling* factor for protest occurrences, not as a primary cause.

While this thesis cannot be exhaustive, additional moderating factors mentioned in the literature such as Gerschewski's concept of legitimation have been acknowledged, even though they are not my central focus. The other elements highlighted as potential confounders by the literature I will attempt to control for in my models.

In summary, I believe that economic inequality is likely to have a negative relationship with mass mobilization due how it worsens existing political inequality. This is especially plausible among autocracies due to an inherent power imbalance favoring the elite. But, protest levels may also differ between regime types due to how their institutions enable, redirect, or discourage dissent. I additionally consider the effects of ICT and regime coercion. I theorize that ICT usage will have a positive relationship with protest, in contrast to negative effects of economic inequality and coercion.

4. Research Design

4.1 Data

To examine the effect of inequality on protest mobilization across regimes, I use data drawn from the Authoritarian Regimes Dataset, Latent Human Rights Protection Scores, the Mass Mobilization Project, The Standardized World Income Inequality Database, Varieties of Democracy, and World Development Indicators datasets.

The Authoritarian Regimes Dataset covers the years of 1972-2014 and includes 195 nations (Hadenius, Teorell, and Wahman 2017). This includes all UN member nations (with the exception of Andorra, Liechtenstein, Monaco, San Marino, Nauru, and Tuvalu.) (Hadenius, Teorell, and Wahman 2017). Former countries and Soviet states are treated as separate nations (Hadenius, Teorell, and Wahman 2017). This dataset is chosen for the reasons previously outlined - the focus on regime institutions, and the consideration of amalgamated regime types. This dataset categorizes regime types by how political power is maintained: hereditary succession, the use of military force, and the implementation of popular elections (Hadenius, Teorell, and Wahman 2017).

The Latent Human Rights Protection Score dataset is a novel dataset which captures the estimated “true” level of repression per country and year, and assumes it to be the result of regime actions (C. J. Fariss 2014, 307). I utilize this dataset since it captures repression in a manner that considers changing standards of accountability over time, and calculates a baseline probability for the level of repression to vary over time (C. J. Fariss 2014, 314). This model also accounts for the difference between the estimates of a dynamic model where the standard of accountability changes with time, and a constant model where it does not (C. J. Fariss 2014).

The Mass Mobilization (MM) Data Project records events where 50 or more protesters demonstrate against the government, and covers 162 countries between the years of 1990 and 2018 (Clark and Regan 2016a). While other protest datasets exist, this dataset appears to provide the most complete coverage of both countries and years. It also limits the data to citizen protest against the government, which other datasets did not.

The Standardized World Income Inequality Database combines data from the OECD Income Distribution Database, the Socio-Economic Database for Latin America and the Caribbean generated by CEDLAS and the World Bank, Eurostat, the World Bank’s PovcalNet, the UN Economic Commission for Latin America and the Caribbean, and national statistical offices worldwide (Solt 2019). It uses data from the Luxembourg Income Study as a standard benchmark, and captures Gini estimates for disposable and market income inequality across 198 countries between 1960 and present (Solt 2019). This dataset is unique in that it uses multiple imputations to capture uncertainty, with values given in a mean-plus-standard-error format (Solt 2019). I chose to use this dataset since its stated goal is to maximize comparability while providing the most coverage possible for countries over time (Solt 2019).

To my knowledge, this dataset coverage is greater than any other dataset for income inequality at present.

The Varieties of Democracy (V-Dem) Dataset is the largest democracy-focused dataset in the world, and consists of expert-coded data for 202 countries between 1789 and 2018 (Coppedge et al. 2020b). It measures five aspects of democracy, those being: electoral, liberal, participatory, deliberative, and egalitarian ('Home | V-Dem' 2020).

The Quality of Government Standard Dataset includes country-year data between 1946 and 2019 (Teorell et al. 2019). The Quality of Government dataset is expert-coded by 30 researchers, with the goal of providing academic research on the "causes, consequences and nature of Good Governance and the Quality of Government (QoG)" (Teorell et al. 2019).

My datasets have been compiled in STATA, and all are presented in country-year panel format.[30]

4.2 Dependent Variable

My main dependent variable in this analysis is mass mobilization occurrence. To represent this in my analysis, I use data from the Mass Mobilization Project. For this variable, the data covers 162 countries between 1990 and 2014 (Clark and Regan 2016a). The unit of observation is the protest-country-year, with protests recorded as individual events within each country and year (Clark and Regan 2016a). An event is defined as a gathering that involves 50 or more people expressing demands against the government, targeted at the state or its policies (Clark and Regan 2016a). Protests targeted at other countries, inter-communal demonstrations and community disputes, union action towards specific companies, rebel attacks, attacks by organized armed resistance, and political rallies by the state are all excluded (Clark and Regan 2016a).

These events are gathered from keyword searches of major world news publications via the Lexis-Nexis news database (Clark and Regan 2016a). These are drawn first from the New York Times, Washington Post, Christian Science Monitor, Times of London, the Jerusalem Post (in the Middle East and North Africa), and then from regional media, wire reports, and other sources (Clark and Regan 2016a).

I operationalize mass mobilization as the number of protests events per country-year. Since the dataset was originally coded at the protest-country-year level, I create the variable **Protest** by summarizing the number of recorded protest events per year for each country code, as a continuous variable ranging from 0 to infinity.

To provide robustness, I replicate my models using an alternate data source for my dependent variable. I employ the **Democratic Mobilization** variable from the V-Dem

[30] My STATA .do file is available upon request.

Dataset. This variable is available for 1900-2019, but restricted to 1990- 2014 for comparison in my model. This variable answers the question: “In this year, how frequent and large have events of mass mobilization for pro-democratic aims been?” (Coppedge et al. 2020a, 214). Here, events are defined as demonstrations, strikes and sit-ins to promote or protect democratic institutions and principles or civil liberties (Coppedge et al. 2020a, 214). Possible values include 0 for nearly no events; 1 for several small-scale events; 2 for many small-scale events; 3 for several large-scale and small-scale events, and 4 for many large and small-scale events (Coppedge et al. 2020a, 214). This variable as used in STATA represents model estimates and can be treated as quasi-continuous.

4.3 Independent Variables

For this analysis, my independent variables are the regime type, post-transfer economic inequality, coercion, ICT usage, economic wealth, natural resources, overall mobilization capacity, urbanization, cultural fragmentation, and national employment level.

First, in order to operationalize economic inequality, I use the mean-plus-standard-error estimates from the Standardized World Income Inequality Database (SWIID) for disposable income. This represents a post-tax, post-transfer income derived from the sum of an estimated households income and government benefits minus direct taxes (‘The SWIID Source Data · Frederick Solt’ 2017). I use this estimate since I consider the post-redistribution level of inequality to be important, since redistribution is a unique result of regime policies. This maximizes coverage, since disposable income estimates are described as more common than other definitions (‘The SWIID Source Data · Frederick Solt’ 2017). This variable is given as **GINI (Disposable)**, where a value of 0 represents complete equality, and 1 or 100% represents maximum inequality (Bellù and Liberati 2006). Countries lacking country-year observations include interpolated values to fill in gaps (‘The SWIID Source Data · Frederick Solt’ 2017).

While not the primary focus of this thesis, I consider that the *relative* change in inequality over time could correlate with protest outcomes. I will provide an additional model which attempts to account for this element by calculating the difference between the yearly GINI coefficient and that of the previous year. I consider that this might capture a degree of the macro-level changes that might affect individual-level perceptions. I theorize that changes large enough to be detectable on a measured country-year level are likely to correspond to greater impacts at the micro-level. These results may be found in the Appendix.[31]

To supply regime type categories, I use the The Authoritarian Regimes Dataset. This dataset categorizes regime types according to how political power is maintained: hereditary succession, the use of military force, and the implementation of popular elections (Hadenius, Teorell, and Wahman 2017). I consider this categorization suitable since I am examining citizen protest and challenges to power. I choose to primarily rely upon the **Regime Type**

[31] Appendix A4, Table A1.

(Collapsed) variable to categorize regime types, given the limited observations of my data and the need to remain within the scope of my thesis.

To incorporate coercion by regimes independent of regime type, I use the **Human Rights Protection Score** variable from the Human Rights Protection Scores dataset. This variable captures the mean estimate plus standard error for a score representing protection of physical integrity rights. This variable is unique in that it captures repression in a manner that considers changing standards of accountability over time along with the differences between a constant and dynamic model (C. J. Fariss 2014, 314). This model also incorporates a baseline probability for the level of repression to vary over time (C. J. Fariss 2014). I include this separately since it captures objective measurements which may help separate the effect of repression on protest from the institutional environment of the regime. This should allow me to control for coercion, and examine the importance of the regime environment on protest mobilization. This only captures violent coercion, for the reasons previously given.

Information Dissemination is operationalized through two measures from World Development Indicators data. Here I use **Mobile Cellular Subscriptions** which captures the aggregate number of mobile cellular subscriptions within a country (The World Bank 2020). To make this variable more comparable, I transform it from an aggregation of individuals into a percentage of the total population, dividing by the yearly population total and multiplying it by one hundred. This means that this represents the total number of cellular subscriptions in relationship to the population, effectively the *density* of cellular device subscriptions. (E.g. the maximum value observed is 205.91% for Kuwait in 2014).

Mobile cellular subscriptions are defined as any mobile telephone service using cellular technology, and includes all mobile cellular subscriptions with voice communications (The World Bank 2020). It is derived from national administrative data where available and otherwise through data from telecommunications operators and market research (The World Bank 2020).

While different regimes can choose to address dilemmas of information by allowing, managing, or restricting ICT technology (Goebel 2013), I choose not to use an interaction term for this variable. This is because I consider it to apply equally, independent of regime type, since it represents only the usage among the population. I also choose not to use the variable available for internet usage, since it has fewer observations and using both would likely cause problems of collinearity.

4.4 Control Variables

Here I include other variables noted as potential confounders. Although not exhaustive, they represent some of the most commonly cited elements from the literature.

To control for the economic resources of a country, I include a variable for economic wealth. This is operationalized as Gross Domestic Product via the **GDP Per Capita** variable. Derived

from the V-Dem dataset, it represents estimated GDP per-capita, transformed by the natural logarithm (Coppedge et al. 2020a).

To control for Natural Resource Rents which might affect coercion and co-optation by providing an independent income source, I use the variable **Total Natural Resources Rents** This variable is from World Bank data, and includes total natural resources rents including oil, natural gas, coal , minerals, and forest resources as a percentage of GDP (The World Bank 2020).

The capacity for mobilization is controlled for by including the population of a country as the variable **Population.** This is a continuous variable representing the total population originally from World Bank data, but used from the V-Dem dataset (Coppedge et al. 2020a, 342).

Since urbanization might affect mobilization, I control for people living in urban areas with the variable **Urban Population**, drawn from World Bank data. It is calculated via estimates from the World Bank and the United Nations World Urbanization Prospects, and captures the percentage of the total population living in urban areas (The World Bank 2020).

The variable **Cultural Diversity** accounts for cultural fragmentation. This variable captures the probability that two people in a given country will belong to different ethnic groups, and incorporates a cultural element based on languages spoken between groups (Teorell et al. 2019, 275). The variable ranges from 0 for perfectly homogeneous to 1 for highly fragmented, and values are assumed to be constant for all years (Teorell et al. 2019, 275).

Finally, I consider unemployment as a factor which might affect inequality and the cost for protest actions. I control for this with the variable **Unemployment**, the percentage of the total national labor force that is currently unemployed but seeking employment (The World Bank 2020). I use the estimate from the International Labour Organization included in World Bank data, since it provides superior coverage for the maximum country-years.

4.5 Research Method

My research data is limited to autocracies between 1990 and 2014. Since time-series–cross-section (TSCS) data involves repeated observations of a set of units over time, the resulting data often has contemporaneous correlations and heteroskedasticity among units (Bailey and Katz 2011, 1). This causes incorrect standard errors when using standard Ordinary Least Squares (OLS) regression to estimate results. Panel-corrected standard errors (PCSE) are suggested by the literature as one method to remedy this problem and improve the reliability of estimates from TSCS data (Bailey and Katz 2011).

For my research method, I use linear regression with panel-corrected standard errors, and a lagged dependent variable. I use the *xtpcse* STATA command, which estimates results for linear TSCS models. It also accounts for heteroskedasticity and autocorrelation across panels when calculating standard errors and variance–covariance estimates (StataCorp

2019, 362). I use the *pairwise* option to include all available observations with nonmissing pairs since there are gaps in the data (StataCorp 2019, 362). My panel variable is the Correlates of War country code.

My dependent variable for each model has a lead of +1 year. This effectively regresses the dependent variable observed in one year against lagged independent variables (from the previous year), in order to estimate correlation across time. I also include the non-lead version of the dependent variable to contrast the level of protest for the past year against the current level. The panel data set is considered to be unbalanced, as there are not observations for each country-pair for all years.

A complete list of summary statistics and countries included in my dataset may be found in the Appendix, along with a table of my model variables, associated concepts, and STATA variable names.[32]

I include five different models to test my hypotheses, shown in Table 1. The first model only examines the relationship of mass mobilization with all other independent variables including relevant controls. The second through fifth model also examines the effect of inequality on mass mobilization when inequality is interacted with regime type categories.

To strengthen any findings, I replicate my regime type models using an alternate dependent variable.[33] Taken from the V-Dem Dataset, the variable **Democratic Mobilization** represents the level of mobilization for pro-democratic causes within a country-year. This also incorporates measurements of event scale which are absent in my main dependent variable.[34] This adds additional robustness and reduces any likelihood that my results are a problem of measurement. The added *correlation(psar1)* specification was used for this variable, to control for autocorrelation found.

[32] See: Appendix A1 & A2.
[33] Results provided in Appendix A5, Table A2.
[34] See: Section 5.4 Limitations and Future Research.

5. Results and Analysis

5.1 Summary of Findings

I test 3 hypotheses in my empirical analysis, examining the relationship of protest to inequality in general and across autocratic regime types. I also consider the potential effect of coercion and ICT usage independent of regime category.

These results are provided in Table 1. In Model 1, I am interested in examining trends and relationships across all country-years. 1,146 observations are included across 85 countries. For Models 2-5, I include regime type category dummy variables along with an interaction term. This is intended to estimate the main effect and interaction of regime type categories with GINI, since the first model does not capture the regime type interactions theorized. All possible observations across country-years are still included in this model (and in the versions using alternative data). That is, no model tests only observations from that regime category. Rather, it tests the relationship of 1) the regime type itself, and 2) the interaction of that regime type with GINI, when all else is considered equal. The relationship of the remaining independent variables are estimated without regard to regime type.

Despite my expectations, GINI alone shows no statistically significant relationship with protest events across countries for any model. Nor do the interactions of regime type with GINI hold any statistical significance. The only regime type found to be statistically significant ($p<0.05$) in my main models is multi-party regimes, with a main effect coefficient of 4.119.

Coercion is shown to be significant ($p<0.05$), and has the opposite of the expected sign. As the respect for physical integrity increases by one unit, average protest events decrease slightly, with a coefficient ranging from -0.607 to -0.855. Across all models, lower protest is correlated with less violent coercion, not greater.[35]

Mobile device usage is significant ($p<0.05$) across all models, with coefficients ranging from 0.0239 to 0.0270. This means that as the ratio of mobile devices increases by 1%, estimated protest increases by 2.39% - 2.7%.

Of my control variables, population was found to be significant in all models and showed a weakly positive relationship for each individual. This can be understood as 0.0029 - 0.00417 higher protest events per 1 million people. The others were not found to be significant, but despite this consider them important for inclusion as potential confounders.

[35] See: Section 5.3 Discussion of Findings.

Table 1. Models 1-5 (Main Results, Mass Mobilization Project Data)

	Model 1	Model 2	Model 3	Model 4	Model 5
Protest (Sum) (Lagged)	0.376***	0.372***	0.374***	0.363***	0.358***
	(0.104)	(0.104)	(0.103)	(0.104)	(0.103)
Disposable GINI	-0.0506	-0.0562	-0.0489	-0.0682*	0.00224
	(0.0321)	(0.0343)	(0.0332)	(0.0383)	(0.0256)
Monarchy		-3.757			
		(3.994)			
Monarchy # Disposable GINI		0.0754			
		(0.0832)			
Military Regime			0.0580		
			(2.202)		
Military # Disposable GINI			-0.0179		
			(0.0489)		
One-Party Regime				-4.510	
				(3.294)	
One-Party # Disposable GINI				0.0741	
				(0.0818)	
Multi-Party Regime					4.119**
					(2.033)
Multi-Party # Disposable GINI					-0.0750
					(0.0459)
Human Rights Protection Score	-0.771***	-0.790***	-0.855***	-0.607***	-0.796***
	(0.176)	(0.175)	(0.170)	(0.183)	(0.174)
Mobile Cellular Subscriptions (% of Pop.)	0.0263***	0.0270***	0.0265***	0.0239***	0.0254***
	(0.00663)	(0.00649)	(0.00667)	(0.00659)	(0.00669)
GDP Per Capita (Logged, Base 10)	0.0206	-0.0625	0.0103	0.143	0.0800
	(0.137)	(0.156)	(0.131)	(0.132)	(0.127)
Total Natural Resources Rents (% of GDP)	-0.0199	-0.0221	-0.0177	-0.0119	-0.0123
	(0.0146)	(0.0162)	(0.0150)	(0.0149)	(0.0146)
Population (Total)	3.01e-09***	3.00e-09***	2.90e-09**	4.17e-09***	3.69e-09***
	(1.15e-09)	(1.15e-09)	(1.15e-09)	(1.39e-09)	(1.21e-09)
Urban Population (% of Pop.)	-0.00779	-0.00357	-0.00864	-0.0154*	-0.0117
	(0.00739)	(0.0104)	(0.00771)	(0.00921)	(0.00801)
Cultural Diversity	-0.117	-0.167	-0.105	-0.583	-0.507
	(0.717)	(0.710)	(0.712)	(0.860)	(0.807)
Unemployment, Total (% of Labor Force)	0.00855	0.00819	0.00774	-0.00439	0.00316
	(0.0126)	(0.0139)	(0.0130)	(0.0149)	(0.0141)
Constant	3.156	3.921	3.225	3.686	0.0487
	(2.301)	(2.529)	(2.285)	(2.479)	(1.626)
Observations	1,146	1,146	1,146	1,146	1,146
R-squared	0.193	0.193	0.194	0.198	0.200
Number of Countries (COWcode)	85	85	85	85	85

Standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

The alternative set of models substituting V-Dem data for my dependent variable[36] provides additional results, but lowers the total observations to 881 from 1146 and countries observed to 63 from 85. I acknowledge that fewer countries being included is especially likely to influence results of the regime type interactions along with my other variables.

Mobile device usage was again found significant ($p<0.01$) but showed a much weaker positive relationship, with coefficients ranging from 0.00147 to 0.00199 for all models.

Multi-party regimes, though significant in my models using MM data, are not found significant when examining V-Dem data. Significance ($p<0.01$) of one-party regimes was found, with a coefficient of -2.168, suggesting a slightly lower correlation of protest scale and frequency for this regime category. Significance ($p<0.01$) for the interaction of GINI with one-party regimes was found (not present in my MM model results) showing a positive relationship of 0.0552 higher protest for each unit of GINI when all else is considered equal.

Along with Population, Urban Population and Cultural Diversity were found to be significant control variables for this set of models. Cultural Diversity was significant in all models, and Urban Population was found to be significant in all models except for Model 5. Both show a positive relationship with mobilization for democracy. Cultural Diversity shows an increase in democratic mobilization ranging from 0.267 to 0.306 as cultural fragmentation increases. Urban Population shows a slightly weaker relationship, increasing democratic mobilization between 0.00249 and 0.00333 for each percent of the total population living in an urban area.

The alternative models using a measurement of yearly GINI difference[37] gives results largely consistent with my main models, with a few notable differences. Significant results ($p<0.05$ and $p<0.01$ respectively) are found for GINI difference when the interaction terms and main effects are included for monarchies and multi-party regimes. The sign is negative for both, and indicates a decrease in protest for an increase in GINI. Interestingly, the interaction of GINI and regime type is significant ($p<0.01$) for one-party and multi-party regimes. These show opposite effects, a negative relationship of -5.503 lower protest (one-party) and a positive relationship of 4.337 higher protest (multi-party) for each unit increase of GINI.

Overall, the expected effects for GINI are not reliably present in my results. Among regime types, although one-party and multi-party regimes partly show the expected relationships, this is not consistent across different models. Deeper investigation of party-based regime types is one potential avenue for future investigation.[38]

5.2 Diagnostic Notes & Robustness Checks

Since I am using panel data, I assume that heteroskedasticity is likely since a wide variation between the largest and smallest observed values is expected. As mentioned, using panel

[36] These results are provided in Appendix A5 Table A2.
[37] These results are provided in Appendix A4 Table A1.
[38] See: Section 5.4 Limitations and Future Research.

corrected standard errors (PCSEs) accounts for heteroskedasticity across panels in my resulting estimates.

Tests using the *sktest* command in STATA were performed to check for normality based on skewness and kurtosis. Tests for normality using normal quantile plots and standardised normal probability (Q-Q) plots were also performed for all variables.[39] Some abnormalities were noted, but adequately correcting and examining these would require additional work.

A Wooldridge test for autocorrelation in panel data showed a significant result for first-order autocorrelation in the model using the V-Dem dataset, but not the MM Dataset. The *correlation(psar1)* specification was used for the V-Dem dependent variable.

A CD-test was performed using both dependent variables and showed some cross-sectional dependence. However, it is unclear to me if this test is valid when taking into account the large number of panel units ignored in this test (since those with fewer than three joint observations are automatically dropped). Additionally, a Modified Wald statistic test showed heteroskedasticity in both models. I consider that using panel corrected standard errors is likely to compensate for these, and that further diagnostics would require additional time.

To provide checks for robustness, I replicated my models using different estimation commands. These results of these are provided in the Appendix.[40] These include: a panel corrected standard errors model with added panel-specific AR1 autocorrelation structure (*xtpcse*); a feasible generalized least squares model with fixed effects and panel-specific AR1 autocorrelation structure (*xtgls*); standard panel data regression with fixed effects and standard errors clustered by country (to account for residual autocorrelation) (*xtreg*), and a conditional fixed-effects overdispersion model (*xtnbreg*). The panel-specific AR1 option specifies that any autocorrelation present is likely to be specific to each panel, rather than shared across all observations. This accounts for some expected autocorrelation for protest.

The results of the panel corrected standard errors model and the feasible generalized least squares model with fixed effects are comparable to my main results, with some differences. They find additional significance for GINI alone and consistent significance for one-party regimes in addition to multi-party regimes as in my main model. In one, monarchies are also significant. These relationships were not present in my main results, and further testing would be required to determine the cause. These also differ from my main results in that most relationships appear to be stronger overall. As an example the coefficient for the main effects of multiparty regimes is 7.323 and 8.193, compared to 4.119 in my main model. This increases confidence in my results being reliable - if conservatively underestimated.

The standard panel data regression with fixed effects and standard errors clustered by country gave extremely different results, with only population significant. This is possibly due

[39] See: Appendix A7.
[40] See: Appendix A6.

to assumptions (as I understand them) of structure to the errors being present (such as heteroskedasticity) when using the *xtgls* command; these assumptions are not present in using *xtreg* for standard panel data regression.

The conditional fixed-effects overdispersion model using *xtnbreg* also produced differing results. GINI alone is significant in all except Model 5, monarchies significant and showing a negative relationship, coercion *not* significant, but ICT still significant and positive.

Plotting the estimation residuals for my main results - though desirable - was found to not be possible when using the *xtpcse* estimation command, and online searches showed other researchers encountering the same problem.

Additional significant results were observed in my models during initial testing stages, particularly among one-party Regimes. However, once I adjusted the variables for Urban Population and Mobile Cellular Subscriptions to reflect their percentage of the total population, these results disappeared entirely. This suggests that any significance found may have been outweighed by the effects of those independent variables.

As noted, using alternative methods and sources of data produced some differing results. While any further testing of my hypotheses is unfortunately not possible at this time, they also present future paths for research.

5.3 Discussion of Findings

In sum, the only significant relationships consistently found are mobile device usage and regime coercion as respect for physical rights. Mobile device usage was found to be the most consistently significant across all models including alternate specifications, with a positive relationship throughout. Regime coercion was found to be significant across a majority of models - and always with a negative sign. Regime type, GINI, and their interaction were the most inconsistent both in sign and significance.

Multi-party regimes are the only regime type found to be statistically significant in my main regression. I consider that this may reflect both that they are the most numerous and potentially institutionalize political competition and dissent to a higher degree. They are not found significant when examining V-Dem data. This could indicate that multi-party regimes are significant in event occurrence, but not when both scale and frequency are considered. Similarly, one-party regimes are found significant for V-Dem data but not MM, which could indicate the opposite - that one-party regimes are significant when both scale and frequency are considered, but not in relationship to event occurrence alone.

Combined with consistent significance for one-party and multi-party main effects in my alternative models, this suggests differing effects for regimes. But greater research is needed to establish this, since their interaction effects were not consistently significant. The regime

type categories used might lack important dimensions reflecting their political environment.[41] Alternatively, the key interactions that lead to mobilization may not lie with the regime structure itself, but be found in different institutional aspects or grievances.

The lack of significance for inequality as measured by disposable GINI - even when interacted with regime categories - is echoed by previous findings in the literature. I consider it may reflect criticisms that grievances have more to do with perceived inequality by citizens, not the actual levels as measured (Gimpelson and Treisman 2018).

The results from my alternative models using yearly GINI differences may support this conclusion. The difference in estimated GINI from the previous year was found significant by itself when including interaction terms and main effects for Monarchies and Multi-party regimes. For one-party and multi-party regimes, the interaction of GINI and regime type was also found to be significant, showing a positive relationship with multi-party regimes but a negative relationship for one-party regimes. This is despite GINI itself being insignificant in the model examining one-party regimes, and strongly negative in the model examining Multi-Party regimes. I suggest that this may point towards both the regime effects theorized and the importance of relative changes in a grievance (Kurer et al. 2019). But this claim requires further evaluation and testing.

Another possibility exists in considering Østby's characterization of GINI as an individualistic approach to inequality mistakenly used to explain a group action (Østby 2008). My null findings would appear to support this criticism, and my results could suggest that inequality as measured is not significant. Rather, what might be significant is *horizontal* inequality within groups, regardless of the objective measurement, in line with previous findings (Grasso and Giugni 2016; Østby 2008). This would be an excellent topic for future research.

The significance found for ICT agrees with past studies in the literature and my own expectations. Overall, these findings support research linking higher levels of ICT with higher political protest by increasing mobilization across distances and time (Christensen and Groshek 2019; Weidmann and Rød 2019).[42]

Although opposite of my expectations, the findings for coercion suggest that it may not repress protest as much as thought, all else considered equal. These results fit with previous evidence, such as the reciprocal relationship of repression and protest previously described (Carey 2006; Moore 1998). While previous work finds that repressive systems have lower levels of protest, this is almost always in the terms of global comparison to democracies (Dalton and van Sickle 2005).

This relationship could also be curvilinear, based on the evidence of the literature alongside previous findings (Opp and Roehl 1990). This would mean that protest might decrease with

[41] See: Section 5.4 Limitations and Future Research.
[42] See also: Weidmann and Rød 2019; Guriev and Treisman 2015; Goebel 2013; Casper and Tyson 2014; Stein 2016.

improved human rights, but also with severe repression - targeted violence in response to protests can deter participation by increasing costs and risk. This could be explored in future research. Since this model relies on country-clustered effects, there is the additional possibility that this relationship is different at the country-level than it is when comparing globally.

Finally, the significance (or lack thereof) of these results might reflect relationships with event occurrence, but not necessarily their size or duration. I attempted to account for this by including the V-Dem measurement of democratic mobilization, In the models using the V-Dem mobilization variable, the significance for cultural diversity suggests a similar association. Cultural diversity appears strongly significant when protest scope and frequency are considered, implying it could be a catalyst for larger movements. Future research is needed to clearly disentangle this relationship.[43]

Based on the collective estimations of Model 1 for all datasets, I reject ***H1*** and accept the null hypothesis. I conclude that inequality among autocracies does not appear to have a significant relationship with mass mobilization events per year, when all else is considered equal.

For ***H2***, I also accept the null hypothesis and conclude that the interaction of regime type with economic inequality does not appear to motivate protest occurrence. While some significant results were observed, these are inconsistent. Multi-party and one-party regimes showed some significant relationships for their main effects, but regime type interactions with GINI were not consistently replicated. I do not feel confident in the results of GINI change without additional investigation, since their findings are not supported consistently across my models.

For ***H3***, I again accept the null hypothesis. Based on the estimations of my data, violent coercion appears to increase protest occurrence when all else is considered equal. This may point to the larger disagreements found in the literature, or possible a nonlinear relationship not captured by my models.

For ***H4***, I reject the null hypothesis and accept ***H4***. Based on the evidence of my models, ICT usage appears to show a positive relationship with mass mobilization, when all else is considered equal. According to the data, this positive correlation can only be said to be evident for mobile device subscriptions, not internet usage as a whole. Importantly, this relationship appears to be with the overall density of usage as a percentage of the population.

[43] See: Section 5.4 Limitations and Future Research.

5.4 Limitations and Future Research

Although this is only a first analysis, both the subject matter and results (or lack thereof) show potential for deeper investigation. The models and methodology could be built upon in various aspects.

Alternative data from the The Mass Mobilization in Autocracies Database (MMAD), was planned for inclusion but found to be too limited (*N*=313) for the time period. Extremely large coefficients were also estimated, indicating issues of reliability.

Admittedly, protest data sources are limited, but there are aspects that could be better acknowledged. The most significant improvement would be to incorporate a measurement of event size or duration, instead of frequency (something done only partially in the MM dataset, and more fully in MMAD data). My main results can best be understood as representing relationships with protest events occuring, but not necessarily their size or longevity. I partially accounted for this with V-Dem's measurement for mobilization, but a better dataset which incorporated size, longevity, and frequency would more clearly establish relationships with mobilization.

Perceived horizontal inequality and changes in inequality offer alternative perspectives. Examining group-level divisions within countries or macro-fluctuations between years might be a more fruitful approach than relying on static measurements of GINI. But limited data may still be a problem. Any relationship with inequality could be nonlinear (as previously theorized) (Nagel 1973)), as might many such relationships.

More deeply examining the linkage between economic inequality and political polarisation is another avenue. While I examined the link between inequality and protest, I did not include a relationship with political polarisation - which may help determine whether inequality does or does not lead to protest (Griffin and De Jonge 2014).

The inconsistent findings for regime categories in my alternative models deserves deeper investigation. Another improvement might be to reconsider the use of rigid regime type categories altogether, and instead focus on other regime characteristics. The significance of multi-party regimes may be due to an inherent quality of that regime type, or simply represent that it has the widest variation and most data points. This is unknown. Considering Svolik's criticisms that classifying dictatorships into a single typology is neither exclusive nor exhaustive (Svolik 2012, 21), perhaps focusing on specific aspects would yield improved insight. For example my models lack a variable for current political mobilisation - which may moderate grievances and protest (Kurer et al. 2019).

Using continuous measurements of regime qualities and key features identified as relevant (such as legislatures[44]) would be a start. Although not performed in this analysis, the use of related variables from datasets such as V-Dem or the forthcoming Varieties of Autocratization project offer perhaps a better way to capture these aspects. This would also eliminate issues with insufficient observations within categories, and illuminate differences and similarities across regime types that have gone unacknowledged.

Future investigation could operationalize coercion in a more nuanced way. Disentangling the relationship of human rights scores with protest might require considering regime loyalty, legitimacy, and grievance types. Further research building on past work examining event-level concessions, disruption costs, and the use of violence would also be suitable (Klein and Regan 2018; Moore 1998). This could include measurement of a regime's response to protests, and how the use of violence by either side affects protest and coercion. Any potential curvilinear effect of coercion is supported by previous research and could be investigated (Opp and Roehl 1990; Moore 1998).

The significant findings for ICT deserve further investigation alongside coercion. Previous research suggests that digital repression serves as a more general, "softer" substitute for other forms of coercion at the cost of regime durability (Weidmann and Rød 2019; Frantz and Kendall-Taylor 2014; Guriev and Treisman 2015). Since both violent coercion and ICT usage appear to have significant relationships with protest, this equilibrium could explain how repression and ICT interact to produce different outcomes.

Regarding ICT usage, there is room for improvement in how this variable is operationalized. While mobile devices and internet usage are relevant according to the literature, both categories overlap greatly when considering the nature of smartphones. While SMS messaging and phone calls may certainly be used where internet access is limited or shut down, many phone services allow internet access through mobile networks in lieu of Wifi. Operationalizing ICT in a manner which better captured both mobile and internet usage collectively would be preferable.

Some previous research found that Internet use *reduced* protest in more liberal countries (Weidmann and Rød 2019). Together with findings by Garrett that ICT yield different effects when used in different contexts (Garrett 2006), this would suggest additional research could perhaps focus on the same types of regime type interactions theorized here for inequality.

Although I was unable to incorporate it into this analysis, overall governmental transparency is an under-researched informational element, and it is mentioned in the literature as possibly increasing the frequency of mobilization among autocracies (Hollyer, Rosendorff, and Vreeland 2013). This may have implications for regimes with participatory political institutions, since they signal information and generate credibility by transparency. This was

[44] See: Bove and Rivera 2015; Frantz and Kendall-Taylor 2014; Wilson and Piazza 2013; Gandhi and Przeworski 2006 among others.

not specifically included in my analysis due to unavailable data, possible collinearity with regime categories, and because it is outside the main scope. Nevertheless, I acknowledge it here for future research.

Finally, additional estimation using imputed data would be recommended in order to eliminate any possible bias from missing observations. This would be comparable to the approach taken by Frantz and Kendall-Taylor as well as Houle, among others (Frantz and Kendall-Taylor 2014; Houle 2009).

Overall I consider that the findings of my model (and lack thereof) contributes in supporting that of previous literature and pointing the way towards future research.

6. Conclusion

The relationship of inequality with protest is admittedly complex, especially within autocratic contexts. Economic inequality has been theorized to alternately motivate or discourage social and political unrest. The literature suggests a number of explanatory factors that influence mobilization, including the environment of the political regime, the use of coercion to suppress opposition, and technologies which enable communication and information sharing.

Grievances alone may not be sufficient to fulfill the *collective* requirement of collective action. Whether dissatisfaction transforms into mobilization depends on the issue, the available resources, and the opportunities available to potential actors.

Autocracies are not collectively uniform, but represent varied arrangements of institutions. They differ in bases and maintenance of power. Aspects such as political parties and legislatures may institutionalize dissent or redirect it; the use of violent coercion may deter or outrage political opposition; reliance on different forms of loyalty structures may shift calculations for opposition. These differences correspond to different policy choices and resulting outcomes.

Along with globalization, the development of information technology has affected how we interact and communicate. Mobile phones are no longer limited to device-to-device calls and SMS, but are internet-enabled multimedia devices. App-based innovations have enabled new forms of networks that complement - and in some instances replace - traditional state infrastructure. Paradoxically, these technologies offer new pathways for autocratic rule even as they strengthen democratic opposition and help circumvent authoritarian control.

Through considering how these elements interact, I have contributed to existing gaps in the literature. In contrast to previous research, I chose to examine autocracies and their variation exclusively, not in comparison to democracies. I built upon preceding work by acknowledging the institutional differences used for categorization. I further considered how the structure and tactics of regime categories may moderate any relationship of inequality and

mobilization. I also examined whether or not inequality has a significant impact on its own.

My research utilized a recent dataset of global protest events, made more contemporary by limiting it between 1990-2014. Restricting the scope of my analysis allowed me to include communications technology alongside other elements from the literature identified as relevant. I considered not only the presence of such technology, but the effect when measured in relationship to the total population.

These findings suggest that national economic inequality is less significant than expected in relation to protest occurrence. Whether or not regimes engage in violent coercion appears important. Overall, increased respect for physical human rights is linked with less, not greater protest, but there is reason to suspect that this relationship may not be strictly linear. Protest appears to be significantly connected to the proportion of mobile device usage among the population.

In sum, any impact of economic inequality alone appears outweighed by the effects of improved human rights and new communications technologies. These findings give some unique insights and new perspectives for broader analyses.

Since the availability of protest data is the largest barrier to studying mobilization within autocracies, complementing estimates of protest event occurrence with values for their size should be a priority. This would offer a more complete picture of mobilization, and allow us to better differentiate relationships with event occurrence from size or longevity.

The significance found for regime coercion is relevant, especially with regards to global governance. This may suggest that political discontent is best reduced by improving human rights rather than reducing income inequality. Encouraging co-optive institutions, even limited ones, may accomplish this through providing alternatives to both coercion and protest.

Economic inequality may not motivate mobilization. This could suggest that other inequalities and grievances are more important. Protest may instead be linked to group-based perceptions or alternative grievances such as corruption, historical discontent, or government competence. Reconsidering the relationship of economic inequality to protest might allow such elements to be uncovered and addressed through targeted policy efforts.

Alternatively, GINI may be significant but under different moderating conditions. Regime categories, explored as one such condition, appear to have potential significance but not in the manner I theorized. Some aspects remain unexplored, such as accounting for political mobilisation or elements such as legislatures and independent political organisations. If inequality leads to mobilization, the key interactions may not lie with the regime type itself but in these other institutional aspects instead.

Future research should attempt to disentangle the effect of influential one-party regimes such as China and unravel the contradiction of multi-party autocracies. Multi-party regimes are the

most numerous and may institutionalize political dissent to a higher degree. But it's unclear whether higher protest among them corresponds to their greater number; inherent political competition, greater dissatisfaction, relationship with coercion, or all of these. More study is needed to illuminate this relationship. Currently they constitute a political Ourobouros, where it's unclear whether their institutions lead to dissent or merely embrace it.

On a global level, I suggest that such research can provide insight into when autocratic governance structures do contribute to peace and good governance. Though they are not democracies, if even quasi-democratic aspects promote some civil engagement and stability then I suggest they are worth promoting. As aptly expressed by Davenport, "in lieu of full democratization, alternatives exist" (Davenport 2007b).

These structural variations are important, since the literature shows that they affect the nature of regime policies and determine resulting outcomes. In studying the correlation of protest with specific structures, we can analyze citizen dissent and political engagement, and through policy efforts encourage structural improvements that benefit both citizens and the regime itself. While inequality remains problematic, in creating such environments we can perhaps give greater voice to the perspectives of citizens themselves.

In conclusion, the relevance of inequality and popular protest to good governance is clear, and appropriate to reconsider in the current global climate. I have shown that a number of avenues exist for additional investigation and future policy building. By closely studying autocratic regimes and considering their successes and failures, we can better understand how government can be improved, where democracy may begin, and how it may be encouraged to grow.

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Appendix

A1. Operationalization of Variables

Variable Category:	STATA Variable:	Concept:	Indicator:	Data Source:
DV	protest	Mass Mobilization	Yearly Number of Protest Events	Mass Mobilization Project
DV (**Alt**)	v2cademmob	Mass Mobilization	Pro-Democratic Mobilization	V-Dem
Main IV	regime1ny	Regime	Autocracy Type	Authoritarian Regimes Dataset
Main IV	gini_disp (ginidispD1 for difference from previous year)	Economic Inequality (Post-Transfer)	GINI Value (Disposable)	The Standardized World Income Inequality Database
Main IV	theta_mean	Regime Coercion	Protection of Physical Integrity Rights	Human Rights Protection Scores
Main IV	it_cel_pop	Information Dissemination	Mobile Devices as % of Population	World Development Indicators
IV	e_migdppcln	Economic Wealth	GDP (Logged)	Varieties of Democracy
IV	ny_gdp_totl_rt_zs	Natural Resources	Natural Resource Rents as % of GDP	World Development Indicators
IV	e_wb_pop	Mobilization Capacity	Population	Varieties of Democracy
IV	sp_urb_totl	Urbanization	Urban Population	World Development Indicators
IV	fe_cultdiv	Fragmentation	Cultural Diversity Measurement	Quality of Government
IV	sl_uem_totl_zs	Employment Level	Unemployment	World Development Indicators

A2. Summary Statistics

Descriptive Statistics

Variable	STATA Variable	Obs	Mean	Std. Dev.	Min	Max
Protest	protest	1968	2.584	5.143	0	91
Democratic Mobilization	v2cademmob	1519	-0.181	1.415	-2.744	3.658
Regime Type (Collapsed)	regime1ny	2024	3.192	1.104	1	4
Monarchies	regime1ny=1	245				
Military	regime1ny=2	342				
One-Party	regime1ny=3	217				
Multi-Party	regime1ny=4	1220				
GINI (Disposable)	gini_disp	1407	40.375	6.592	21.9	58.7
Human Rights Protection Score	theta_mean	2075	-0.573	1.08	-3.237	2.167
Mobile Cellular Subscriptions (% of Population)	it_cel_pop	2002	27.688	42.146	0	205.91
GDP Per Capita, (Logged, base 10)	e_migdppcln	1948	8.292	1.153	5.595	11.959
Total Natural Resources Rents (% of GDP)	ny_gdp_totl_rt_zs	1943	12.241	13.846	0	86.453
Population	e_wb_pop	2064	38443144	1.44E+08	69507	1.36E+09
Urban Population (% of Population)	sp_urb_totl_in_zs	2034	46.992	22.626	5.416	100
Cultural Diversity	fe_cultdiv	1890	0.355	0.209	0	0.733
Unemployment (% of Labor Force)	sl_uem_totl_zs	1917	7.201	6.433	0.2	37.976

Protests By Regime Type (1990-2014) (MM Data)

Regime Type	N	Mean	SD	Min	Max
Military	332	2.175	4.043	0	23
Monarchy	245	1.237	2.859	0	21
Multi-party	1162	3.149	5.829	0	91
One-party	212	1.722	4.346	0	36

Protests By Country (1990-2014) (MM Data)

Country Name	N	Mean	Min	Max	Country Name	N	Mean	Min	Max
Afghanistan	11	1.273	0	6	Guinea	25	2.68	0	15
Albania	11	3	0	11	Guinea-Bissau	24	0.958	0	6
Algeria	25	1.36	0	11	Guyana	2	0	0	0
Angola	12	0.417	0	2	Haiti	23	3.565	0	10
Armenia	22	3.045	0	8	Honduras	5	2.8	0	6
Azerbaijan	24	5.042	0	20	India	2	4	3	5
Bahrain	25	1.64	0	9	Indonesia	14	6.714	1	23
Bangladesh	18	14.278	2	60	Iraq	23	3.043	0	14
Belarus	23	2.565	0	10	Ivory Coast	25	3.96	0	14
Bhutan	25	0.08	0	1	Jordan	25	1.52	0	15
Bosnia and Herzegovina	19	0.737	0	5	Kazakhstan	25	3.12	0	11
Burkina Faso	24	2.292	0	22	Kenya	14	2.929	0	8
Burma/Myanmar	25	2.24	0	21	Kuwait	24	1.542	0	11
Burundi	21	2.238	0	8	Kyrgyzstan	25	6.28	0	34
Cambodia	22	1.818	0	8	Laos	25	0.08	0	1
Cameroon	25	1.64	0	13	Latvia	0	.	.	.
Cape Verde	1	0	0	0	Lebanon	23	2.087	0	7
Central African Republic	24	2.333	0	8	Lesotho	11	2	0	5
Chad	22	0.318	0	2	Liberia	16	2.188	0	7
China	25	8.24	0	36	Libya	3	4.333	1	7
Colombia	9	5.444	2	12	Lithuania	1	1	1	1
Comoros	16	2.563	0	13	Madagascar	8	3.875	0	17
Croatia	9	0.556	0	3	Malawi	18	2.056	0	7
Cuba	25	0.2	0	2	Malaysia	25	4.24	0	12
Democratic Republic of the Congo	25	2.04	0	8	Maldives	0	.	.	.
Djibouti	25	0.4	0	2	Mali	4	2.25	0	5
Dominican Republic	2	4	2	6	Mauritania	25	2.92	0	12
Egypt	24	3.667	0	22	Mexico	10	5.8	1	12
El Salvador	1	0	0	0	Moldova	6	3.667	1	10
Equatorial Guinea	25	0.16	0	1	Mongolia	2	7.5	3	12
Eritrea	25	0.08	0	1	Montenegro	0	.	.	.
Estonia	0	.	.	.	Morocco	25	0.8	0	6
Eswatini	25	3.6	0	14	Mozambique	23	2.696	0	8
Ethiopia	25	0.92	0	3	Nepal	20	6.45	1	17
Fiji	0	.	.	.	Nicaragua	6	3.333	1	5
Gabon	25	1.28	0	6	Niger	18	4.722	0	12
Georgia	19	2.053	0	6	Nigeria	25	1.36	0	10
German Democratic Republic	1	11	11	11	North Korea	25	0.32	0	2
Ghana	11	1.364	0	6	North Macedonia	7	3.286	1	6
Guatemala	12	3.417	0	10	Oman	25	1	0	21

Country Name	N	Mean	Min	Max	Country Name	N	Mean	Min	Max
Pakistan	25	5.92	0	20	Sudan	25	0.92	0	8
Papua New Guinea	6	1.333	0	3	Suriname	10	3.2	0	13
Paraguay	3	0.333	0	1	Syria	21	0.238	0	3
Peru	9	5.111	2	9	Taiwan	3	7.333	5	11
Qatar	25	0.04	0	1	Tajikistan	25	1.28	0	8
Republic of the Congo	18	1.056	0	8	Tanzania	25	1.4	0	8
Romania	6	19.333	0	63	Thailand	11	12	0	23
Russia	23	6.652	1	19	The Gambia	21	0.19	0	2
Rwanda	25	0.4	0	3	Timor-Leste	0	.	.	.
Sao Tome and Principe	0	.	.	.	Togo	21	2.667	0	12
Saudi Arabia	25	0.76	0	7	Tunisia	23	0.609	0	6
Senegal	10	0.9	0	5	Turkey	10	4.2	0	21
Serbia	3	12	1	25	Turkmenistan	25	0.16	0	1
Seychelles	0	.	.	.	Uganda	25	1.96	0	8
Sierra Leone	12	0.5	0	2	Ukraine	10	12.6	2	91
Singapore	25	0.32	0	5	United Arab Emirates	25	0.12	0	1
Slovenia	0	.	.	.	Uzbekistan	25	1.44	0	13
Solomon Islands	0	.	.	.	Venezuela	16	10.063	0	18
Somalia	4	0.75	0	3	Vietnam	25	0.6	0	2
South Africa	4	17	11	25	Yemen	21	5.095	0	58
South Yemen	0	.	.	.	Zambia	16	3.063	0	12
Sri Lanka	22	2.591	0	23	Zimbabwe	25	3	0	9

A3. Descriptive Graphs

FIGURE A1. Coercion & Protests Among Autocracies

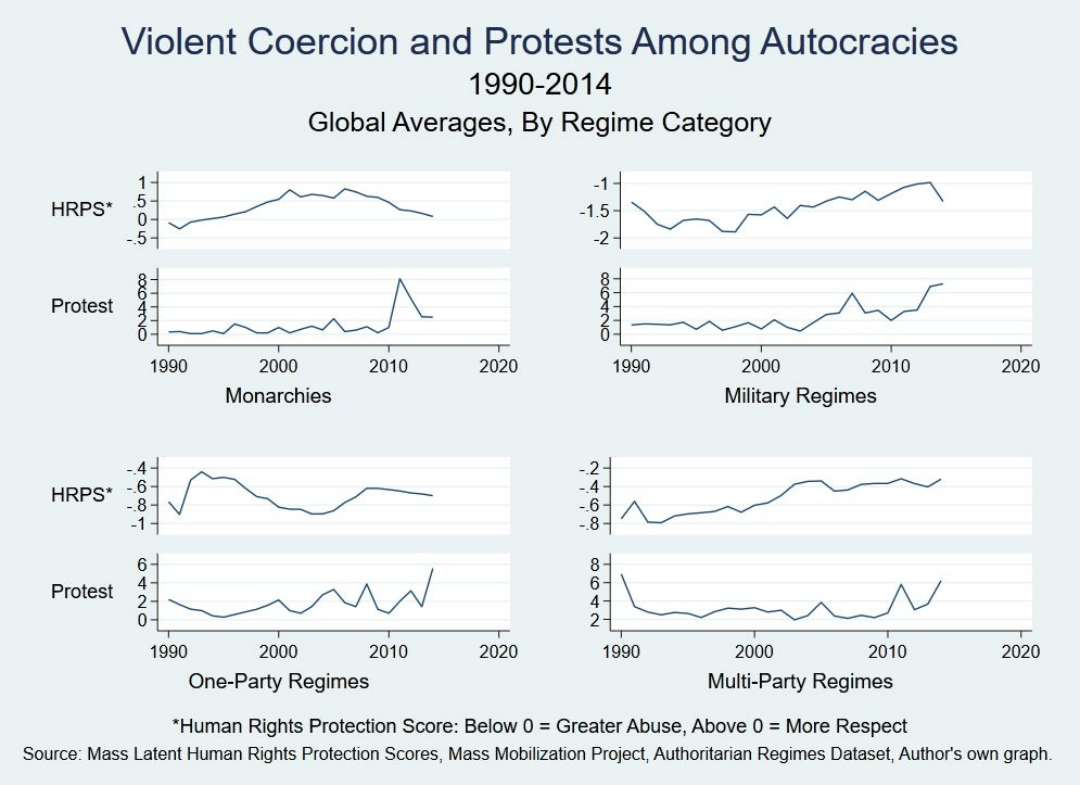
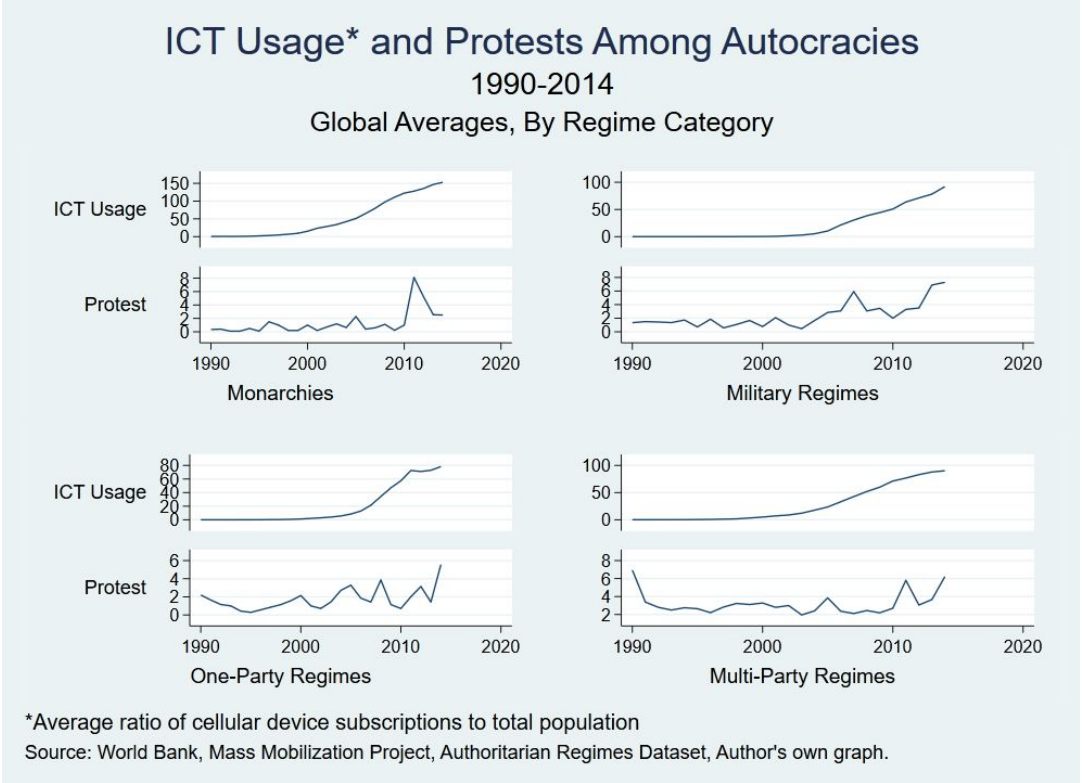


FIGURE A2. ICT Usage & Protests Among Autocracies



A4. Results Using Disposable GINI Difference

Table A1. Models 1-5 (MM Data) (GINI Difference from previous year)

	Model 1	Model 2	Model 3	Model 4	Model 5
Protest (Sum)	0.357***	0.352***	0.350***	0.344***	0.333***
	(0.112)	(0.113)	(0.112)	(0.112)	(0.112)
Disposable GINI (Difference)	-1.423*	-1.472**	-1.224*	-0.880	-4.994***
	(0.735)	(0.748)	(0.713)	(0.727)	(1.363)
Monarchy		-0.895*			
		(0.480)			
Monarchy # Disposable GINI = 1		4.944			
		(3.285)			
Military Regime			-0.806*		
			(0.461)		
Military # Disposable GINI = 1			-3.282		
			(2.087)		
One-Party Regime				-1.120*	
				(0.591)	
One-Party # Disposable GINI = 1				-5.503**	
				(2.363)	
Multi-Party Regime					1.107***
					(0.355)
Multi-Party # Disposable GINI = 1					4.337***
					(1.532)
Human Rights Protection Score	-0.800***	-0.816***	-0.936***	-0.619***	-0.792***
	(0.212)	(0.216)	(0.222)	(0.219)	(0.215)
Mobile Cellular Subscriptions (% of Population)	0.0230***	0.0241***	0.0234***	0.0209***	0.0217***
	(0.00628)	(0.00642)	(0.00629)	(0.00637)	(0.00622)
GDP Per Capita, Logged, Base 10	0.0801	0.0179	0.0217	0.167	0.186
	(0.155)	(0.152)	(0.153)	(0.153)	(0.146)
Total Natural Resources Rents (% of GDP)	-0.0196	-0.0219	-0.0180	-0.00996	-0.0111
	(0.0148)	(0.0155)	(0.0152)	(0.0153)	(0.0148)
Population	3.60e-09***	3.59e-09***	3.37e-09***	5.90e-09***	5.19e-09***
	(1.18e-09)	(1.17e-09)	(1.16e-09)	(1.35e-09)	(1.21e-09)
Urban Population (% of total population)	-0.00478	-0.00105	-0.00523	-0.00965	-0.0143*
	(0.00703)	(0.00766)	(0.00717)	(0.00769)	(0.00791)
Cultural Diversity	0.0424	-0.0712	-0.111	-0.395	-0.601
	(0.817)	(0.820)	(0.805)	(0.918)	(0.892)
Unemployment, Total (% of labor force) (ILO)	-0.00268	0.00182	-0.00780	-0.0155	-0.00772
	(0.0166)	(0.0156)	(0.0174)	(0.0198)	(0.0170)
Constant	0.595	0.998	1.210	0.499	-0.391
	(1.191)	(1.150)	(1.227)	(1.074)	(0.957)
Observations	1,077	1,077	1,077	1,077	1,077
R-squared	0.187	0.189	0.190	0.195	0.199
Number of Countries (COWcode)	80	80	80	80	80

Standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

A5. Results Using V-Dem Data

Table A2. Models 1-5 (V-Dem Data)

	Model 1	Model 2	Model 3	Model 4	Model 5
Democratic Mobilization	0.854***	0.846***	0.849***	0.821***	0.820***
	(0.0300)	(0.0311)	(0.0302)	(0.0350)	(0.0338)
Disposable GINI	0.00216	0.00544	0.00348	-0.00166	0.00530
	(0.00302)	(0.00368)	(0.00319)	(0.00311)	(0.00436)
Monarchy		0.0884			
		(0.452)			
Monarchy # Disposable GINI = 1		-0.00489			
		(0.00933)			
Military Regime			0.718		
			(0.480)		
Military # Disposable GINI = 1			-0.0197*		
			(0.0116)		
One-Party Regime				-2.168***	
				(0.709)	
One-Party # Disposable GINI = 1				0.0552***	
				(0.0211)	
Multi-Party Regime					0.296
					(0.226)
Multi-Party # Disposable GINI = 1					-0.00246
					(0.00543)
Human Rights Protection Score	-0.0482*	-0.0358	-0.0632**	-0.0139	-0.0423
	(0.0283)	(0.0314)	(0.0296)	(0.0280)	(0.0296)
Mobile Cellular Subscriptions (% of Population)	0.00181***	0.00181***	0.00199***	0.00147**	0.00185***
	(0.000679)	(0.000701)	(0.000693)	(0.000703)	(0.000672)
GDP Per Capita, Logged, Base 10	-0.0800**	-0.0551	-0.1000**	-0.0662*	-0.0621
	(0.0393)	(0.0524)	(0.0405)	(0.0386)	(0.0446)
Total Natural Resources Rents (% of GDP)	-0.00338*	-0.00349*	-0.00345*	-0.000597	-0.00277
	(0.00179)	(0.00186)	(0.00181)	(0.00168)	(0.00173)
Population	-1.58e-10**	-1.64e-10**	-2.04e-10***	-1.37e-10	-1.15e-10*
	(6.71e-11)	(8.01e-11)	(6.43e-11)	(2.22e-10)	(6.33e-11)
Urban Population (% of total population)	0.00329**	0.00297*	0.00333**	0.00249**	0.00235
	(0.00138)	(0.00158)	(0.00140)	(0.00126)	(0.00153)
Cultural Diversity	0.284***	0.306***	0.291***	0.267**	0.290***
	(0.105)	(0.109)	(0.106)	(0.109)	(0.103)
Unemployment, Total (% of labor force)	0.00416	0.00556*	0.00357	0.00120	0.00238
	(0.00312)	(0.00299)	(0.00310)	(0.00321)	(0.00305)
Constant	0.260	-0.0590	0.375	0.399	-0.0974
	(0.279)	(0.428)	(0.274)	(0.295)	(0.278)
Observations	881	880	880	880	880
R-squared	0.807	0.805	0.804	0.815	0.815
Number of Countries (COWcode)	63	63	63	63	63

Standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

A6. Alternate Model Specifications

Results using XTPCSE Specification

Models 1-5 (MM Data) (Panel-Specific AR1 Autocorrelation)

	Model 1	Model 2	Model 3	Model 4	Model 5
Protest	0.332***	0.326***	0.326***	0.318***	0.309***
	(0.105)	(0.106)	(0.104)	(0.105)	(0.105)
Disposable GINI	-0.116**	-0.124*	-0.122*	-0.131**	-0.00223
	(0.0588)	(0.0633)	(0.0645)	(0.0637)	(0.0447)
Monarchy		-7.084			
		(5.586)			
Monarchy # Disposable GINI = 1		0.139			
		(0.121)			
Military Regime			-3.962		
			(3.281)		
Military # Disposable GINI = 1			0.0783		
			(0.0774)		
One-Party Regime				-12.74**	
				(6.334)	
One-Party # Disposable GINI = 1				0.273*	
				(0.146)	
Multi-Party Regime					7.323**
					(3.484)
Multi-Party # Disposable GINI = 1					-0.149*
					(0.0830)
Human Rights Protection Score	-0.748***	-0.749***	-0.862***	-0.614***	-0.854***
	(0.180)	(0.173)	(0.166)	(0.195)	(0.164)
Mobile Cellular Subscriptions (% of Population)	0.0473***	0.0476***	0.0479***	0.0454***	0.0467***
	(0.0106)	(0.0105)	(0.0107)	(0.0106)	(0.0105)
GDP Per Capita, Logged, Base 10	-0.111	-0.191	-0.0710	0.00680	-0.0647
	(0.250)	(0.327)	(0.242)	(0.247)	(0.255)
Total Natural Resources Rents (% of GDP)	-0.0364*	-0.0396*	-0.0391*	-0.0324	-0.0413*
	(0.0205)	(0.0225)	(0.0212)	(0.0216)	(0.0229)
Population	2.12e-09**	2.07e-09**	1.95e-09**	3.56e-09***	2.83e-09***
	(9.60e-10)	(9.60e-10)	(9.42e-10)	(1.26e-09)	(9.96e-10)
Urban Population (% of total population)	-0.0220	-0.0158	-0.0256*	-0.0278*	-0.0255
	(0.0144)	(0.0195)	(0.0155)	(0.0144)	(0.0158)
Cultural Diversity	-1.257	-1.359	-1.220	-1.562	-1.561
	(1.146)	(1.151)	(1.214)	(1.200)	(1.284)
Unemployment, Total (% of labor force)	0.0157	0.0128	0.0119	0.00411	-0.00483
	(0.0256)	(0.0297)	(0.0256)	(0.0258)	(0.0298)
Constant	8.262*	9.119*	8.437**	8.511*	2.712
	(4.237)	(4.848)	(4.279)	(4.399)	(3.024)
Observations	1,146	1,146	1,146	1,146	1,146
R-squared	0.354	0.355	0.354	0.357	0.356
Number of Countries (COWcode)	85	85	85	85	85

Standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Results using XTGLS Specification

Models 1-5 (MM Data) (Panel-Specific AR1 Autocorrelation)

	Model 1	Model 2	Model 3	Model 4	Model 5
Protest	0.328***	0.319***	0.322***	0.310***	0.303***
	(0.0320)	(0.0319)	(0.0319)	(0.0319)	(0.0318)
Disposable GINI	-0.117***	-0.124***	-0.116***	-0.115***	0.0398
	(0.0221)	(0.0236)	(0.0216)	(0.0204)	(0.0495)
Monarchy		-11.60***			
		(3.824)			
Monarchy # Disposable GINI = 1		0.231***			
		(0.0887)			
Military Regime			-4.517		
			(3.155)		
Military # Disposable GINI = 1			0.0863		
			(0.0777)		
One-Party Regime				-12.35**	
				(5.662)	
One-Party # Disposable GINI = 1				0.260*	
				(0.144)	
Multi-Party Regime					8.193***
					(2.198)
Multi-Party # Disposable GINI = 1					-0.161***
					(0.0539)
Human Rights Protection Score	-0.865***	-0.946***	-0.972***	-0.707***	-0.968***
	(0.209)	(0.214)	(0.217)	(0.210)	(0.207)
Mobile Cellular Subscriptions (% of Population)	0.0453***	0.0450***	0.0446***	0.0409***	0.0403***
	(0.00464)	(0.00455)	(0.00461)	(0.00446)	(0.00437)
GDP Per Capita, Logged, Base 10	-0.318	-0.573	-0.201	-0.0650	-0.140
	(0.326)	(0.362)	(0.329)	(0.316)	(0.315)
Total Natural Resources Rents (% of GDP)	-0.0403***	-0.0482***	-0.0354***	-0.0245***	-0.0283***
	(0.0116)	(0.0124)	(0.00970)	(0.00750)	(0.00798)
Population	2.23e-09***	2.22e-09***	2.03e-09***	3.77e-09***	3.29e-09***
	(7.61e-10)	(7.66e-10)	(7.68e-10)	(1.18e-09)	(7.81e-10)
Urban Population (% of total population)	-0.0140	-0.00255	-0.0182	-0.0192*	-0.0174
	(0.0117)	(0.0131)	(0.0121)	(0.0116)	(0.0118)
Cultural Diversity	-1.164	-1.302	-1.181	-1.646*	-1.628*
	(0.922)	(0.925)	(0.938)	(0.917)	(0.938)
Unemployment, Total (% of labor force)	0.0310	0.0347	0.0186	0.00552	0.000102
	(0.0335)	(0.0357)	(0.0321)	(0.0322)	(0.0325)
Constant	9.540***	11.49***	8.868***	8.113***	0.877
	(2.539)	(2.864)	(2.450)	(2.353)	(2.980)
Observations	1,141	1,141	1,141	1,141	1,141
R-squared	-	-	-	-	-
Number of Countries (COWcode)	80	80	80	80	80

Standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Results using XTREG Specification

Models 1-5 (MM Data) (Fixed Effects, Country Clusters)

	Model 1	Model 2	Model 3	Model 4	Model 5
Protest	0.117	0.117	0.117	0.117	0.117
	(0.0807)	(0.0809)	(0.0809)	(0.0805)	(0.0807)
Disposable GINI	-0.0696	-0.0677	-0.0728	-0.0531	-0.0912
	(0.208)	(0.213)	(0.213)	(0.209)	(0.202)
Monarchy		4.173			
		(17.12)			
Monarchy # Disposable GINI = 1		-0.100			
		(0.425)			
Military Regime			-0.791		
			(2.466)		
Military # Disposable GINI = 1			0.0175		
			(0.0540)		
One-Party Regime				4.530	
				(4.014)	
One-Party # Disposable GINI = 1				-0.116	
				(0.101)	
Multi-Party Regime					-1.344
					(1.654)
Multi-Party # Disposable GINI = 1					0.0330
					(0.0427)
Human Rights Protection Score	-0.729	-0.722	-0.733	-0.750	-0.745
	(0.605)	(0.624)	(0.646)	(0.609)	(0.651)
Mobile Cellular Subscriptions (% of Population)	0.0261*	0.0262*	0.0261*	0.0267*	0.0264*
	(0.0141)	(0.0140)	(0.0142)	(0.0142)	(0.0141)
GDP Per Capita, Logged, Base 10	0.769	0.757	0.776	0.720	0.744
	(1.061)	(1.083)	(1.061)	(1.080)	(1.072)
Total Natural Resources Rents (% of GDP)	-0.00121	-0.00113	-0.000682	0.00115	-0.000671
	(0.0339)	(0.0341)	(0.0350)	(0.0338)	(0.0343)
Population	6.56e-08***	6.57e-08***	6.60e-08***	6.99e-08***	6.61e-08***
	(1.86e-08)	(1.86e-08)	(1.92e-08)	(2.12e-08)	(1.92e-08)
Urban Population (% of total population)	-0.0353	-0.0363	-0.0366	-0.0397	-0.0366
	(0.102)	(0.102)	(0.107)	(0.102)	(0.105)
Cultural Diversity (Omitted)	-	-	-	-	-
	-	-	-	-	-
Unemployment, Total (% of labor force)	0.130	0.130	0.131	0.131	0.128
	(0.0846)	(0.0849)	(0.0858)	(0.0858)	(0.0849)
Constant	-4.706	-4.625	-4.609	-5.106	-3.601
	(13.20)	(13.21)	(13.32)	(13.26)	(13.10)
Observations	1,146	1,146	1,146	1,146	1,146
R-squared	0.084	0.084	0.084	0.085	0.084
Number of Countries (COWcode)	85	85	85	85	85

Standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Results using XTNBREG Specification

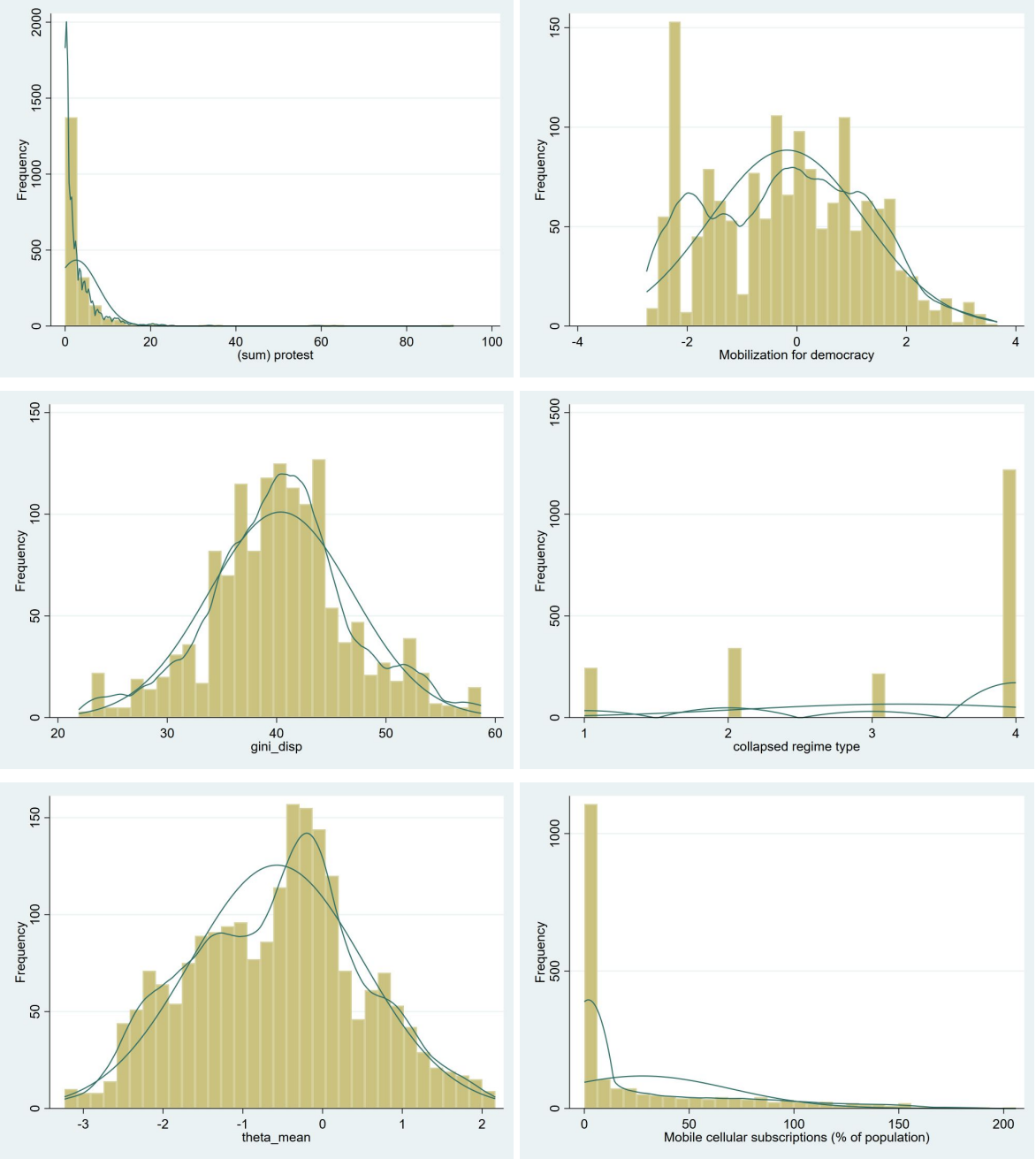
Models 1-5 (MM Data) (Fixed Effects)

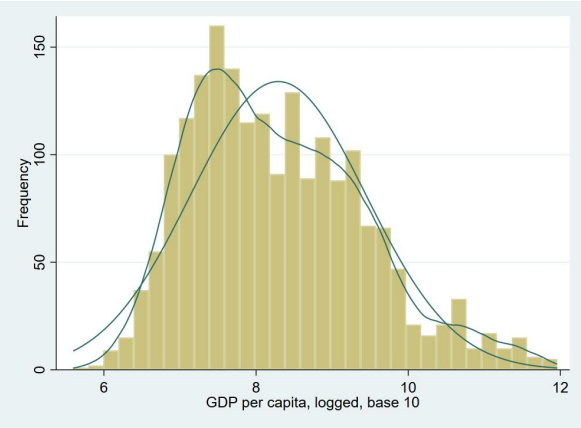
	Model 1	Model 2	Model 3	Model 4	Model 5
Protest	0.0226***	0.0218***	0.0155***	0.0226***	0.0222***
	(0.00444)	(0.00448)	(0.00457)	(0.00446)	(0.00445)
Disposable GINI	0.0411***	0.0412***	0.0348***	0.0417***	0.0349*
	(0.0111)	(0.0117)	(0.0107)	(0.0115)	(0.0178)
Monarchy		-3.996**			
		(1.870)			
Monarchy # Disposable GINI = 1		0.0678			
		(0.0414)			
Military Regime			0.467		
			(1.086)		
Military # Disposable GINI = 1			-0.0131		
			(0.0259)		
One-Party Regime				0.191	
				(1.168)	
One-Party # Disposable GINI = 1				-0.00799	
				(0.0302)	
Multi-Party Regime					-0.161
					(0.758)
Multi-Party # Disposable GINI = 1					0.00848
					(0.0181)
Human Rights Protection Score	-0.0904	-0.0798	-0.0272	-0.0894	-0.105
	(0.0667)	(0.0682)	(0.0714)	(0.0669)	(0.0675)
Mobile Cellular Subscriptions (% of Population)	0.00355***	0.00349***	0.00399***	0.00354***	0.00354***
	(0.00124)	(0.00124)	(0.00121)	(0.00124)	(0.00124)
GDP Per Capita, Logged, Base 10	0.0995	0.0619	0.0338	0.102	0.117
	(0.119)	(0.128)	(0.119)	(0.119)	(0.120)
Total Natural Resources Rents (% of GDP)	0.00404	0.00260	0.00418	0.00411	0.00443
	(0.00525)	(0.00525)	(0.00521)	(0.00528)	(0.00525)
Population	8.02e-10**	7.80e-10**	6.27e-09***	8.97e-10**	9.04e-10**
	(3.68e-10)	(3.70e-10)	(1.44e-09)	(4.26e-10)	(3.79e-10)
Urban Population (% of total population)	0.00759	0.0106**	0.00566	0.00754	0.00634
	(0.00502)	(0.00540)	(0.00498)	(0.00506)	(0.00506)
Cultural Diversity	0.856**	0.716*	0.785**	0.861**	0.891**
	(0.397)	(0.401)	(0.396)	(0.397)	(0.395)
Unemployment, Total (% of labor force)	-0.00356	-0.000903	0.00373	-0.00363	-0.00203
	(0.0111)	(0.0115)	(0.0113)	(0.0112)	(0.0113)
Constant	-3.233***	-2.965***	-2.514**	-3.276***	-3.259***
	(1.028)	(1.106)	(1.007)	(1.042)	(1.130)
Observations	1,141	1,141	1,141	1,141	1,141
R-squared					
Number of Countries (COWcode)	80	80	80	80	80

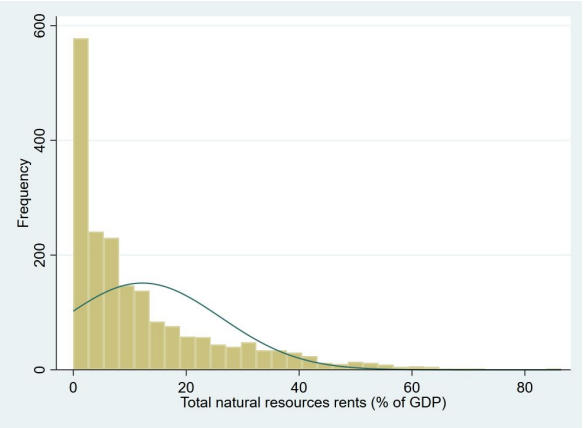
Standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

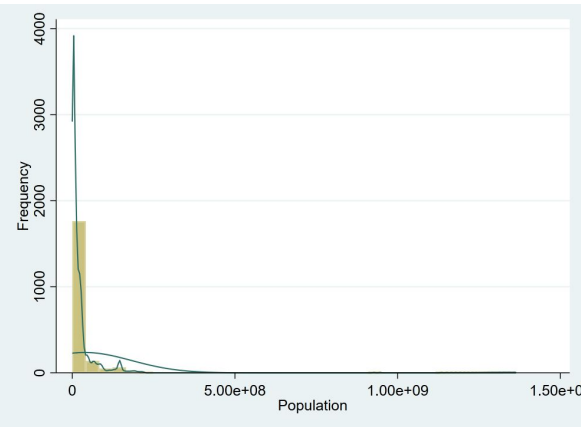
A7. Diagnostic Graphs

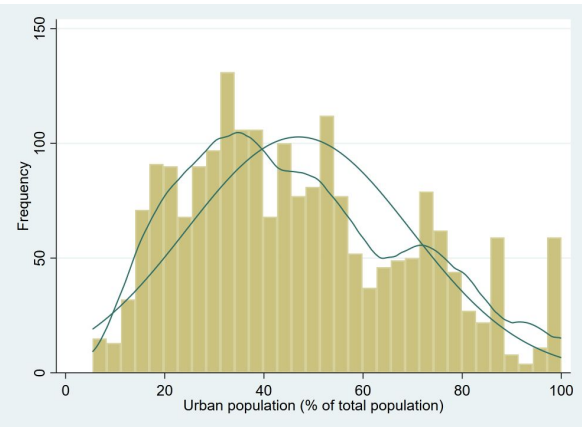
Distribution Histograms (Normal Distribution & Kernel Density)

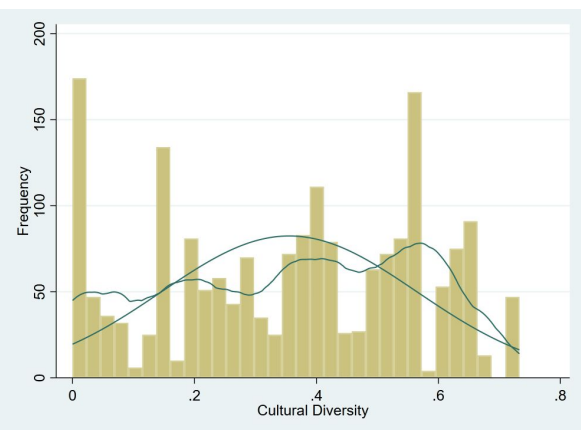


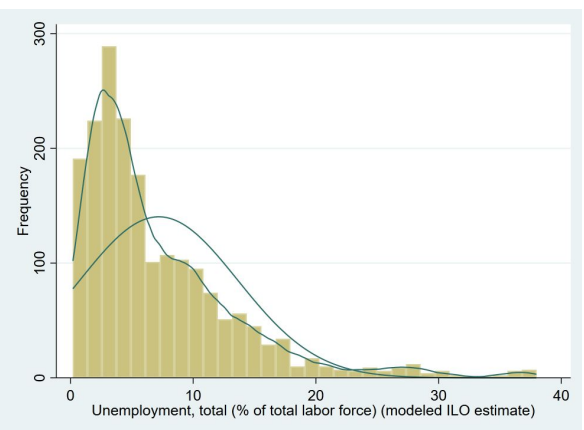

Frequency
0
50
100
150
6
8
10
12
GDP per capita, logged, base 10


Frequency
0
200
400
600
0
20
40
60
80
Total natural resources rents (% of GDP)

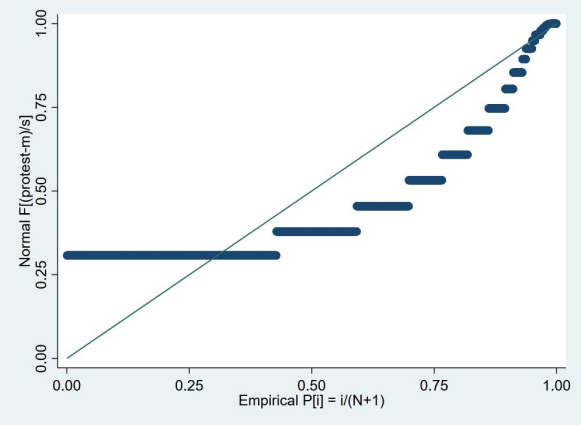

Frequency
0
1000
2000
3000
4000
0
5.00e+08
1.00e+09
1.50e+0
Population

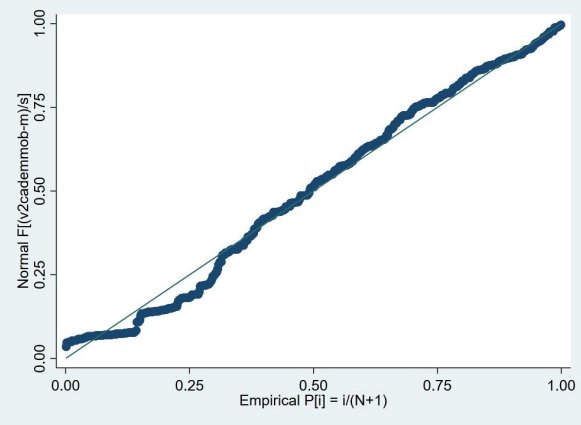

Frequency
0
50
100
150
0
20
40
60
80
100
Urban population (% of total population)

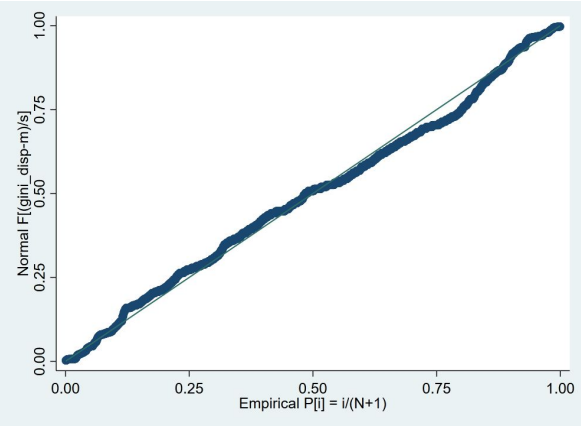

Frequency
0
50
100
150
200
0
.2
.4
.6
.8
Cultural Diversity

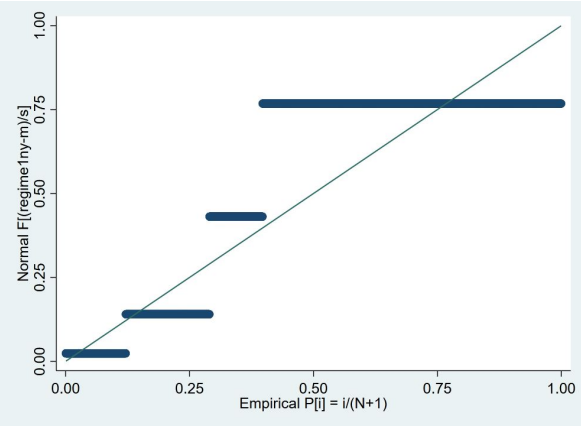

Frequency
0
100
200
300
0
10
20
30
40
Unemployment, total (% of total labor force) (modeled ILO estimate)

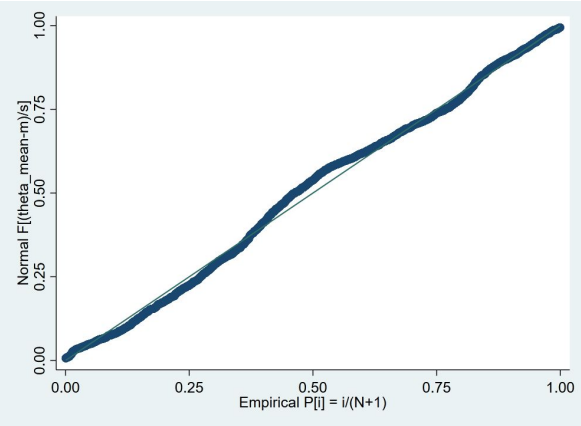
Standardised Normal Probability (P-P) Plots

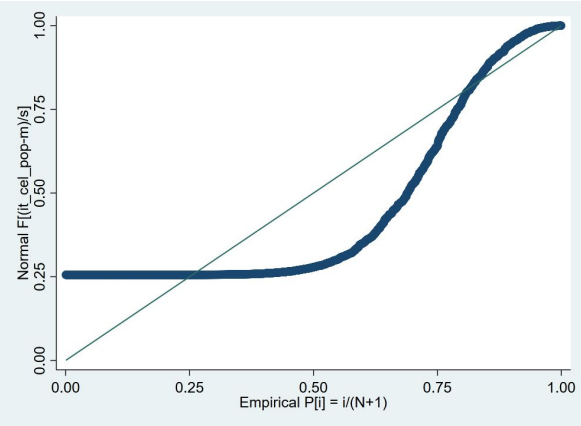


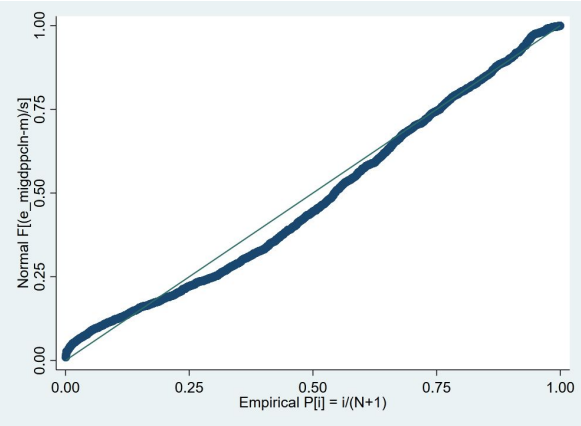


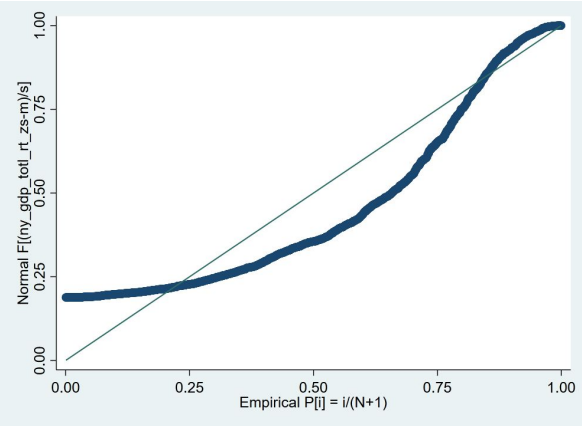


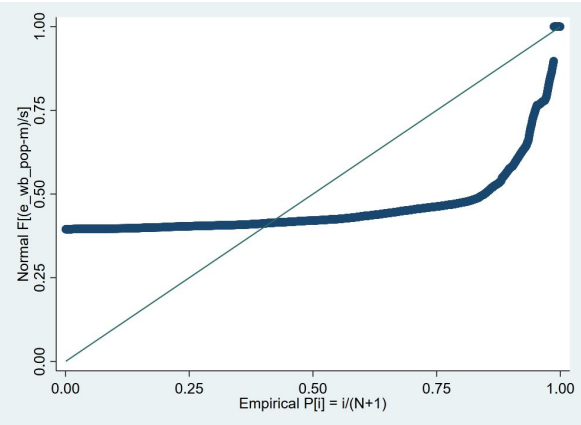


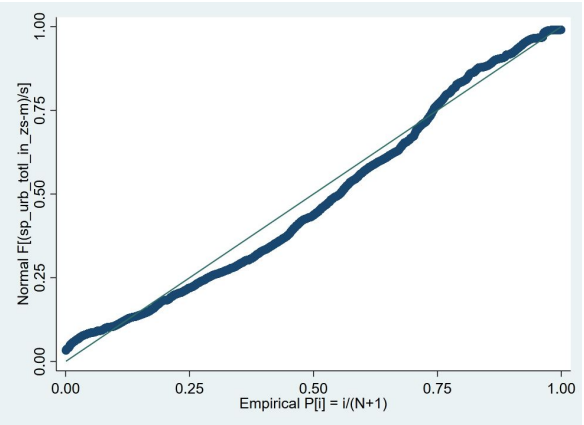


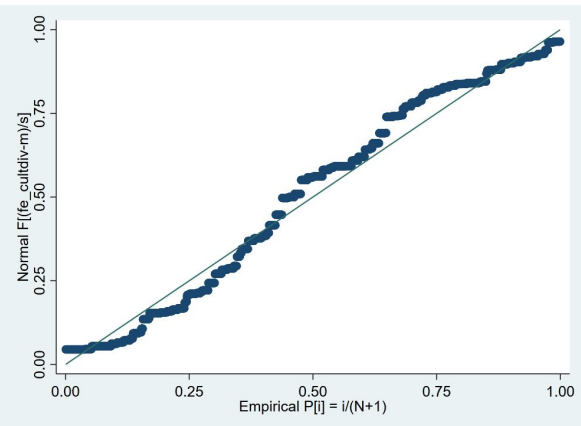


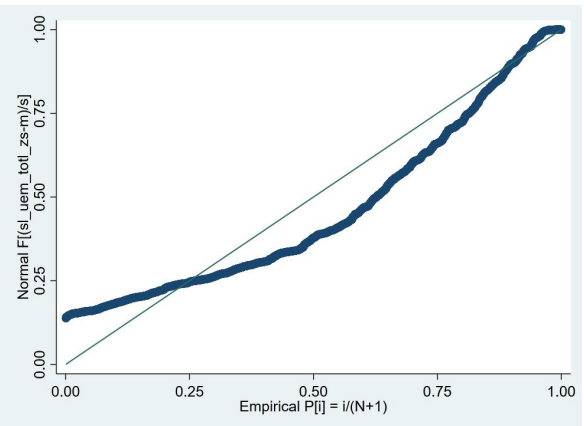

Normal F[(e_migdppcln-m)/s]
0.00
0.25
0.50
0.75
1.00
Empirical P[i] = i/(N+1)


Normal F[(ny_gdp_totl_rt_zs-m)/s]
0.00
0.25
0.50
0.75
1.00
Empirical P[i] = i/(N+1)

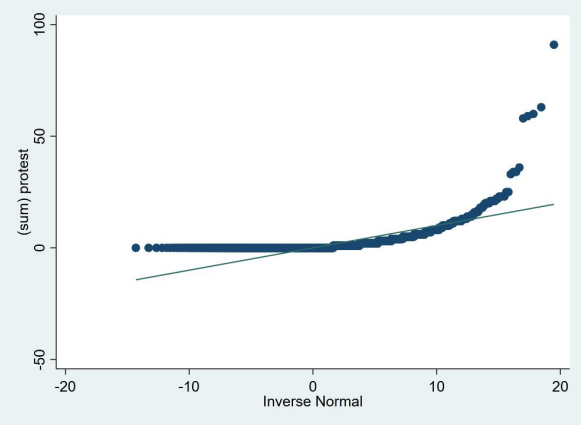

Normal F[(e_wb_pop-m)/s]
0.00
0.25
0.50
0.75
1.00
Empirical P[i] = i/(N+1)

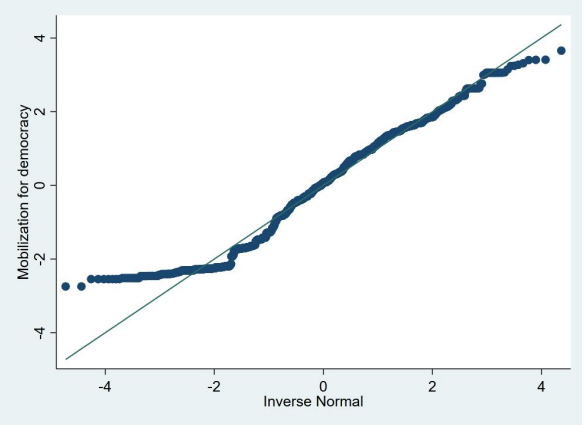

Normal F[(sp_urb_totl_in_zs-m)/s]
0.00
0.25
0.50
0.75
1.00
Empirical P[i] = i/(N+1)

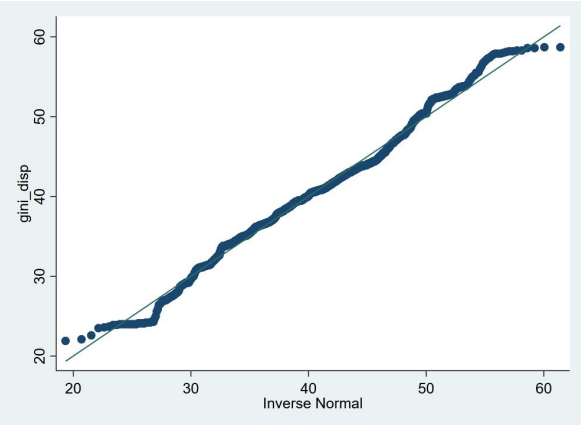

Normal F[(fe_cultdiv-m)/s]
0.00
0.25
0.50
0.75
1.00
Empirical P[i] = i/(N+1)

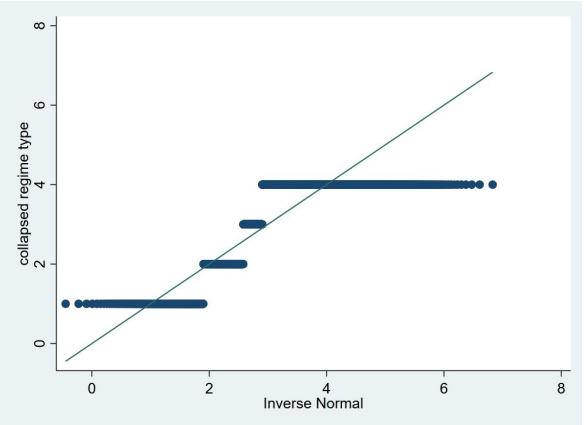

Normal F[(sl_uem_totl_zs-m)/s]
0.00
0.25
0.50
0.75
1.00
Empirical P[i] = i/(N+1)

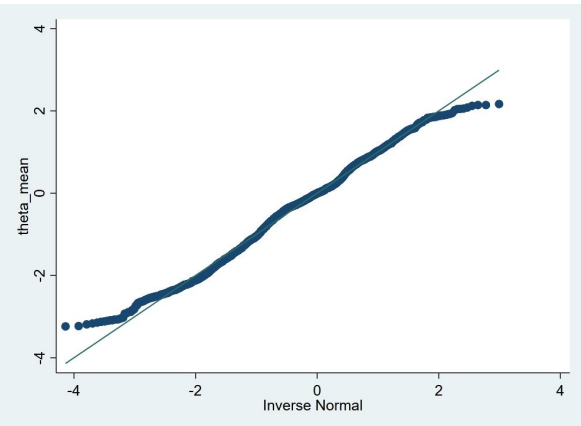
Quantile-Quantile (Q-Q) Plots

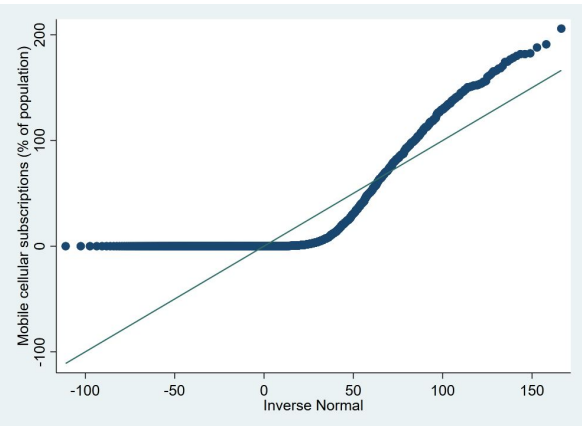


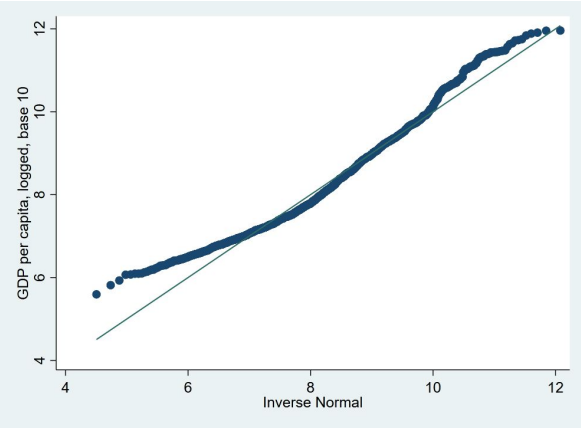


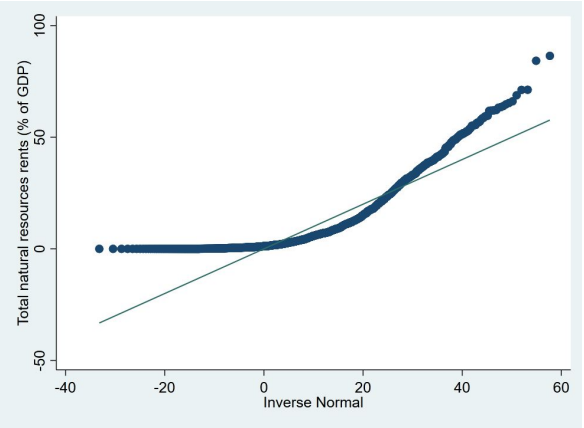


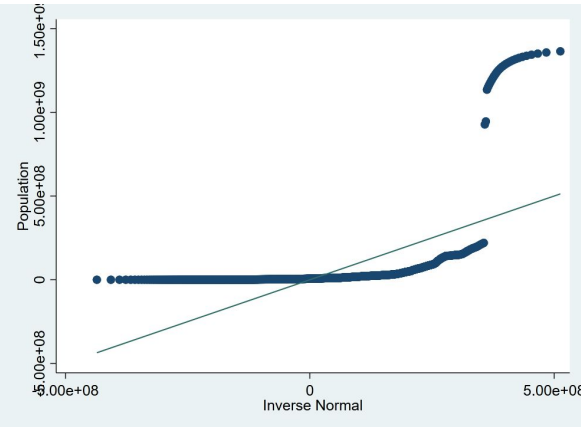


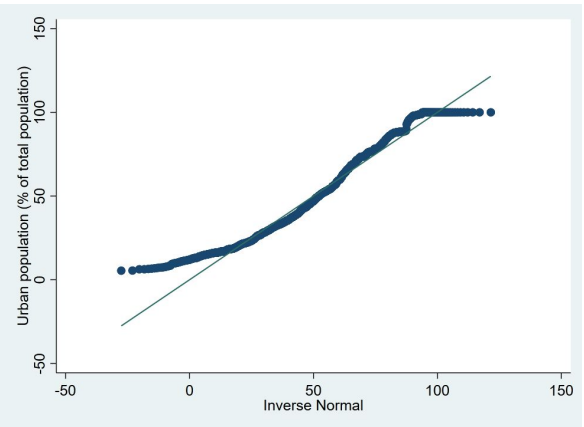


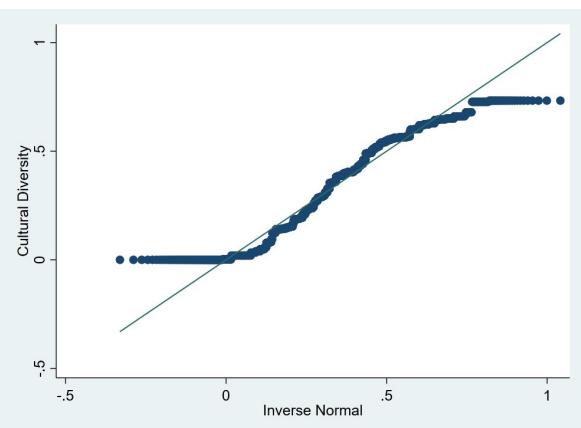


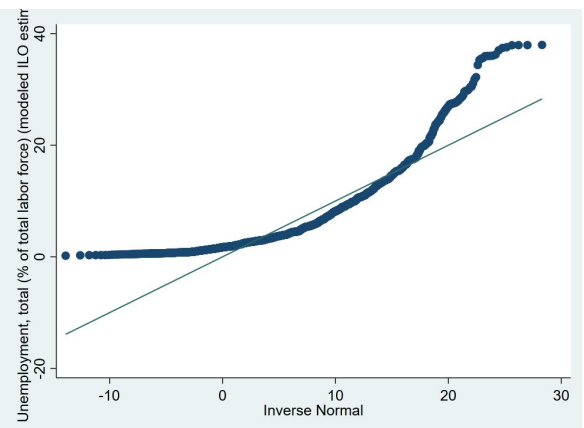

GDP per capita, logged, base 10
4
6
8
10
12
Inverse Normal


Total natural resources rents (% of GDP)
-50
0
50
100
-40
-20
0
20
40
60
Inverse Normal


Population
5.00e+08
0
1.00e+09
1.50e+0
5.00e+08
0
5.00e+08
Inverse Normal


Urban population (% of total population)
-50
0
50
100
150
-50
0
50
100
150
Inverse Normal


Cultural Diversity
-.5
0
.5
1
-.5
0
.5
1
Inverse Normal


Unemployment, total (% of total labor force) (modeled ILO estim
-20
0
20
40
-10
0
10
20
30
Inverse Normal