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Rethinking Inequality under Autocracy. Parties, Citizens, and Preferences

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Abstract

The causes of different levels of political and economic inequalities and related public policies under autocratic regimes are diverse. Existing works are mainly concerned with questions such as how political institutions matter for policy outcomes under authoritarianism and how citizens under autocratic rule adopt political and economic preferences conditioned by the nature of the regime environment. However, the literature still lacks a framework that systematically theorizes and empirically compares the effects of different institutional designs of dictatorships on policies that affect economic and political inequalities, such as redistribution and women's political inclusion. In addition, the consequences of political and economic inequality under authoritarianism for ordinary citizens are particularly important but are still understudied.

The present dissertation seeks to answer whether and how the institutional foundations of autocracies determine economic and political inequalities and whether and how these inequalities affect ordinary citizens in the short and long term. The main argument at the heart of this dissertation is that autocratic institutions, and especially the strength of an incumbent's party, matter for redistributive policies and inequalities and their consequences for ordinary citizens.

The four research papers that form the core of this dissertation employ quantitative methods with cross-national data on redistribution and women's political inclusion and individual-level data across countries on political participation and redistributive preferences. A crucial goal of this doctoral thesis is to propose a theoretical framework explaining public policies that address political and economic inequalities and the attitudinal effects of those policies and inequalities on ordinary citizens.

The focus of my first dissertation paper is on theorizing and empirically examining variation in income redistribution across autocracies. It argues that the degree of electoral uncertainty affects two mechanisms that shape the redistributive nature of autocratic regimes. The inclusion and exclusion from political power on the grounds of socioeconomic and social attributes and the institutionalization of political parties determine autocrats' incentive and capacity for redistributing income and economic benefits. First, the empirical analysis suggests that more inclusionary ruling coalitions correspond with higher levels of income redistribution compared to more exclusionary regimes. Second, regimes with higher levels of party institutionalization redistribute more than regimes in which authoritarian parties are less institutionalized. However, third, the effects are largely conditional on electoral uncertainty.

The second paper of this dissertation examines the association between women's political inclusion and incumbent party strength in authoritarian regimes and thereby investigates policies that autocratic regimes implemented to reduce this form of horizontal inequality. This article argues that the degree of party institutionalization is the main determinant of

women's political inclusion under authoritarian rule. Similar to the first paper, it argues that institutionalized party rule determines authoritarian parties' incentive and capacity for introducing more gender-equal political processes and political outputs. Although previous research stressed the link between authoritarian regime types and gender equality, this study finds regime types explain little of the variation in gender equality. In contrast, regimes with higher levels of party institutionalization provide more gender-equal politics and policies than regimes in which authoritarian parties are less institutionalized.

The third paper focuses on individuals living in autocratic regimes and their political participation. Thus, similar to the fourth paper, it shifts the level of inquiry to the individual level. The third paper investigates the following questions. What effect does economic inequality in authoritarian regimes have on the political participation of their citizens? Do individual income and repression each have a greater effect than economic inequality? The paper benefits from three prominent theories, namely the Conflict, Relative Power, and Resource Theories that address the inequality-participation puzzle in democracies. However, theoretical arguments and empirical evidence regarding non-democratic regimes are scarce. Thus, the third paper argues that it is individual income and the level of repression rather than economic inequality that explain political participation in autocracies. The paper demonstrates that higher levels of economic inequality hardly suppress political participation among citizens in general. However, individual income has a more powerful effect on civil society participation, while the level of repression decreases the likelihood of voting more strongly than income.

The fourth paper sheds light on how authoritarian regimes have a lasting imprint on their citizens' ideas and values in the long term and on which mechanisms determine the redistributive preferences of their former citizens. It is widely established that autocracies attempt to indoctrinate their citizens to have compliant subjects. However, the long-term consequences of socialization under authoritarian rule are weakly conceptualized, and empirical evidence is rare, especially regarding citizens' economic preferences. The fourth paper proposes a distinction between three different mechanisms: state repression, political indoctrination, and exposure to autocracies during citizens' lifetimes. It finds that socialization under a highly indoctrinating regime leaves a strong pro-redistributive legacy, while highly repressive regimes also leave a pro-redistributive legacy. This study contributes to our understanding of how state repression and indoctrination affect ordinary citizens in the long term.

This dissertation underlines the finding that highly institutionalized dictatorships provide public policies that address political and economic inequalities, while ordinary citizens are also affected by economic and political inequalities under autocratic rule. This doctoral thesis complements existing research on the causes and consequences of inequality under autocracy, socialization under authoritarianism, and citizens' preference formation in autocratic environments.

Zusammenfassung

Die Ursachen für unterschiedliche Niveaus von politischen und ökonomischen Ungleichheiten und die damit in Beziehung stehenden *public policies* in autokratischen Regimen sind vielfältig. Bisherige Arbeiten befassen sich dabei hauptsächlich mit Fragen wie politische Institutionen in Autokratien *policy outcomes* beeinflussen und wie Bürger unter autokratischer Herrschaft politische und ökonomische Präferenzen adaptieren. Diese politische Präferenzen sind dabei von der Art der autokratischen Regimeumwelt beeinflusst. Eine Perspektive, die in der Literatur noch fehlt, ist ein theoretisches Framework, welches die Auswirkungen verschiedener institutioneller Arrangements von Autokratien auf solche policies, die ökonomische und politische Ungleichheiten beeinflussen wie beispielsweise Redistribution und die politische Inklusion von Frauen, systematisch theoretisiert und empirisch untersucht. Darüber hinaus sind die Folgen politischer und wirtschaftlicher Ungleichheiten in Autokratien für normale Bürger nicht nur besonders relevant, sondern bisher auch wenig untersucht.

Die vorliegende kumulative Dissertation versucht zwei übergeordnete Fragen zu beantworten. Erstens, ob und inwiefern das institutionelle Fundament von Autokratien wirtschaftliche und politische Ungleichheiten determiniert. Und zweitens, ob und inwiefern sich diese Ungleichheiten kurz- und langfristig auf normale Bürger übertragen. Das Hauptargument –das im Mittelpunkt dieser Dissertation steht –ist, dass autokratische Institutionen und insbesondere die Stärke der Regimepartei für die Umverteilungspolitiken, Ungleichheiten und deren Folgen für die Bürger von Bedeutung sind.

Die vier Artikel, die den Kern dieser Dissertation bilden, verwenden quantitative Methoden für länderübergreifende Daten zur Umverteilung und zur politischen Inklusion von Frauen sowie Daten auf der Individualebene über Länder hinweg zu politischer Partizipation und Umverteilungspräferenzen von Bürgern. Ein wichtiges Ziel dieser Doktorarbeit ist die Formulierung eines theoretischen Rahmens zur Erklärung von *public policies*, die sich mit politischen und wirtschaftlichen Ungleichheiten befassen, sowie die Erklärung von Einstellungsmustern der Bürger, die aus diesen *public policies* folgen.

Der Schwerpunkt des ersten Artikels liegt auf der Theoretisierung und empirischen Untersuchung der Unterschiede bei der Einkommensumverteilung in Autokratien. Es wird argumentiert, dass der Grad der Wahlunsicherheit zwei Mechanismen beeinflusst, die den Umverteilungscharakter autokratischer Regime beeinflussen, indem diese den Anreiz und die Fähigkeit der Autokraten, Einkommen und wirtschaftliche Leistungen umzuverteilen: Erstens, die Inklusion bzw. die Exklusion von politischer Macht aufgrund sozioökonomischer und sozialer Merkmale und zweitens, die Institutionalisierung politischer Parteien. Die empirische Analyse legt nahe, dass inklusivere *ruling coalitions* im Vergleich zu exklusiveren Regimen ein höheres Maß an Einkommensumverteilung aufweisen. Zweitens, verteilen Regime mit einem höheren Grad an Parteiinstitutionalisierung mehr um als Regime, in

denen autoritäre Parteien weniger institutionalisiert sind. Schließlich hängen die skizzierten Zusammenhänge vom Grad der Wahlunsicherheit ab.

Das zweite Papier dieser Dissertation untersucht den Zusammenhang zwischen der politischen Inklusion von Frauen und der Stärke der Regimepartei in autoritären Regimen. Das Papier untersucht damit Strategien, die autokratische Regime zur Verringerung eines horizontalen Ungleichheitsphänomens umsetzen. Dieser Artikel argumentiert, dass der Grad der Parteieninstitutionalisierung die Hauptdeterminante für die politische Inklusion von Frauen in Autokratien ist. Ähnlich wie im ersten Papier wird argumentiert, dass der Grad der Institutionalisierung von Parteien den Anreiz und die Fähigkeit autoritärer Parteien determinieren solche policies zu implementieren, die geschlechtergerechte politische Prozesse und politische Ergebnisse befördern. Wenngleich frühere Untersuchungen den Zusammenhang zwischen autoritären Regimetypen und der Gleichstellung der Geschlechter betonten, findet diese Studie heraus, dass Regimetypen nur geringe Unterschiede in der Gleichstellung der Geschlechter erklären. Vielmehr stellen autokratische Regime mit einem höheren Grad an Parteieninstitutionalisierung mehr *public policies* im Bereich der Gleichstellung der Geschlechter bereit als Regime, in denen Parteien weniger institutionalisiert sind.

Das dritte Papier konzentriert sich auf die politischen Präferenzen von Individuen, welche in Autokratien leben. Wie auch im vierten Artikel, verschiebt sich die Untersuchungsebene von der Länderebene auf die Individualebene. Dabei untersucht das dritte Papier die folgenden Fragen: Welche Auswirkungen hat wirtschaftliche Ungleichheit in autoritären Regimen auf die politische Partizpation von Bürgern? Haben dabei individuelles Einkommen und Unterdrückung jeweils eine größere Auswirkung als wirtschaftliche Ungleichheit? Auf theoretischer Ebene profitiert der Artikel dabei von drei prominenten Theorien, den Konflikt-, Relativkraft- und Ressourcentheorien, die sich mit dem Zusammenhang von Ungleichheit und Beteiligung im Kontext von Demokratien befassen. Für nichtdemokratische Regime sind theoretische Argumente und empirische Untersuchungen jedoch rar. Das dritte Papier argumentiert, dass tendenziell eher das individuelle Einkommen und das Ausmaß der Unterdrückung als die wirtschaftliche Ungleichheit die politische Partizipation in Autokratien erklären. Das Papier zeigt dabei, dass ein höheres Maß an wirtschaftlicher Ungleichheit die politische Partizipation aller Bürger kaum negativ beeinflusst. Individuelles Einkommen wirkt sich stärker auf die Beteiligung der Zivilgesellschaft aus, während das Ausmaß der Repression die Wahrscheinlichkeit der Stimmabgabe in Wahlen stärker verringert als individuelles Einkommen.

Das vierte Papier beleuchtet, inwiefern autokratische Regime die Präferenzen und Einstellungen ihrer Bürger langfristig prägen und welche Mechanismen die Umverteilungspräferenzen ihrer früheren Bürger bestimmen. Es ist allgemein anerkannt, dass Autokratien versuchen ihre Bürger zu indoktrinieren, um konforme Untertanen zu generieren. Bisher sind die langfristigen Folgen der Sozialisierung unter autoritärer Herrschaft jedoch schwach konzeptualisiert. Dies gilt insbesondere in Bezug auf die wirtschaftlichen Präferenzen der Bürger. Empirische Untersuchungen sind ferner selten. Zur Theoretisierung schlägt das vierte Papier eine Unterscheidung zwischen drei verschiedenen Mechanismen vor: staatliche Repression, politische Indoktrination und zeitliche Exposition des Bürger. Die Studie findet heraus, dass die Sozialisierung unter einem stark indoktrinierenden Regime

ein starkes pro-umverteilendes Erbe auf die Einstellungen der Bürger hinterlässt, während auch hochrepressive Regime ein pro-umverteilendes Erbe hinterlassen. Diese Studie trägt somit zu einem besseren Verständnis bei, wie Repression und Indoktrination langfristig auf die politischen Einstellungen von normalen Bürgern wirken.

Insgesamt unterstreicht diese Dissertation den Befund, dass hoch institutionalisierte Diktaturen *public policies* implementieren, die sich mit politischen und wirtschaftlichen Ungleichheiten befassen, während insbesondere normale Bürger unter autokratischer Herrschaft von wirtschaftlichen und politischen Ungleichheiten in ihren Handlungen und Präferenzen beeinflusst werden. Dabei ergänzt diese Dissertation die Literatur zu (a) den Ursprüngen und Konsequenzen von Ungleichheit in Autokratien, (b) die Forschung zur Sozialisation unter autokratischer Herrschaft sowie (c) die Forschung zur Präferenzbildung der Bürger.

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List of Abbreviations

AE	autocratic environment
APC	Age-Period-Cohort
ART	authoritarian regime type
BFA	Bayesian Factor Analysis
CI	confidence interval
CM	competitive multiparty
DAG	Directed Acyclic Graph
DVPW	Deutsche Vereiningung für Politikwissenschaft
EDI	Electoral Democracy Index
ESS	European Social Survey
EVS	European Values Survey
FE	fixed effect(s)
GDP	gross domestic product
GWF	Geddes, Wright, and Frantz
HAPC	Hierarchical Age-Period-Cohort
HM	hegemonic multiparty
IB	individual behaviour and political preferences
ICC	intra-class correlation coefficient
IR	income redistribution
IRT	item response theory
ISSP	International Social Survey Programme
LB	Latinobaroemter
LIS	Luxembourg Income Study
LoI	level of inequality
MA	multiparty autocracy
MC	multiparty competition
ME	multiparty elections
OECD	Organisation for Economic Co-operation and Development
OLS	Ordinary Least Squares
PI	party institutionalization
PR	preferences for redistribution
REWB	within-between random effects
RoW	Regimes of the World
RS	ruling strategies
RT	regime types
SPaW	Social Policies around the World Database
SWIID	Standardized World Income Inequality Database

USSR	Union of Soviet Socialist Republics
V-Dem	Varieties of Democracy
WI	women's political inclusion
WPE	women's political exclusion
WVS	World Values Survey

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Chapter 1

Introduction

Autocratic regimes provide public policies in many ways. Public policies in dictatorships range from redistributive policies, to welfare-state measures, to policies promoting women's political inclusion and environmental protection. While in some dictatorships, economic and political inequalities are comparable to some democratic regimes, other autocracies perform worse (e.g., see Figure 1.1). The wide variation in the public policy profiles of autocratic regimes is not only similar to those of democratic regimes but is also intertwined with political and economic inequalities within a country. Moreover, ''inequality does not follow a deterministic process'' (Piketty & Saez, 2014, p. 842) but is rather largely influenced by political institutions and policies that societies choose to adopt.

Consider, for example, the competitive multiparty autocracy of Singapore. Singapore outperforms Indonesia and India, both democratic regimes, with respect to women's political empowerment.[1] In addition, Singapore provides basic public services, such as primary education, clean water, and healthcare regardless of the socioeconomic position of citizens, while in democratic India and Indonesia, access to basic public services is largely conditioned up on the socioeconomic position of the individual.[2] Singapore is an example of a multiparty autocracy with a pronounced public policy profile. By contrast, there are several autocratic regimes with less pronounced public policy profiles and women's political integration policies, such as Sudan, Somalia, and Saudi Arabia (compare Figure 1.2).

The causes of these variations in political and economic inequalities and related public policies are diverse. For political scientists, explaining the causes of political and economic inequalities is a core concern, especially in comparative politics and political economy. Scholars are especially interested in distributional conflicts in democratic transitions around the world (see Acemoglu & Robinson, 2006; Boix, 2003; Haggard & Kaufman, 2016). Other researchers have questioned the importance of distributional conflicts in democratic transitions and argue that many transitions can be explained by non-distributional factors (Ansell & Samuels, 2014; Haggard & Kaufman, 2016) or elite mistakes (Treisman, 2020). However, the literature on distributional conflicts serves as a theoretical origin for this doctoral thesis. As argued by these theories, political and economic inequalities have

[1] According to V-Dem women's political empowerment index.
[2] According to V-Dem's *access to public services distributed by socioeconomic position* indicator.

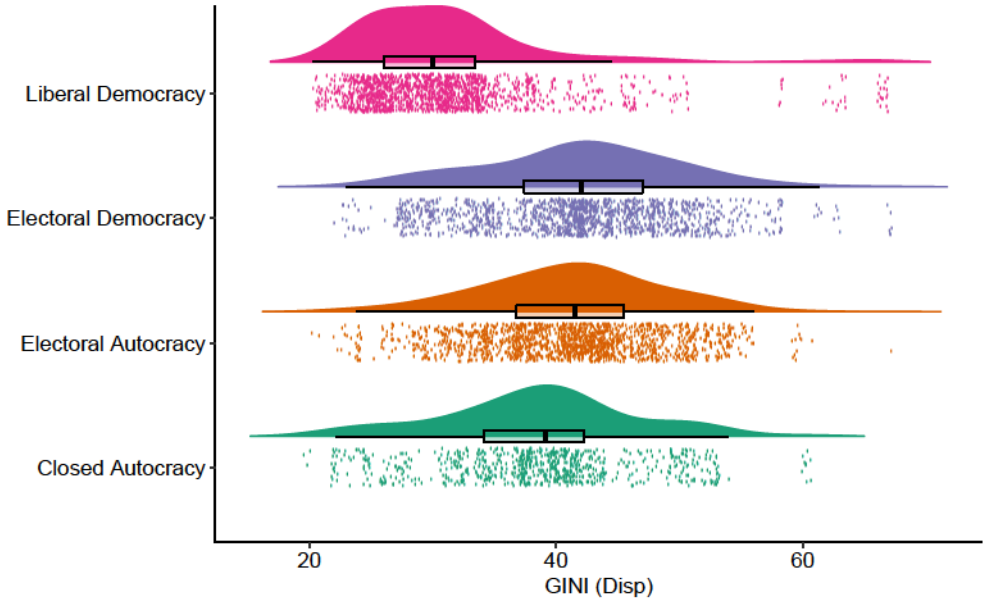

Figure 1.1: Distribution of disposable Gini by regime type

Notes: The raincloud plot shows the distribution (density) of disposable Gini by regime type, raw data (by points) and the box plot for each regime type. Data comes from V-Dem (Coppedge et al., 2020b) and SWIID (Solt, 2020). n = 5,300 country-years, 2,380 autocratic country-years and 2,920 democratic country-years.

profound effects on the likelihood of democratic transitions. However, comparative politics literature still lacks a framework that systematically theorizes and empirically compares the effects of different institutional designs of dictatorships on policies that affect economic and political inequalities, such as redistribution and women's political inclusion. In addition, the consequences of political and economic inequalities under authoritarianism for ordinary citizens are particularly important due to the stylized fact that "what occurs under authoritarianism has profound effects on the transition and the democracy that follow" (Gandhi, 2019, p. e15). Nevertheless, the consequences of political and economic inequalities for ordinary citizens living in autocratic regimes are still understudied.

Before delving into the different research questions that each paper addresses, three descriptive findings serve as important starting points. The first is the observation that economic inequality is lowest on average in liberal democracies, while electoral democracies and electoral autocracies perform worse, and closed autocracies do not have as negative a distributional profile as one may expect (see Figure 1.1).[3] Do these findings affect redistributive policies in autocracies? Figure 1.2a provides preliminary insights into this question. Some autocracies provide large-scale redistributive policies, while there is no clear

[3]Please note that this preliminary conclusion can be biased by the data generation of the inequality measurement (see also Section 1.3 of this introduction).

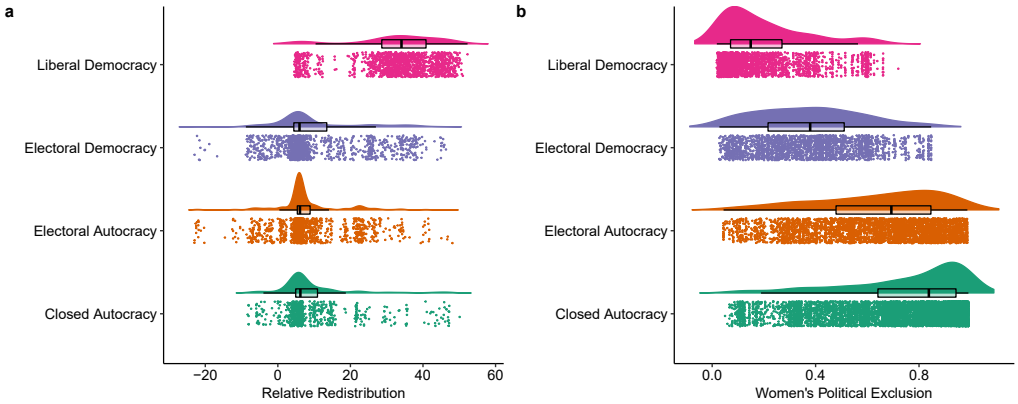

Figure 1.2: Distribution of a) relative redistribution and b) women's political exclusion by regime type

Notes: The raincloud plots show the distribution (density) of a) relative redistribution and b) women's political exclusion by regime type, raw data (by points) and the box plot for each regime type. Data comes from V-Dem (Coppedge et al., 2020b) and SWIID (Solt, 2020). a) n = 5,300 country-years, 2,380 autocratic country-years and 2,920 democratic country-years; b) n = 17,719 country-years, 13,101 autocratic country-years and 4,618 democratic country-years

and observable pattern as to whether electoral autocracies provide more redistribution than closed autocracies. What is observable is that liberal democracies seem to be especially economically redistributive. In addition, liberal democracies are more supportive of women's political inclusion, while the majority of electoral and closed autocracies perform worse regarding women's political inclusion (see Figure 1.2b).

In order to shed light on the descriptive findings presented in Figures 1.1 and 1.2 and the wide range of public policies in autocracies, I aim to answer whether and how the institutional foundations of autocracies determine economic and political inequalities and whether and how these inequalities affect ordinary citizens in the short and long term. The main argument at the heart of this dissertation is that autocratic institutions, and especially the strength of the incumbent's party, matter for redistributive policies, inequalities, and their consequences for ordinary citizens.

The studies comprising this dissertation are arranged into two parts. Each of the four studies addresses different aspects of the overarching research questions. The first two papers investigate the origins of economic redistribution (Chapter 2) and women's political inclusion —a political inequality phenomenon —(Chapter 3) on the country-year level. Chapter 2, published in *Democratization* (see Pelke, 2020b), aims to gauge the level of income redistribution under authoritarianism. It asks:

What are the determinants of the redistribution of income and wealth under autocratic rule? Why do autocrats redistribute income and wealth?

Chapter 3, published in *Contemporary Politics* (see Pelke, 2021), also focuses on the country-level and examines political inequality between men and women and it determinants. It asks:

What are the determinants of political inequality between men and women under autocratic rule? Why are some autocratic regimes more gender equal in terms of access to political offices and representation than others?

Chapters 4 and 5 address the consequences of economic inequality and socialization under a dictatorship for political participation and economic preferences and thereby shift the level of inquiry to the individual-level. Chapter 4, published in *ZfVP* (see Pelke, 2020a), addresses the inequality-participation nexus, asking:

How does economic inequality affect ordinary citizens in autocracies regarding their preference formation, in particular their likelihood to participate in autocratic elections and civil society organizations?

Chapter 5 goes beyond the immediate effects of autocratic rule on citizen's preferences to inquire about the long-lasting effects autocratic regimes have upon their citizens, asking:

What are the legacies of autocracies on the political economy preferences of their former citizens?

In the remainder of this introduction, I introduce central theoretical concepts. Afterwards, I briefly outline the theoretical arguments of this thesis by discussing relevant literatures. Next, I summarize this study's methodological foundations and data sources. Then I discuss the contribution of this dissertation to different research strands and finally summarize the empirical findings and thereby outline the roadmap of this thesis.

1.1 Overview of central concepts

The distinction between autocracy and democracy is central to this dissertation. Autocracy was first broadly defined as non-constitutional rule "in the hands of one man or a group of men who are uncontrolled by a free and unrestricted public opinion" (Loewenstein, 1935, p. 571). However, in a contemporary terminology, scholars use autocracy as a generic term

for all types of authoritarian and totalitarian rule (Tullock, 1987).[4] Moreover, autocratic rule has been defined in negative terms as the absence of democratic rule. A minimalist definition of democracy entails ''rulers are de-facto accountable to citizens through periodic elections'' (Lührmann, Tannenberg, & Lindberg, 2018, p. 63). Therefore, a de-facto free, fair, and multiparty election is a necessary criterion for a democracy, while the absence of this criterion entails a regime is an autocracy.

A common approach for distinguishing between a wide variety of dictatorships is based on the identity of the autocratic support coalitions (see Cheibub, Gandhi, & Vreeland, 2010; W. R. Clark, Golder, & Golder, 2018). Based on the identity of autocratic support coalitions, one can distinguish between (1) monarchic dictatorships, (2) military dictatorships, and (3) civilian dictatorships. The civilian dictatorship category can be further divided into personalist dictatorships, one-party or dominant party dictatorships, and multiparty dictatorships. For example, Geddes et al. (2014) and Cheibub et al. (2010) classified autocratic regime types based on the characteristics of the autocratic ruling or support coalition.

In contrast to this approach, Wahman et al. (2013) based their regime typology on the modes of political power maintenance. Monarchies rest upon hereditary succession or lineage, while military dictatorships rest upon the actual or threatened use of military force. Electoral regimes hold regular elections. Within the electoral-regimes category, Wahman et al. (2013) distinguished between no-party regimes, where parties are prohibited but elections are held; one-party regimes, where one dominant regime party is in place; and limited multiparty regimes, where different parties compete in unfair elections. A third approach for classifying autocratic regimes rests on the distinction between different legitimation strategies (Kailitz, 2013). Kailitz tried ''to provide a thorough theoretical foundation for the classification of political regimes'' (Kailitz, 2013, p. 40) by complementing Geddes et al.'s typology with a legitimation dimension.

However, this doctoral thesis builds on another approach to distinguish between different autocratic ruling settings. As shown by Miller (2020a), among others, electoral authoritarianism has become the dominant form of dictatorship since the end of the Cold War. Common strategies autocratic regimes use for managing electoral uncertainty are institutionalizing elections and establishing autocratic ruling parties. In addition, as more regimes hold multiparty elections, within-group differentiation between different levels of electoral uncertainty becomes important. Moreover, the institutionalization of autocratic (ruling) parties and the degree of electoral uncertainty are two main rationales of this dissertation. Unfortunately, the typologies introduced above do not differentiate between

[4] I use the terms *autocracy* and *dictatorship* interchangeably.

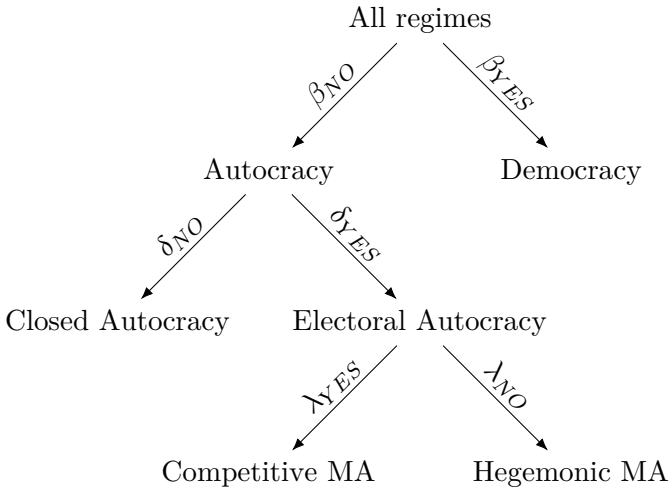

Figure 1.3: Autocratic and democratic regimes

Notes: β: de-facto multiparty, free and fair elections and Dahl's institutional prerequisites; δ: de-jure multiparty elections for the chief of executive and the legislature; λ: allow >= 25% of adult population to vote and/or show no substantial irregularities that affect the outcome of elections; MA: multiparty autocracy.

different degrees of electoral uncertainty and forms of autocratic party institutionalization.[5] Thus, this doctoral thesis uses another empirical approach to distinguish between different types of dictatorships.

Scholars make a distinction between closed autocracies and electoral autocracies (e.g., Bernhard, Edgell, & Lindberg, 2020; Brownlee, 2009; Levitsky & Way, 2010; Lührmann et al., 2018; Schedler, 2013). Electoral autocracies are regimes in which direct or indirect multiparty elections are held for the chief of the executive and seats in national legislature (Schedler, 2013, p. 2). In contrast, closed autocracies are one-party autocracies without de-facto multiparty competition in national elections and regimes in which the chief of executive and the legislature are not subject to elections (see also Figure 1.3).

Within electoral autocracies, one can differentiate between hegemonic multiparty autocracies and competitive multiparty autocracies (see Bernhard et al., 2020; Levitsky & Way, 2010; Schedler, 2013). One can differentiate between previously mentioned autocracy types according to two criteria: minimal competitiveness in practice and minimal suffrage in practice (cf. Bernhard et al., 2020). Hegemonic multiparty autocracies have elections that may include at least one real opposition party but do not allow at least 25% of the adult population to vote and/or show irregularities that affect the outcome of elections (cf. Bernhard et al., 2020).[6] In contrast, competitive multiparty regimes allow for substantial

[5] This problem is discussed in detail in Chapter 3.

[6] The threshold of 25% is self-evidently a somehow arbitrary choice. However, Bernhard et al. (2020)

electoral competition, and at least 25% of the adult population is allowed to participate. The following chapters build upon these definitions of autocracy and democracy. Since this dissertation focuses on inequalities in autocracies, the distinction between both types of rule is necessary, and for the empirical analyses, I gather samples largely based on Regimes of the World (RoW) data (Lührmann et al., 2018).[7]

The second central concept of this dissertation is inequality. According to Frances Stewart, one can differentiate between vertical and horizontal inequalities (Stewart, 2005). Vertical inequalities[8] is defined as inequalities among individuals, while Stewart defines horizontal inequalities as ''the existence of severe inequalities between culturally defined groups'' (Stewart, 2005, p. 102). Horizontal inequalities are ''multidimensional – with political, economic, and social elements (as, indeed, are vertical inequalities, but they are rarely measured in a multidimensional way)'' (Stewart, 2005, p. 102). By introducing the distinction between horizontal and vertical inequality, Stewart has argued for going beyond the focus on individuals and focusing on inequality between socially defined groups. This dissertation ties in with Stewart's distinction and uses the concept of vertical inequality in Chapters 2, 4, and 5, and Chapters 3 and 5 investigate horizontal inequality between women and men in autocracies (Chapter 3) and redistributive preferences among citizens (Chapter 5). These redistributive preferences often have a horizontal dimension in certain societies.[9] However, the main focus of comparative authoritarianism and democratization research is on vertical inequalities.

Another conceptual distinction can be established between *inequality of outcomes* and *inequality of opportunities* (e.g., United Nations Department of Economic and Social Affairs, 2015). The term economic inequality refers to *inequality of outcomes*. There is *inequality of outcomes* when individuals do not have equal access to material wealth or economic living conditions; the *inequality of opportunities* perspective acknowledges that circumstances of birth (United Nations Department of Economic and Social Affairs, 2015, p. 1) are essential prerequisites of equality of opportunities. The latter perspective goes back to Amartya Sen and his capability framework (Sen, 1993, 2003). Sen argues that well-being is a function of personal circumstances (e.g., age, gender, and family background) and capabilities (the freedom to choose and to act) and that ''what should be equalized is not means of living but the actual opportunities of living that give people the freedom to pursue a life of their own choosing'' (United Nations Department of Economic and Social Affairs, 2015, p. 1-2; Sen, 1993). This dissertation contributes to the *inequality of outcomes* literature but also

use this 25% threshold for distinguishing between hegemonic and competitive multiparty autocracies.

[7] See also the datasets by Geddes et al., 2014, Wahman et al., 2013, and Cheibub et al., 2010.

[8] Stewart calls it the normal definition of *inequality*.

[9] In joint work with David Kuehn, I am also systematically collecting data on ethnic inequality in the militaries of autocratic regimes. This data is still being collected, and a related data feature will be published afterwards.

contributes to the *inequality of opportunities* literature by examining the consequences of economic inequality under authoritarianism as concerns citizens' preferences and political behavior. Finally, political institutions, in particular the type of access to government and the degree of freedom and equal access to power, affect economic inequality. Piketty and Saez argue in a similar way that ''inequality does not follow a deterministic process'' (Piketty & Saez, 2014, p. 842). In fact, it is largely influenced by political institutions and policies that societies choose to adopt.

The third central concept is (income) redistribution. As Tullock argues, ''redistribution is probably the most important function of most modern governments'' (Tullock, 2013, p. 1). However, the level of redistribution and its cross-sectional variation cannot be modeled using only purely economic explanations, such as the level of inequality in a given society (see McCarty & Pontusson, 2009). Therefore, I focus on the question of how political processes and institutions, such as autocratic ruling strategies and the degree of incumbent party institutionalization, determine the level of redistribution and inequality. In this dissertation, redistribution is broadly defined as the transfer of resources from one person or group to another person or group (see also Albertus, 2015; Boadway & Keen, 2000; Solt, 2020; Tullock, 2013). More precisely, income or fiscal redistribution is defined as the transfer of resources via taxes and fiscal transfer policies from one person or group to another. By contrast, land redistribution —a second influential type of redistribution (Albertus, 2015) —is defined as land reform measures that lead to a reallocation of land properties from landed elites to the landed poor.[10] In addition, income redistribution is also often conceptualized as the transfer of resources to the poor.

Governments can implement redistributive policies using progressive taxation systems (see Boadway & Keen, 2000) or a set of social policies that do not directly alleviate income inequality, such as welfare state measures and social policies. Public welfare provisions are often-used as a proxy for the degree of redistribution (McCarty & Pontusson, 2009), while the standard measure of redistribution ''is the percentage change in Gini coefficients that we observe as we move from market income (before taxes and transfers) to disposable income (after taxes and transfers)'' (McCarty & Pontusson, 2009, p. 668). In addition, government policies that are not typically linked with redistributive policies affect the distribution of income in a given society, such as macroeconomic and educational policies.

A common approach for explaining the degree of redistribution and welfare state policies focuses on the process of how voters form redistributive preferences and how political processes aggregate these individual- and group-level preferences and implement (re)distributive policies. Thus, redistributive preferences are the fourth central concept in this dissertation.

[10] In this dissertation, land redistribution is not of interest. An influential approach explaining land redistribution is from Albertus (2015).

Redistributive preferences are defined as the (non-)support for government policies (e.g., income taxation) that result in the redistribution of income and wealth from the rich to the poor (e.g., Alesina & Giuliano, 2011; Piketty & Saez, 2014).[11] Even though redistributive preferences and party institutionalization are second-order concepts (in contrast to the above-defined concepts such as autocracy and inequality), they are core theoretical concepts in this dissertation. Therefore, I briefly discuss these concepts here.

Party institutionalization is the main explanatory factor in Chapters 2 and 3. Party institutionalization is the degree to which decisions within a party are made according to clear and stable rules and the degree to these decisions are informed by party networks that link party elites with their constituencies outside the core party organization (e.g., F.-Y. Chen, 2020; Hicken, Kollman, & Simmons, 2016; Randall & Svåsand, 2002; Rasmussen & Knutsen, 2019). According to Randall and Svåsand, party institutionalization manifests itself in two ways: *routinization* and *value infusion*. *Routinization* refers to the rule-guided process between a party and its followers, while *value infusion* refers to party followers' attitudinal affiliation with their party (Randall & Svåsand, 2002, p. 12). However, in the empirical papers, autocratic party institutionalization is measured as the rule-guided process between a party and its followers, while the party followers' attitudinal affiliations cannot be measured directly by expert-coded data. The arguments across the different articles draw on the idea that it is the internal constitution of incumbent parties that matters for public policies: party institutionalization enables and provides incentives for authoritarian leaders to pursue certain public policies.

Hereafter, I discuss how party institutionalization, income redistribution, inequality, women's political inclusion,[12] and citizens' preference formation are interrelated and how the core concepts are used in each chapter to illuminate inequality and its consequences in autocratic regimes.

1.2 Theoretical arguments

The four related articles in this doctoral thesis aim to advance our understanding of how institutions in autocracies and the characteristics of autocratic rule shape government policies concerning income redistribution (Chapter 2) and women's political inclusion (Chapter 3) and how these outputs influence ordinary citizens' participation in autocratic elections (Chapter 4) and form their redistributive preferences (Chapter 5). Thus, the dissertation draws on two theoretical claims. The first is that political institutions matter

[11] For a detailed discussion about the individual and group-level origins of redistributive preference, see the theoretical framework by Alesina and Guiliano (2011).

[12] As argued above, women's political inclusion is related to horizontal inequality. The concept of women's political inclusion is presented in Chapter 3 in detail.

for policy outcomes under authoritarianism (e.g., Albertus, 2015; Croissant, Kailitz, Koellner, & Wurster, 2014; Croissant & Wurster, 2013; Donno & Kreft, 2019; Gandhi, 2008; Gehlbach & Keefer, 2011; Gehlbach & Sonin, 2014; Knutsen & Rasmussen, 2018; Michael K. Miller, 2015b; Rasmussen & Knutsen, 2019). The second is that citizens under autocratic rule adopt political and economic preferences conditioned by the nature of the regime environment (e.g., Gandhi & Lust-Okar, 2009; Michael K. Miller, 2015b; Neundorf, Gerschewski, & Olar, 2020; Neundorf & Pop-Eleches, 2020).[13]

The first claim is based on the new institutionalism (see Pepinsky, 2014) that has shaped the research on comparative authoritarianism (e.g., Brownlee, 2011; Gandhi, 2008; Geddes, 1999; Geddes, Wright, & Frantz, 2018). According to the literature, I subsume the institutionalization of (incumbent) parties, the distribution of political power produced via autocratic ruling strategies, and the regime types as institutional arguments (see Pepinsky, 2014).[14] The literature on political socialization under authoritarianism forms the second claim (e.g., Neundorf et al., 2020; Neundorf & Pop-Eleches, 2020; Pop-Eleches & Tucker, 2017; Rozenas & Zhukov, 2019).

Figure 1.4 presents the theoretical connections between the different chapters and theoretical concepts and thereby builds a comprehensive synopsis of common arguments and causal pathways connecting autocratic institutions with citizens' preferences and behavior. However, it is important to note that this dissertation does not aim to theorize a unified framework explaining redistribution, women's political inclusion, and individual-level preferences for redistribution and political participation under autocracy. Rather it intends to establish theoretical connections between the subjects of each chapter. Figure 1.4 presents a Directed Acyclic Graph (DAG)[15] to clarify my arguments and establish (causal) connections between the concepts I use.[16] Thus, the DAG appears to show relatively complex theoretical connections between the concepts. However, in light of complex causal processes that are triggered by a multitude of (intertwined) causes, this DAG simplified real-world causal pathways.

In this DAG, white solid circles represent the observed variables and gray circles represent the (unobserved) confounders AE_i and U_{ij}. Both are vectors of unit-specific confounders in the case of AE_i or unit-specific and individual-specific confounders in case of U_{ij}. The solid black arrows indicate the possible existence of a direct causal effect of an explanatory variable on a dependent variable. The absence of an arrow indicates the assumption that

[13] However, this introduction does not serve as a substitute for the more targeted literature reviews and theoretical argumentations of the four papers.

[14] A critique of the institutional turn in comparative autocracy research was written by Pepinsky (2014)

[15] An illustrative graphical approach in modern causal analysis to the problem of causal inference.

[16] DAGs can also be very helpful for showing why some identification strategy in empirical models makes sense. However, in this introduction, I use the DAG only for clarifying my theoretical arguments and establishing connections between the chapters of this dissertation.

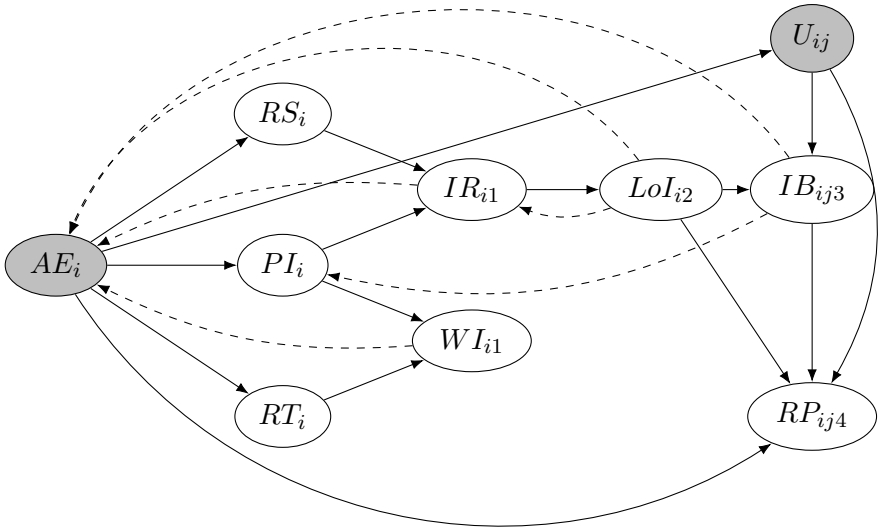

Figure 1.4: Directed acyclic graph of theoretical arguments in the dissertation

Notes: AE_i: autocratic political environment; RS_i: ruling strategies; PI_i: party institutionalization; RT_i: regime types; IR_{i1}: income redistribution; WI_{i1}: women's political inclusion; LoI_{i2}: level of inequality; IB_{ij3}: individual behavior and political preferences; RP_{ij4} preferences for redistribution. Solid circles represent observed outcome WI_{i1}, IR_{i1}, IP_{ij3} and RP_{ij4} and treatment (or explanatory) variables RS_i, PI_i, RT_i, LoI_{i2}. Gray circles represent a vector of unit-specific confounders in the case of AE_i or a vector of unit-specific and individual-specific confounders in case of U_{ij}. The solid arrows indicate the possible existence of a causal relationship. The absence of such arrows represents the lack of causal relationships. The dashed arrows indicate a time-delayed possible causal relationship between the outcome variables and the treatment or background factors i

there is no causal effect. The dashed arrows indicate a time-delayed possible relationship between the outcome variables and the background factors i. Observed variables and confounders can be at the country level i or on the individual level j. In addition, the DAG also shows a temporal component indicated by the numerical subscripts.

The following synopsis summarizes the possible causal connections between the observed variables and confounders and links them with the different chapters. The AI_i is the autocratic environment and a vector of background factors in autocratic regimes, such as the level of repression and the political ideology. The autocratic environment AI_i has a causal effect on the autocratic ruling strategies RS_i, the (incumbents) party institutionalization PI_i, and the autocratic regime types RT_i indicated by solid black arrows.[17] The causal effects of autocratic ruling strategies RS_i, and party institutionalization PI_i on income

[17]In Chapters 2 and 3, these autocratic background factors and their causal effects on PI_i, RT_i, and RS_i are not examined.

redistribution IR_{i1} are at the heart of Chapter 2. The main argument in Chapter 2 states that the inclusion and exclusion from political power on socioeconomic and social grounds, and the institutionalization of political parties determine the incentives and capacity for autocrats to redistribute income and economic benefits.

Party institutionalization PI_i is also the main explanatory variable in Chapter 3. Chapter 3 argues that the degree of party institutionalization is the main determinant of women's political inclusion under authoritarian rule. Institutionalized party rule determines the incentives and capacity for authoritarian parties to introduce more gender-equal political processes and political outputs. However, autocratic regime types RT_i have also been used in previous research on women's political equality. Both RT_i and PI_i have a causal effect on women's political inclusion WI_{i1}, which is the main dependent variable in Chapter 3. In Chapters 2 and 3, macro-level phenomena are the main interest of both theoretical and empirical frameworks, while in Chapters 4 and 5, the focus is on individual behavior and preferences j.

The level of income redistribution IR_{i1} has an effect on the level of (income) inequality LoI_{i2}. The level of inequality LoI_{i2} by itself has a theoretically posited effect on individual political behavior IB_{ij3}. The direction and the strength of this effect is theorized by the Conflict, Relative Power, and Resource Theories in the context of democracies. Chapter 4 tests the theoretical and empirical explanatory power of these theories in autocracies and adds the level of repression and individual income as theoretical explanations for individual political behavior IB_{ij3}. The level of repression is embedded in the DAG via the causal path from AE_i (the level of repression is a part of the autocratic environment) to the unit-specific and individual-specific confounders U_{ij} that causally effect individual political behavior IB_{ij3}.

Finally, individual political preferences IB_{ij3} that were internalized while living under an autocratic regime and confounders U_{ij} are individual-level determinants of redistributive preferences RP_{ij4}. In addition to these individual-level determinants, the autocratic environment AE_i and the level of inequality LoI_{i2} in which someone was socialized are two additional and important determinants of redistributive preferences RP_{ij4}. In Chapter 5, I develop a theory on the long-term consequences of socialization under authoritarian rule on redistributive preference formation. The theory distinguishes between three different mechanisms: state repression (measured at AE_i), political indoctrination (measured at AE_i), and exposure to autocracies during citizens' lifetimes (measured as U_{ij}). As shown in Figure 1.4, Chapter 5 develops a theory of how long-term socialization effects that were internalized during individuals' youth while living under autocratic rule affect individual preference formation after an autocratic regime has collapsed.

In sum, one should observe that autocratic institutions (party institutionalization, ruling strategies, and regime types) strongly impact public policies and that these public policies and the institutional arrangements of autocracies likely shape citizens political perceptions and behavior (redistributive preferences, political participation in elections and civil society). My theoretical arguments —briefly summarized above —yield theoretical and empirical implications that will be evaluated in detail in the subsequent chapters.

1.3 Data on autocratic regimes and inequality

This section introduces the data used in the empirical analyses of this dissertation. Data availability in comparative politics and political economy research has extensively improved in the last decades. In particular, the Varieties of Democracy (V-Dem) project (Coppedge et al., 2020b) provides methodologically rigorous and disaggregated data (see Coppedge et al., 2020a) on democracy, elections, parties, the executive, the legislature, civil society, and political exclusion, among other variables. It is based on a Bayesian item response theory (IRT) measurement model (see Pemstein et al., 2020). The global and temporal coverage as well as the structure of (dis)aggregation of high-level concepts makes V-Dem data especially useful for the study of autocratic regimes. In addition, several other data collection projects have made the study of autocratic regimes and (economic) policies more feasible in recent years (e.g., Cheibub et al., 2010; Geddes et al., 2014; Lucas & Richter, 2016; Rasmussen, 2016; Solt, 2020). Table 1.1 provides an overview of data sources used for each chapter. It provides a comprehensive overview of the main data sources for the dependent variables, the explanatory variables, and the additional control variables.

Another component of the data used in this dissertation is comprised of survey data compiled through different academic survey projects, for example, the World Values Survey (WVS), the European Social Survey (ESS), the European Values Survey (EVS), Latinobarometer (LB), and the International Social Survey Project (ISSP). However, using observational survey data from autocracies warrants caution due to potential biases caused by self-censorship, item non-response and social control mechanisms in autocracies. In the remainder of this section, I discuss these problems before using survey data in the empirical analysis of Chapters 4 and 5. I also briefly discuss the macro-level datasets used in this dissertation and the data merging procedures.

1.3.1 Macro-level data

The core explanatory variables explaining income redistribution (Chapter 2), women's political inclusion (Chapter 3), and autocratic legacies (Chapter 5) are drawn from the

Varieties of Democracy (V-Dem) dataset (Coppedge et al., 2020b).[18] In Chapters 2 and 3, the core explanatory variable is party institutionalization (see also Bizzarro, Hicken, & Self, 2017).[19] The distinction between inclusionary and exclusionary ruling strategies in authoritarian regimes is a second explanatory variable in Chapter 2, which is also drawn from V-Dem.

The V-Dem data derives from expert surveys, and therefore, data quality is a function of the quality of the experts' assessments. The V-Dem project relies on country experts (at least five for each country-year and item) and bridge coding (an expert codes more than one country through time) and lateral coding (an expert codes a number of countries limited to a single year) procedures (see Coppedge et al., 2020a, pp. 43–65). The recruiting of country experts is based on five criteria: (1) an individual's expertise on a specific country and indicators as ''signified by an advanced degree in the social sciences, law, or history; a record of publications; or positions outside political society that establish their expertise in the chosen area'' (Coppedge et al., 2020a, pp. 58–59); (2) at least three of the five country experts come from or reside in the country they code; (3) ''prospective coder's seriousness of purpose, i.e., her or his willingness to devote time to the project'' (Coppedge et al., 2020a, p. 59); (4) impartiality; (5) and diversity in professional background among the coders. Finally, V-Dem organized the questionnaire into 11 surveys (nested in five clusters), and experts were only assigned to provide answers for surveys or clusters for which they have expertise.

These raw and ordinal expert ratings are aggregated into country-year scores using a customized Bayesian item response theory (IRT) measurement model (Coppedge et al., 2020a; Pemstein et al., 2020). This IRT measurement model was designed to improve cross-country and inter-temporal comparability by accounting and adjusting for differential item functioning[20] and variation in rater reliability. The Bayesian IRT results in latent items being rated by multiple coders on a standard normal scale with associated measures of confidence. Overall, systematic assessments of V-Dem data show that the data is not only internally valid and reliable but also externally valid and reliable (Coppedge et al., 2020a, pp. 130–177). The data also correlate well with data from different data projects on democracy and corruption.

[18] In Chapter 2 and 3, V-Dem version 9 was used for all analyses (Coppedge et al., 2019b)

[19] Party institutionalization is conceptualized as a meso-level concept. However, I contextualize party institutionalization similar to the macro-level phenomena in this introduction chapter, because V-Dem measures party institutionalization on the country-year level for across all parties.

[20] Differences that are applied by experts between different response categories.

Table 1.1: Overview of datasets used in chapters

Chapter	Dependent variable(s)	Explanatory variable(s)	Additional control variables
Chapter 2: *Inclusionary regimes, party institutionalization and redistribution under authoritarianism*	SWIID (Solt, 2020) and SPaW (Rasmussen, 2016)	V-Dem (Coppedge et al., 2020b), among others	
Chapter 3: *Party institutionalization, regime authoritarian types and women's political equality*	V-Dem	V-Dem (Coppedge et al., 2020b), GWF regime type data (Geddes et al., 2014)	
Chapter 4: *Economic inequality, income, and their effects on electoral and civil society participation in authoritarian regimes*	World Values Survey (2016)	V-Dem and SWIID (Solt, 2020)	V-Dem, among others
Chapter 5: *How do past repression and indoctrination affect redistributive preference*	Harmonized survey data (WVS, ESS, EVS, ISSP, LB)	V-Dem	V-Dem, SWIID (Solt, 2020), among others

Note: SWIID = Standardized World Income Inequality Database, V-Dem = Varieties of Democracy, WVS = World Values Survey, EVS = European Values Survey, ESS = European Social Survey, ISSP = International Social Survey Programme, LB = Latinobarometer, SPaW = Social Policies around the World Database, GWF = Geddes, Wright & Frantz database

The core dependent phenomena to be explained in Chapters 2 and 3 are also measured on the macro-level and are drawn from the Standardized World Income Inequality database (Solt, 2020) for Chapter 2 and from V-Dem for Chapter 3. The Standardized World Income Inequality database (SWIID) provides data on pre-tax and pre-transfer income inequality and post-tax and post-transfer inequality. Solt (2020) generated a comprehensive dataset for a large sample of countries, including several autocratic countries. The data generation process was based on the methodological standards of the Luxembourg Income Study (LIS) and provided information on uncertainty in the point-estimators for income inequality. The SWIID ''routine estimates the relationships between Gini indices based on the LIS and all of the other Ginis available for the same country-years, and it uses these relationships to estimate what the LIS Gini would be in country-years not included in the LIS but available from other sources'' (Solt, 2020, p. 1183). Using these k-fold cross-validations for inequality data increases comparability between countries and across time. Thus, Solt's SWIID is an often-used source for income inequality data (e.g., Berg, Ostry, Tsangarides, & Yakhshilikov, 2018; R. Clark, 2020; Dorsch & Maarek, 2019). Chapter 2 uses redistribution data defined as the difference between pre-tax/pre-transfer and post-tax/post-transfer income inequality (Solt, 2020). In Chapter 2, I use a proxy that measures the universalism of welfare state policies as an additional dependent variable (Rasmussen, 2016). The Universalism Index from the SPaW dataset counts the number of social groups that are covered by six different policy areas, including as old-age pensions or sickness insurance. In Chapters 4 and 5, income inequality measures from the SWIID database are used as explanatory variables or control variables for explaining individual political behavior and preferences.

1.3.2 Individual-level data

In Chapters 4 and 5, the core dependent phenomena to be explained concern the individual level of citizens who previously lived under autocracy (Chapter 5) or currently live under autocracy (Chapter 4). The individual-level data used in this dissertation is observational data from large academic cross-national survey projects, such as the World Values Survey or the European Social Survey. These datasets ensure that questions are less country specific and are able to travel across borders. In addition, these cross-national surveys enable cross-national comparisons. However, whenever making cross-national comparisons, caution is advised.

Many works have focused on preference falsification, self- censorship, and item non-response that occur with observational survey data (e.g., Benstead, 2018; Robinson & Tannenberg, 2019; Shen & Truex, 2020; Tannenberg, 2017). These phenomena are prevalent in autocratic regimes (e.g., C. Chang & Manion, 2021; Robinson & Tannenberg, 2019; Tannenberg, 2017),

especially in those autocratic regimes where respondents fear personal consequences for participating in a survey. Nevertheless, this dissertation uses survey data from autocracies to answer the above defined research questions.

Self-censorship of political preferences and attitudes in autocratic regimes can produce significant survey response biases (e.g., Robinson & Tannenberg, 2019; Tannenberg, 2017). The potential of self-censorship may be more problematic in more autocratic regimes (Tannenberg, 2017, p. 21). Thus, respondents have two options in the context of high political fear: preference falsification and item non-response (cf. Mauk, 2020, pp. 88–92). Preference falsification can be detected via interviewer evaluations of respondents' demeanors during interviews (e.g., Mauk, 2020) or by evaluating survey items on perceived survey sponsors (e.g., Tannenberg, 2017). Tannenberg concludes that politically sensitive survey items on trust in government institutions and the political preferences of respondents suffer from autocratic trust bias. Therefore, preference falsification is more problematic, the more sensitive a question is and the more respondents believe that the government has commissioned the survey. Unfortunately, neither the World Values Survey (used in Chapter 4) nor the ESS, the EVS, the LB, or the ISSP provide information on perceived survey sponsorship or on interviewer evaluations of the respondents' demeanor.

Item non-response is the second indicator of autocratic trust bias. ''Respondents afraid of repercussions may refuse to answer to politically sensitive questions or pretend to 'don't know' or 'can't choose' an answer'' (Mauk, 2020, p. 90). However, Mauk argues that there is no systematic pattern of non-response across regime types related to the level of repression. In addition, Shen and Truex found that for ''many authoritarian systems, citizens do not display higher rates of item nonresponse on regime assessment questions than their counterparts in democracies'' (Shen & Truex, 2020, p. 1). They conclude that self-censorship is more relevant in regimes without electoral competition for the executive, such as China, while in regimes with authoritarian elections, self-censorship via item non-response is comparable to democracies. Moreover, the authors found that ''most of the authoritarian samples in the WVS data do not show evidence of substantially inflated item non-response rates on the regime assessment questions'' (Shen & Truex, 2020, p. 2). This result suggests that such questions may not be that sensitive in many places, which in turn raises doubts that authoritarian citizens are widely feigning positive attitudes toward regimes they secretly despise. Higher levels of self-censorship are found in regimes without electoral competition for the executive.

Finally, we can conclude that survey data from autocratic regimes are more problematic for more politically sensitive questions. However, the sensitivity of a question is context dependent. Therefore, in Chapter 4, I briefly discuss the sensitivity of questions used in constructing the dependent variables. Chapter 5 uses survey data that was collected

in democratic and autocratic regimes and uses questions about respondents' preferences regarding redistribution. However, whenever studying political preferences of citizens in (post-)autocratic countries or making cross-national comparisons, one must rely on observational survey data from large-scale academic survey projects. One should therefore be careful in interpreting these data due to potential autocratic trust bias.

In Chapter 4, I use World Values Survey data from five different waves between 1990 and 2016. In Chapter 5, I construct a harmonized survey dataset[21] on redistributive preferences (see also Claassen, 2019, 2020; Klassen, 2018; Neundorf et al., 2020). The harmonized survey dataset includes publicly available survey data from numerous countries around the globe. It includes surveys from established democracies, young democracies, and autocratic regimes. It uses the World Values Survey (WVS, 1981-2020, 7 waves), International Social Survey Programme (ISS, 1987-2009, 4 waves), European Values Survey (EVS, 1981-2017, 4 waves), European Social Survey (ESS, 2002-2018, 9 waves), and the Latinobarometer (LB, 1997-2018, 12 waves). The dataset samples 1,131,248 respondents combining 706 (country * wave * study) existing surveys from 76 countries from around the globe.

The data presented in this section and in Table 1.1 derive from different sources and cover different temporal and spatial samples. Merging these datasets and different sources is challenging due to different identifiers and naming conventions for countries and different units of observations. However, this dissertation uses the programming environment R (R Core Team, 2019) and the RStudio software to merge different datasets and combine data on different units of observation. Details on data management are presented in each chapter and the corresponding Supplementary Appendices. All computer code for this dissertation is also available online in data repositories. The *tidyverse* package (Wickham et al., 2019) and the *countrycode* package (Arel-Bundock, 2020) are especially useful for data management for each article. All additional packages used can be found in the replication code.

1.4 Empirical strategies

In this section, I briefly present the empirical strategies I follow in answering the research questions. However, this short overview is intended only to introduce the reader to the two general empirical approaches. Each empirical chapter provides greater details regarding the methodological approach used.

The methodological approach used in the different articles of this cumulative dissertation consists of a quantitative research design using hierarchical regression models for clustered data. In Chapters 2 and 3, country-years are nested in countries (time-series cross-sectional

[21] In Chapter 5, I discuss potential drawbacks of harmonizing cross-national survey data.

data) with observations on economic inequality, income redistribution, and political gender inclusion. In contrast to Chapters 2 and 3, Chapters 4 and 5 focus on individuals nested in country-years and countries with observational data for redistribution preferences and political participation in elections and civil society. These clustered data structures with individuals or country-years nested in countries require a hierarchical modeling strategy (Gelman & Hill, 2006). With time-series cross-sectional data, (dynamic) linear models with country and year fixed effects are more common empirical modeling approach. However, my research questions necessitate a more flexible strategy for estimating within and between variation among the explanatory variables (Bell, Fairbrother, & Jones, 2019; Bell & Jones, 2015; Gelman & Hill, 2006). In the remainder of this section, I discuss the assets and drawbacks of the empirical approaches used in answering my research questions.

1.4.1 Cross-national comparisons on the country-year level

In the cross-national comparisons in Chapters 2 and 3 of this dissertation, I use within-between random effects models (REWB; see Bell et al., 2019; Bell & Jones, 2015) which are powerful alternatives to classical linear two-way fixed effects models. Analyzing time-series cross-sectional data presents several challenges, such as unit heterogeneity and serial correlation. Both previously mentioned modeling approaches can handle these issues, while REWB models enable a more flexible strategy for the heterogeneity in the effect of predictor variables (Bell, Jones, & Fairbrother, 2018, p. 6) at both the country-year and country levels. Simple within-between random-intercept models yield the same results as a fixed-effects model (Bell et al., 2019), while complex random slope models allow for randomly varying predictors between countries.

In contrast to standard country and year fixed effects linear models, REWB models provide information about the random effects, and these models can incorporate time-invariant covariates that are absorbed in country fixed effects regression models. In particular, including time-invariant covariates is crucial for Chapter 3, which models the effects of regime types (which are typically time-invariant) and control variables on women's political inclusion. Including random intercepts and random slopes into the models allows for the consideration of complex level-1 variance functions (heteroscedasticity) and randomly varying predictors between countries, and makes the results more robust regarding the reliability of the country estimates (Snijders & Bosker, 2011, p. 62). In Chapters 2 and 3, I follow Bell and Jones when mean-centering all continuous independent and control variables and calculating deviations from the country means for each of the centered variables.

In both chapters, within and between effects are modeled as separate effects, and these are allowed to differ by including the country mean of the variables. The following equation

for the simple random intercept model is a general form of the models used in Chapters 2 and 3:

$$\begin{aligned} Outcome_{it} = \beta_0 + \ \beta_{1W}\ (X_{it} - \ \overline{X}_i) + \ \beta_{2B}\ \overline{X}_i + \\ \beta_3\ z_i \ + \upsilon_{i0} + \epsilon_{it}, \end{aligned} \tag{1.1}$$

where X_{it} is a vector of time-variant explanatory and control variables for country i and year t, and $\overline{X}_i$ is the higher-level countries' i's mean. β_{1W} is an estimate of the within (longitudinal) effect, while β_{2B} is an estimate of the between (cross-sectional) effects of X_{it}; Z_i is a vector of time-invariant variables. β_0 is an intercept, ϵ_{it} is the level-1 error term, and υ_{i0} is the level-2 error term. With this equation, the effects are clearly separated from one another (Snijders & Bosker, 2011, p. 58).

In addition, Chapter 3 models a complex random slope model that allows randomly varying predictors between countries for the main explanatory variables. The general form of this model used in regression models in Chapter 3 is:[22]

$$\begin{aligned} Outcome_{it} = \beta_0 + \ \beta_{1W}\ (X_{it} - \ \overline{X}_i) + \ \beta_{2B}\ \overline{X}_i + \\ \beta_3\ Z_i \ + \upsilon_{i0} + \upsilon_{i1}\ (X_{it} - \ \overline{X}_i) + \epsilon_{it} \end{aligned} \tag{1.2}$$

As an additional modeling strategy, linear country and year fixed effects regressions are also implemented in both chapters as additional robustness tests. However, these country and year fixed effects models rely on many (implausible) assumptions. In particular, popular unit fixed effects regression models come at the expense of dynamic causal relationships (see Imai & Kim, 2019b), while ''many researchers use these models to adjust for unobserved, unit-specific and time-invariant confounders when estimating causal effects from observational data.'' (Imai & Kim, 2019b, p. 467). A second assumption of two-way fixed effects regression models is that they can simultaneously adjust for time-specific and unit-specific unobserved confounders (Imai & Kim, 2019a). This logic assumes linear additive effects that are uncommon in time-series cross-sectional data, especially in data on income redistribution and women's political inclusion. The use of REWB models is a flexible solution to some of these problems, although these models cannot address all of these problems. Future research can profit from recently established matching methods for causal inference in time-series cross-sectional data (Imai, Kim, & Wang, 2020), but these models are not applicable to the research questions addressed in Chapters 2 and 3 because these models examine the effect of non-binary treatments on income redistribution and women's political equality.

[22] υ_{i1} is clustered-level error term that allows for variation around the slope.

1.4.2 Cross-national comparisons on the individual level

Chapters 4 and 5 use observational data from cross-national surveys, such as the World Values Survey or the European Social Survey. The observational data where individuals are nested in country-years nested in countries require a hierarchical modeling strategy (Gelman & Hill, 2006). First, the hierarchical regression models used in Chapters 4 and 5 can estimate group-level regression coefficients accounting for individual and group-level variation (Gelman & Hill, 2006, p. 246). Second, multilevel regressions account for variation among individual-level regression coefficients. In particular, these individual-level and group-level regression coefficients describe cross-level interaction effects and are especially relevant for the hierarchical age-period cohort models in Chapter 6. Third, group-level regression coefficients can be estimated for a single group even when only a small number of individual observations is available for this group (Gelman & Hill, 2006, p. 246). However, hierarchical regression models comes with potential drawbacks. Each additional nested level adds additional complexity, but this complexity comes from the data generation process, which should be modeled adequately.

Chapter 4 focuses on the effect of contextual factors on individuals' participation in elections and civil society. It uses three-level hierarchical regression models. Individuals i are nested in country-years t that are nested within countries j. All models in Chapter 4 were estimated using logistic hierarchical models that have the following form:

$$outcome_{jti} = \beta_0 + \beta_1 X_{jti} + \gamma_1 Z_{jt} + \upsilon_j + \mu_{jt} + \epsilon_{jti} \tag{1.3}$$

In Chapter 5, the data generation process is even more complex. Chapter 5 uses a global survey dataset that was harmonized by the author from different academic survey projects, including the World Values Survey, the European Social Survey, and Latinobarometer. Individuals grew up in cohorts and are therefore nested within these cohorts. Simultaneously, individuals participated in a particular survey that is the period (survey year). Periods and cohorts are nested within countries. To model this complex data generation process, I use hierarchical age-period-cohort (HAPC) models for 76 autocratic and democratic countries comprising more than 1,130,000 individuals (see Yang & Land, 2013). With these models, I am mainly interested in the cohort effects of socialization under autocracy.The HAPC models estimates between and within cohort differences in individual preferences regarding redistribution around the world. The models include macro-level explanatory variables that are located in the cohort context and the period context and thus test the generational perspective of political socialization under autocracy. The equation for the models is specified in Chapter 5. The most important part of these models is the random intercept that accounts for the socialization effects of growing up in an autocracy.

1.5 Contributions

This paper-based dissertation mainly builds on and contributes to four different literature strands: studies on the politics of authoritarian regimes, in particular how incumbent parties work and stabilize autocratic rule (comparative authoritarianism); studies on the origins and consequences of inequality under autocracy; work on citizens' preferences in autocratic elections and public support for autocratic regimes; and research on how socialization under authoritarianism during individuals' youth shape their political preferences (socialization in autocracies). These four literatures sheds light on different aspects of how inequality and autocratic rule affect each other. Below, I summarize the main contributions of my research to these four research areas.[23]

1.5.1 Comparative authoritarianism and incumbent parties

Within comparative authoritarianism, research on the origins and consequences of the strength and degree of institutionalization of the dictators' ruling party has been growing in the last few years (e.g., F.-Y. Chen, 2020; Gandhi, 2008; Geddes et al., 2018; Gehlbach & Keefer, 2011; Magaloni, 2006; Meng, 2020; Michael K. Miller, 2020b; Rasmussen & Knutsen, 2019). Another area within comparative authoritarianism given increasing attention regards elections under autocracy and their effects on regime survival (e.g., Knutsen & Rasmussen, 2018; Levitsky & Way, 2010; Schedler, 2013; Wright & Escriba-Folch, 2012) and development (Gehlbach & Keefer, 2011; Michael K. Miller, 2015a, 2015b). However, for most scholars, autocratic elections and their results change the equation of elite bargaining (Geddes et al., 2014, 2018; Magaloni, 2008) and the possibility of "authoritarian control" of the population (Svolik, 2012).

In sum, the above mentioned research areas within comparative authoritarianism highlight the role of incumbents' party strength and institutionalization (in autocratic elections) as important factors in explaining their capacity to implement public policies and their incentives for doing so. Thus, this dissertation aims to make two important contributions to the comparative authoritarianism literature. First, it develops a theoretical framework that explains how institutionalized parties, in particular autocratic ruling parties, shape politics and policy outputs, for example, public policies on income redistribution and social welfare programs (Chapter 2) and women's political representation and inclusion in political processes (Chapter 3). It adds to the literature on autocratic incumbent parties by showing that party institutionalization matters for women's political inclusion and public policies in the context of autocratic regimes. Second, it provides comparative quantitative analysis of the consequences of party institutionalization under autocracy with newly introduced

[23] Detailed literature reviews on each of these strands can be find in the following research articles.

data on this phenomenon. In a nutshell, the main contribution of Chapters 2 and 3 is that they theorize the capacities of and incentives for institutionalized autocratic parties to implement public policies.

1.5.2 Origins and consequences of inequality under autocracy

The literature on the consequences of (e.g., economic and gender) inequality under autocracy on public policies and individuals living in dictatorships is relatively scarce (e.g., Donno & Kreft, 2019; Kammas & Sarantides, 2019; Teo, 2019). By contrast, research on the origins of economic inequality and its consequences in democratization processes is extensive (e.g., Acemoglu & Robinson, 2006; Albertus & Menaldo, 2014; Boix, 2003; Haggard & Kaufman, 2016; Knutsen & Wegmann, 2016). The so-called distributive conflict models explain democratization by accounting for the level of economic inequality as a central variable that explains elite behavior in situations of mass mobilization (e.g., Acemoglu & Robinson, 2006; Boix, 2003). The main assumption of these theories is that democracies represent institutionalized insurance for economic redistribution to the poor. However, the explanatory power of these studies has been criticized by Albertus and Menaldo (2018), Ansell and Samuels (2014), and Haggard and Kaufman (2016), among others.

In sum, this dissertation contributes to these literature strands by (a) theorizing why autocrats redistribute income to the poor, even in situations without mass mobilization and pressure from below for democratization (Chapter 2), and by (b) providing evidence that the actual level of economic inequality does not matter for individuals' decision to participate in autocratic elections and civil society organizations (Chapter 4). By developing theoretical assumptions on the effects of incumbents' party strength on gender inequality and economic redistribution, this article contributes to the emerging literature about the consequences of different dimensions of inequality in dictatorships. It thereby also challenges important assumptions of the distributive conflict models.

1.5.3 Public support, electoral behavior and autocratic regimes

Third, this dissertation contributes to the research on the political behavior of individuals and public support under authoritarianism (e.g., Albrecht, 2005; Blaydes, 2006; Ciftci, 2018; Gandhi & Ong, 2019; Geddes & Zaller, 1989; Mauk, 2020). By focusing on individuals' preferences for redistribution (Chapter 5) and political participation in elections and civil society organizations (Chapter 4), this dissertation contributes to the research on individual behavior under autocratic regimes and on how citizens see the autocratic regime they live in (e.g., Blaydes, 2006; Gandhi, 2019; Letsa & Wilfahrt, 2018; Mauk, 2020). In addition, it contributes to research on preference formation under authoritarianism (e.g., Neundorf & Pop-Eleches, 2020; Rozenas, Schutte, & Zhukov, 2017; Rozenas & Zhukov, 2019). However,

even when autocratic elections are held, at most electoral moments, the power architecture of autocratic regimes and their fundamental stability is not at stake (Gandhi & Lust-Okar, 2009, p. 407).

While structural and institutional explanations of autocratic regimes and their ability to stay in power have been examined extensively, researchers still know little about public support for autocracies and the determinants of political behavior in these environments (e.g., Gandhi & Ong, 2019; Letsa & Wilfahrt, 2018; Mauk, 2020). Individual political behaviors such as voting for an authoritarian ruling party or engaging in a pro-regime civil society organization are sources of political support for a dictator; by contrast individual political behaviors such as voting for opposition parties or engaging in anti-government civil society groups can threaten autocrats when they are widespread. Beyond these directly observable actions, other more latent types of (non-)support for autocratic regimes can affect the stability of autocratic rule, such as concealed anti-regime attitudes and preferences that only manifest themselves in times of regime crises.

A central question regarding autocratic elections is ''what drives voters to go to the polls if fundamental policies and government positions are not at stake'' (Gandhi & Lust-Okar, 2009, p. 408). Magaloni conceptualizes the ''tragic brilliance'' of autocratic regimes: ''Citizens' choices are free, yet they are constrained by a series of strategic dilemmas that compel them to remain loyal to the regime'' (Magaloni, 2006, p. 19). Two factors that drive the decision calculation of individuals voting in favor of incumbents despite their actual preferences are two structural advantages of autocratic regimes: patronage distribution and control over resources (e.g., Blaydes, 2006; Diaz-Cayeros, Estévez, & Magaloni, 2017; Gandhi & Lust-Okar, 2009; Lust-Okar, 2006; Magaloni, Diaz-Cayeros, & Estévez, 2007). This dissertation contributes to these literature strands by investigating the effect of (economic) inequality on individuals' likelihood of voting or participating in civil society organizations. This dissertation finds that political participation is distributed unequally with respect to income and education but not with respect to structural determinants such as income inequality. It therefore presents empirical evidence for the inequality-participation nexus in the context of authoritarian regimes.

1.5.4 Socialization in autocracies

Finally, this dissertation, in particular Chapter 5, contributes to studies on socialization processes in non-democratic contexts and the resulting legacies of autocratic regimes on citizens preferences (e.g., Bernhard & Karakoç, 2007; Elçi, 2021; Neundorf et al., 2020; Neundorf & Pop-Eleches, 2020; Pop-Eleches & Tucker, 2014; Pop-Eleches & Tucker, 2017, 2020; Rozenas et al., 2017; Rozenas & Zhukov, 2019; Wang, 2020). I consider research on the legacies of (communist) autocratic regimes because the legacy effects of dictatorships

on citizens' preferences are not limited to political beliefs and support for democratic values but also affect economic preferences in the long run.

Recent work has focused on the long-term effects that autocratic regimes have on political beliefs and citizens' attitudes toward democracy (Neundorf, Ezrow, Gerschewski, Olar, & Shorrocks, 2017; Neundorf et al., 2020; Pop-Eleches & Tucker, 2017), the political loyalty of citizens toward political parties (Rozenas & Zhukov, 2019), support for political parties in elections (Rozenas et al., 2017), and trust (Lupu & Peisakhin, 2017; Wang, 2020). However, research on the legacy effects of socialization under autocracy on economic preferences is relatively underdeveloped. The studies by Pop-Eleches and Tucker are exceptions. They study redistributive preferences and attitudes toward the welfare state in post-communist countries (Pop-Eleches & Tucker, 2014; Pop-Eleches & Tucker, 2017). Nevertheless, the research on the attitudinal and behavioral legacies of socialization experiences in autocracies proposes no comprehensive framework to explain economic preferences potentially formed by socialization experiences outside former communist regimes.

This dissertation adds to this research by proposing a theoretical framework that connects political socialization under autocratic regimes with political ideologies and state repression experienced during respondents' youth. By doing so, this research adds to the literature on redistributive preferences and the role of socialization of ordinary citizens under authoritarian rule. This dissertation also contributes to our understanding of inequality perceptions and social policy preferences.

1.6 Roadmap and summary of the thesis

This cumulative dissertation is divided into five chapters. This section briefly summarizes the key findings of the individual studies and thereby presents the roadmap of this dissertation. In this section, I also critically discuss how these findings contribute to the overall theoretical framework presented in this introduction.

The first study (Chapter 2) is motivated by inconclusive findings regrading the link between income redistribution and autocratic rule. I argue that the degree of electoral uncertainty affects two mechanisms that shape the redistributive nature of autocratic regimes. Inclusion and exclusion from political power on the grounds of socioeconomic and social attributes and the institutionalization of political parties determine the incentives and capacity for autocrats to redistribute income and economic benefits. I find that so-called inclusionary ruling coalitions have higher levels of income redistribution compared to more exclusionary regimes. However, two additional factors explain why dictatorships redistribute income. Higher levels of party institutionalization correlate with more redistribution, but the effects of party institutionalization and ruling strategies are largely conditional on the electoral

uncertainty within these autocratic regimes. This study helps clarify the relationship between authoritarian regime characteristics (ruling strategies, electoral uncertainty, and party institutionalization among the ruling party and the opposition) and the political economy of dictatorships.

The second study (Chapter 3) examines the association between political gender equality and incumbent party strength in authoritarian regimes. The argument is similar to that of Chapter 2 and states that the degree of party institutionalization is the main determinant of gender equality in autocracies. By arguing that incumbent party institutionalization is a main determinant of different types of inequality, such as women's political inequality and income inequality, this dissertation introduces party strength to the literature on political and economic inequalities. The main argument of Chapter 3 is that institutionalized party rule determines the authoritarian parties' incentives and capacity introducing more gender-equal political processes and political outputs. Although previous research stressed the link between authoritarian regime types and gender equality, this study finds that regime type does not explain much gender-equality variation. However, regimes with higher levels of party institutionalization provide more gender-equal politics and policies than regimes in which authoritarian parties are less institutionalized.

The third and fourth studies (Chapter 4 and 5) focus on the citizens of (former) autocratic regimes. The third study (Chapter 4) addresses the puzzle of how economic inequality in autocracies affects the political participation of their citizens in elections and civil society. By building on three prominent theories, namely the Conflict, Relative Power, and Resource Theories that address the inequality-participation puzzle in the context of democracies, I transform and critically discuss the logic of these theories as they relate to autocracies. Theoretical arguments and empirical evidence for the inequality-participation puzzle in non-democratic regimes are scarce. In this study, I argue that individual income and the level of repression rather than economic inequality explain political participation in non-democracies. This study finds that higher levels of economic inequality scarcely suppress citizens' political participation. This study also shows that individual income has a powerful effect on participation in civil society, while the level of repression decreases the likelihood of voting more than income. These findings suggest that the Resource Theory has the greatest empirical support in the context of autocracies.

The fourth study (Chapter 5) deals with the long-term consequences of autocratic rule and socialization under repressive and indoctrinating dictatorships on economic preference formation. To do so, it focuses on citizens that were socialized in dictatorships and now live under democratic or autocratic regimes. This chapter is based on the observation that the long-term consequences of socialization under autocratic rule are weakly conceptualized. This study distinguishes between three different mechanisms that affect the political and

economic preference formation of individuals: state repression, political indoctrination, and exposure to autocracies during one's lifetime. The study is based on the assumption that autocracies indoctrinate their citizens in the long term and that individuals therefore do not abruptly change their preferences after an autocratic regime has collapsed. This study finds that socialization under highly indoctrinating regimes leaves a strong pro-redistributive legacy, while highly repressive regimes also leave a pro-redistributive legacies. This chapter helps explain how state repression and political indoctrination and ideologies affect ordinary citizens in the long term.

Chapter 2

Inclusionary regimes, party institutionalization and redistribution under authoritarianism

ABSTRACT

This article examines the variation in income redistribution across autocracies. It argues that the degree of electoral uncertainty affects two mechanisms that shape the redistributive nature of autocratic regimes. The inclusion and exclusion from political power on the grounds of socioeconomic and social attributes, and the institutionalization of political parties determine the incentive and capacity for autocrats to redistribute income and economic benefits. Using data from 105 autocracies between 1960 and 2016 and within-between random effects models, I estimate within- and between-country effects of the variables. The analysis suggests that more inclusionary ruling coalitions have higher levels of income redistribution compared to more exclusionary regimes. Second, regimes with higher levels of party institutionalization redistribute more than regimes in which authoritarian parties are less institutionalized. Third, the effects are largely conditional on the electoral uncertainty. This analysis improves our understanding about how authoritarian regime characteristics affect the political economy of those regimes. Its findings provide empirical support for the selectorate theory and the literature on authoritarian institutionalization and have implications for democratization and democratic consolidation.

KEYWORDS

redistribution, authoritarian regimes, inequality, inclusionary regimes, party institutionalization

Note: This chapter is identical to an article published as Pelke (2020b) in *Democratization*; https://doi.org/10.1080/13510347.2020.1786683.

2.1 Introduction

Scholars mostly studied the effect of socioeconomic inequality, and to a lesser extent the effect of redistribution, on regime stability in the context of democratization processes (e.g., Acemoglu & Robinson, 2006; Albertus & Menaldo, 2014; Knutsen & Wegmann, 2016). However, studies of intra-regime dynamics and the capacity to redistribute between different social and economic groups fail to produce coherent findings for authoritarian regimes (Albertus, 2015; Albertus & Menaldo, 2014; Gallagher & Hanson, 2009; Hanson, 2013). Albertus provides a theory of land redistribution in authoritarian Latin America and argues that it requires "those in government that have both the incentive and the capacity to implement redistribution" (Albertus, 2015, p. 15). Still, a conclusive approach that models income redistribution via taxation and social spending is missing (e.g., Gallagher & Hanson, 2009; Hanson, 2013; Pelke & Croissant, 2018).

Building on the distinction between capacities and incentives, this article implements a theoretical argument connecting inclusionary ruling strategies, party institutionalization, electoral uncertainty and income redistribution. It investigates the extent to which ruling strategies and party institutionalization influence levels of socioeconomic redistribution in authoritarian regimes and if the effects of party institutionalization and inclusionary ruling strategies differ between closed, hegemonic multiparty, and competitive multiparty regimes.

The theory developed in this paper predicts that the effects of party institutionalization and ruling strategies (political inclusionary or exclusionary) are conditional on the degree of electoral uncertainty in the authoritarian regime. It argues that the mechanisms differ between types of authoritarian regimes that represent different levels of electoral uncertainty (e.g., Levitsky & Way, 2010). Closed autocracies (e.g., Vietnam) do not permit any electoral competition, while in hegemonic multiparty autocracies (e.g., Belarus) elections are held but significant irregularities affect the results and winner are determined ex ante. In competitive multiparty autocracies, such as Singapore since 1993, elections allow for substantial (though, limited) competition between the incumbent, and the opposition and there is some degree of freedom of expression.

This article connects ruling strategies and party institutionalization under different degrees of electoral uncertainty with income redistribution. It argues that inclusionary ruling strategies (cf. Neundorf et al., 2020) incentivize ruling elites to redistribute income. In contrast, exclusionary ruling strategies decrease the incentives for ruling elites to redistribute because those regimes are built on a small group of privileged individuals. Party institutionalization influences the likelihood of redistributive policies by increasing both the capacities and incentives. When party institutionalization is high, ruling elites have greater

capacities and better incentives to implement redistributive policies. In contrast, with low party institutionalization ruling elites face more threats from within the authoritarian party and should redistribute less. However, both mechanisms differ depending on the level of electoral uncertainty.

The empirical analysis is based on *within-between random effect* (REWB) models to estimate separately the within- and between-country effects on relative redistribution. The dataset combines data from Solt and the SPaW dataset (Rasmussen, 2016; Solt, 2020) and data on authoritarian ruling strategies and party institutionalization from the V-Dem dataset (Coppedge et al., 2019b).

My study finds that the impact of party institutionalization and ruling strategies differs substantively between closed autocracies, hegemonic multiparty regimes, and competitive multiparty regimes. Countries that are inclusionary regimes are more likely to redistribute income compared with countries with more exclusionary ruling strategies. However, the models show that the effect of political inclusion within countries is more pronounced in regimes with electoral competition, such as competitive and hegemonic multiparty regimes. Further, regimes with high levels of party institutionalization are more likely to redistribute income. Within authoritarian countries, the effect of party institutionalization differs between authoritarian regime types and is dependent on the measure of income redistribution.

2.2 Theoretical modelling

We do not have robust findings of any aggregate effect of autocracy on income redistribution or inequality (cf. Kammas & Sarantides, 2019; Knutsen, 2015; Pelke & Croissant, 2018). Thus, this section disaggregates the political power architecture of autocracies. It argues that the differences in the electoral risk among different types of authoritarian regimes influence the level of income redistribution by two main causal mechanisms.

First, according to the selectorate theory (Bueno de Mesquita, Smith, Siverson, & Morrow, 2003), autocratic regimes with more inclusionary ruling strategies (Neundorf et al., 2020) should have greater income redistribution compared to more exclusionary regimes. Second, the degree of party institutionalization matters for the level of income redistribution. However, the effects of these mechanisms differ across all regime types and are dependent on the electoral risk and the distribution of core versus swing voters in that regime types (Cox & McCubbins, 1986; Diaz-Cayeros et al., 2017). Hereafter, I differentiate between closed autocracies, hegemonic multiparty autocracies, and competitive multiparty autocracies (e.g., Levitsky & Way, 2010).

Before presenting my arguments in detail, I build on the findings of Albertus. The size and the configuration of regime support coalitions have important consequences for the incentives of political elites to redistribute income and socioeconomic assets. When the support coalition is composed of members of the economic elites or depends on them, ruling elites are unlikely to implement large-scale redistribution (cf. Albertus, 2015, p. 18). By contrast, when the support coalition of the regime is composed of members of the lower and middle classes or depends on the support of those classes, political elites are more likely to implement redistributive policies. However, the incentives for redistribution are not the only determinants of redistribution under autocracy (Albertus, 2015, p. 19). The capacity to implement redistributive policies is the second main mechanism that explains the amount of redistribution. I argue that in autocracies the capacity to redistribute is mainly determined by the level of institutionalization of the ruling party. However, the two mechanisms operate differently under various levels of electoral risk in authoritarian regimes. In the next step, I differentiate between electoral risks (Diaz-Cayeros, 2008; Diaz-Cayeros et al., 2017) and core versus swing voters (Cox, 2010) in different types of authoritarian rule.

2.2.1 Competitive multiparty, hegemonic multiparty and closed autocracies

The first step of inquiry is to differentiate the electoral risks for incumbents in authoritarian regimes and combine regime types with the literature on core versus swing voters (Cox, 2010; Cox & McCubbins, 1986). A starting point is the literature on electoral authoritarianism (Bernhard et al., 2020; Levitsky & Way, 2010). One strand of literature argues that holding multiparty elections in autocracies potentially stabilizes those regimes (Levitsky & Way, 2002; Schedler, 2013). The other strand conceptualizes multiparty elections as a threat of authoritarian rule (e.g., Brownlee, 2009; Edgell, Mechkova, Altman, Bernhard, & Lindberg, 2018).

Hereafter, I argue that the chances of incumbents to lose power through elections are associated with different regime types that are linked with different levels of electoral risk. In this, I depart from the vote-buying theory by Diaz-Cayeros et al. (Diaz-Cayeros et al., 2017) who model the relationship between core and swing voters, electoral risk and public goods provision in developing countries. They assume that ‘‘parties and voters are engaged in strategic interactions that extend indefinitely’’ (Diaz-Cayeros et al., 2017, p. 68) into future policies. The second assumption is that core voters are responsive to welfare benefits, making voter loyalty conditional on whether the incumbent party can credibly signal that these benefits will continue in the future (cf. Magaloni et al., 2007). Finally, I argue that these two assumptions are not only plausible for young democracies in the developing world, but also for specific authoritarian regimes (cf. Michael K. Miller, 2015a).

In competitive multiparty authoritarian regimes, citizens can express their discontent at the ballot box. Elections ''can serve as focal points for collective action and coordination'' (Teo, 2019, p. 6) and election defeats are more likely compared to hegemonic multiparty autocracies (Bernhard et al., 2020). Thus, the electoral risk for the incumbent is more pronounced. Incumbents can use public goods to cater to a wider spectrum of voters (Michael K. Miller, 2015a). However, public goods provision is a risky electoral investment as they cannot target at specific voters. Therefore, a ''mixed-basket strategy'' (Diaz-Cayeros et al., 2017, p. 83) that combines private and public goods would yield a relatively high vote return. Hence, I expect authoritarian incumbents to spend more on public goods when pressed by electoral competition in a multiparty environment. By providing redistributive policies that represent median-voter positions, incumbent parties can decrease the likelihood of election losses.

In hegemonic multiparty environments, the incumbent can be relatively certain that her party will win the election. Even though opposition parties participate, the number of swing voters is potentially lower than in competitive multiparty environments, and the incumbent party has a stable number of core voters. Hence, incumbents in hegemonic multiparty regimes are under lower electoral pressure than in competitive environments and therefore should spend less on public goods. However, incumbents in hegemonic regimes should provide public goods because they have incentives to expand the share of their voters. Swing voters are responsive to welfare benefits, making their voter loyalty conditional on whether the incumbent party can signal that these benefits will continue. Therefore, ruling parties are more likely to redistribute income and provide public goods in multiparty autocracies compared to autocracies without multiparty competition (Teo, 2019). In hegemonic multiparty regimes the electoral uncertainty is largely reduced by preventive measures of the regime (Levitsky & Way, 2010, p. 13).

Most closed autocracies have a (incumbent) political party but popular elections, if held at all, are uncontested and opposition parties cannot generate electoral pressure. Therefore, the number of core voters is high under one-party rule, while the share of the population that decides not to vote is low. Opposition's voters or swing voters are non-existent in these environments. In a closed autocracy, political alternatives in terms of parties and policies are absent and cannot influence the redistribution likelihood. While, closed autocracies may still provide public goods and redistributive income to the citizens to buy their support, the mechanisms of why closed autocracies provide public goods are not based on electoral pressure or the composition of core and swing voters.

The argument that incumbent parties face different electoral pressures which produces different incentives to invest in voter loyalty deals critically with vote-buying approaches (e.g., Diaz-Cayeros et al., 2017) and the literature on core versus swing voters (e.g.,

Cox, 2010). The model emanates from the notion that authoritarian incumbent parties have different incentives (captured by inclusionary or exclusionary ruling strategies) and capabilities (captured by the level of party institutionalization) to provide public goods and income redistribution under different levels of electoral uncertainty. In the next two sections, I examine both mechanisms in detail and explicitly model differences between competitive, hegemonic multiparty, and closed autocracies in their impact on both mechanisms (Table 2.1).

Table 2.1: Summary of mechanisms: effect on income redistribution

Closed autocracies	**Hegemonic multiparty autocracies**	**Competitive multiparty autocracies**
No electoral risk	Weak electoral risk	Medium electoral risk
No other parties or no elections voters are core voters	High number of core voters; low number of swing voters	High/medium number of core voters; medium numbers of swing voters
Political inclusion		
No major effect of political inclusion due to no electoral risk	Positive effect of political inclusion; buying core voters and making swing voters to core voters	Positive effect of political inclusion; buying core voters and making swing voters to core voters
Party institutionalization		
Small positive effect of party institutionalization, due to higher responsiveness of party to demands from population and more information	Negative effect of party institutionalization, due to party has capacity to compensate swing voters and good information on preferences	Small positive effect of PI (regime parties and opposition parties). Opposition parties are a reliable threat, regime parties can not compensate swing voters

2.2.2 Inclusionary and exclusionary ruling coalitions

This first mechanism builds on the distinction between inclusionary and exclusionary ruling strategies in authoritarian regimes (Neundorf et al., 2020) and is largely based on selectorate theory. Therefore, I only provide a short discussion of the mechanisms. Bueno de Mesquita et al. (2003) argue that the size of the winning coalition (i.e. those members of the selectorate whose support is necessary for the survival of the political leader) and the ratio between the winning coalition and the selectorate (loyalty norm) explain the

economic and political performance as well as the survival of political regimes. [1] The smaller the winning coalition in relation to the selectorate, the higher the incentive for the government to buy the loyalty of the winning coalition through the provision of private goods (Bueno de Mesquita et al., 2003, pp. 65–76). Consequently, regimes with small winning coalitions provide fewer public policies and public goods, such as health care and social welfare (cf. Bueno de Mesquita et al., 2003, pp. 129–214). Bueno de Mesquita et al. also argue that the size of the winning coalition has a strong effect on the reduction of income inequality in all regime types (Bueno de Mesquita, Downs, & Smith, 2017, p. 26). However, based on the arguments of Bueno de Mesquita et al. (2017; 2003), it follows that political inclusionary and exclusionary ruling coalitions should affect the likelihood of redistribution: incumbent parties will deliver public goods when the size of the winning coalition is insufficient to keep them in power, particularly when electoral uncertainty is high (Diaz-Cayeros et al., 2017, p. 83).

As defined by Neundorf et al., regimes with inclusionary ruling strategies rely on a broad public support coalition and regulate access ‘‘to political power by making use of decisive ‘qualities’’’ (Neundorf et al., 2020, p. 1894). Such decisive qualities can be ethnicity, religion, and membership in a specific political organization, or social class (e.g., the working class). A inclusionary ruling strategy integrates various social groups by using political and economic concessions to buy political support and to decrease the likelihood of action against the status quo.

In contrast to inclusionary regimes, political exclusionary regimes exclude societal and political groups from power by handpicking people and limiting access to power to only those players that are necessary for political survival. To decrease the likelihood of resistance against the status quo, such regimes actively restrict the access to power to other societal groups and rely on more particularistic goods provision (Neundorf et al., 2020, p. 1896). Thus, they should redistribute less than more inclusionary regimes.

The ruling strategies of a regime can be differentiated along two dimensions: political inclusion and economic inclusion (Neundorf et al., 2020, p. 1894). The political dimension measures whether the dictator regulates access to political power on the basis of specific attributes, such as ethnic origin, religion or class membership. The economic dimension measures whether the dictator uses the distribution of particularistic goods to co-opt regime insiders and strategically important players or whether she uses public goods to include a wider range of the selectorate to generate specific support among the population. Because the economic dimension mostly measures the distribution of public and particularistic goods that is conceptually very close to redistribution, I rely on the political dimension

[1] Compare Gallagher and Hanson (2015) for a critical discussion on the selectorate theory, in particular the concept of the winning coalition.

of inclusionary and exclusionary ruling strategies. The economic dimension of ruling strategies is therefore not part of the explanatory variables. Contrary to the assumption that the political and economic inclusion dimension measure the same concept, I argue that economic and political inclusiveness are two distinct theoretical and empirical concepts (cf. Neundorf et al., 2020, p. 1894). It is possible that regimes include citizens based on social group membership, but also provide particularistic goods, as shown in Figure A.7. However, autocracies that exclude citizens based on social group membership tend to spend less on public goods.

The theory presented here argues that politically inclusionary regimes are more likely to have higher levels of redistribution. Because regimes that are more inclusionary are more dependent on pro-regime support, they are more likely to redistribute in a more universalistic way. In contrast, exclusionary regimes that are based on smaller regime coalitions and are dependent on the loyalty of the actual ruling coalition rely on a more particularistic distribution of benefits and concessions to decrease the likelihood of palace coups by regime insiders.

> **H1a**: Authoritarian regimes relying on political inclusionary ruling strategies are more likely to redistribute than exclusionary regimes.

Turning to the interaction between inclusionary ruling strategies and electoral uncertainty on redistribution, I argue that electoral pressure can have two diverging effects on the impact of inclusionary ruling strategies. Transfers for public goods can be used to expand the size of the coalition. Hence, electoral pressure in the competitive environments of exclusionary regimes can lead to greater redistribution rates when the size of their electorate is not certain to keep the incumbent party in power. However, incumbent parties under electoral pressure are caught in a dilemma: ‘‘They can maximize their chances of victory by catering to swing voters, but at the cost undermining core-voter loyalties’’ (Diaz-Cayeros et al., 2017, p. 82). By using public goods provisions, incumbent leaders can signal to swing voters and core voters that their policy preferences matter.

On the other hand, I expect that more inclusionary regimes deliver more public goods, particularly when they hold competitive multiparty elections in which the core voters are bought with concessions. Regimes that are politically inclusive already depend on their core voters and should increase their share of swing voters to decrease electoral uncertainty. Hence, I expect for the effect of electoral uncertainty in authoritarian regimes to boost the effect of inclusionary ruling strategies. Therefore, in authoritarian regimes without multiparty autocracies the effect of inclusionary regimes should be marginal due to the missing electoral link. Consequently, I expect to observe a positive interaction effect of authoritarian regime types when interacting those regime types with political inclusionary

ruling strategies:

> **H1b**: The effect of inclusionary ruling strategies should be more powerful in competitive multiparty autocracies, should be less powerful in hegemonic multiparty autocracies and should be marginal in closed autocracies.

2.2.3 Party institutionalization

The second part of the theoretical argument in this article builds on the literature on authoritarian power-sharing (Magaloni, 2006) and the power-stabilizing effect of authoritarian institutions (Gandhi, 2008; Gandhi & Przeworski, 2007). I focus on the institutionalization of parties, while the external dimension of party system institutionalization is mainly a function of the institutional configuration of countries (e.g., electoral system, regime types).

Authoritarian parties serve as mediators between the leader and the elites (e.g., Gandhi, 2008; Magaloni, 2006) by solving the credible commitment problem and perpetuating the leader-regime-coalition relationship. Authoritarian ruling parties allow dictators to co-opt potential rivals (Gandhi & Przeworski, 2007) and distribute economic benefits among members of the ruling coalition (Svolik, 2012). In addition, opposition parties make distinctive policy preferences visible and enable credible exit-options for regime challengers (Magaloni, 2006). However, the mere existence of political parties in autocracies cannot explain the likelihood of redistribution. Rather, it is the internal constitution of incumbent parties that matters: party institutionalization enables and provides incentives for authoritarian leaders to redistribute income.

In accordance with Rasmussen and Knutsen (2019) I distinguish between *top-down* and *bottom-up* mechanisms linking facets of party institutionalization with income redistribution. The *top-down* mechanism addresses ''how institutionalized parties can create comprehensive bargains in order to arrive at credible policy proposals and override politicians or social groups aspiring to veto'' (Rasmussen & Knutsen, 2019, p. 5) the implementation of policy legislations. I expect that the effects of *top-down* mechanisms do not vary substantively across authoritarian regime types. The *bottom-up* mechanisms encompass demands from citizens and organized interests and how those demands and interests are institutionalized by parties through local party branches and linkages with the civil society (Rasmussen & Knutsen, 2019). Hence, I expect that the *bottom-up* mechanisms vary across different authoritarian regimes depending on their respective electoral pressure. Hereafter, I discuss how the sub-components of party institutionalization contribute to the incentives and capacities of authoritarian parties to redistribute income and why the effects of each sub-component add to the overall positive effect of party institutionalization.

2.2.3.1 Top-down mechanisms

Top-down mechanisms relate to decision-making power in parties (party organizations) and to the legislative cohesion of authoritarian incumbent parties. As Rasmussen and Knutsen argue (Rasmussen & Knutsen, 2019, p. 5), strong *party organizations* enable regime leaders to overcome veto players within the incumbent party by implementing tools for sanctioning and monitoring party members. Parties with stronger party organizations are more likely to overcome such veto players, and thus are more likely to redistribute income. Strong party organizations can implement candidate selection mechanisms that focus on shared political ideology and are more likely to endure political crises. Thus, party members should be less eager to veto political decisions due to the long-term consequences of such a deviant behaviour. When strong party organizations lead to improved decision-making power in parties, ''benefits and costs are distributed over longer time periods'' (Rasmussen & Knutsen, 2019, p. 6) and thus should make redistribution more likely.

The second *top-down* mechanism is *legislative party cohesion*. Individual members of authoritarian legislatures with diverging redistributive preferences can act as veto players in parliament. However, when the legislative party acted cohesively in the past, deviant voting in parliamentary decisions is more costly for the deviator than in parties with less legislative party cohesion (cf. Bizzarro et al., 2018).

Third, both previous mechanisms make the distribution of spoils and patronage among crucial party members less likely, and facilitate the redistribution of income without the concession of those crucial party members, because strong party organizations and legislative party cohesion result in a broader power base for the party leaders.

Turning to the effects authoritarian regime types representing the degree of electoral pressure and the core- vs. swing-voter logic, I expect that the *top-down* mechanisms do not vary much across regime types. Strong *party organizations* and *legislative party cohesion* of incumbent parties should not be directly affected by electoral pressure. Moreover, one would anticipate that incumbent parties have stronger party machines and more legislative cohesion under the electoral pressure of competitive authoritarian regimes than in hegemonic or closed autocracies.

2.2.3.2 Bottom-up mechanisms

Turning to the *bottom-up* mechanisms, I refer to the differences between parties regarding how they aggregate and perceive voter preferences (Rasmussen & Knutsen, 2019), how they differ in their recruitment practices and how a party is linked to its voters (Bizzarro et al., 2017).

The first bottom-up mechanism relates to opposition parties in authoritarian regimes. More institutionalized opposition parties increase the ''likelihood that citizens will perceive the opposition as a viable alternative to the ruling party'' (Teo, 2019, p. 9). In the restricted electoral competition between the ruling party and the opposition, policy concessions are made towards citizens to receive their votes. Therefore, the dictators should have an incentive to offer median-voter policies. Because the median voter always prefers income redistribution, these policy-concessions should be of a redistributive nature (Meltzer & Richard, 1981). Therefore, income redistribution should be more likely under more institutionalized (ruling and opposition) parties. In addition, this mechanism should be more pronounced in competitive multiparty than in hegemonic multiparty regimes based on the potential policy proposals of opposition parties.

Second, authoritarian parties with *local party branches* should have better access to information, policy preferences, and other information regarding the support of the regime on the local level. Those local connections enable authoritarian parties to ''separate signals from noise'' (Rasmussen & Knutsen, 2019, p. 7) and make them less likely to focus on particular interests that are expressed more effectively or more vociferously. In addition, local party branches enable incumbent parties to ''interact with economically disadvantaged groups'' (Rasmussen & Knutsen, 2019, p. 7), such as land-workers, unskilled workers and individuals without access to the state bureaucracy. Those groups that often represent the rural or economic poor should prefer redistributive policies, and such local party branches aggregate those preferences to national party organizations (cf. Hicken et al., 2016).

Hence, I expect that *local party branches* have diverging effects under different levels of electoral pressure. Because the incumbent party with more institutionalized local party branches has access to more and better information, they can use particularistic transfers to those swing voters that are essential to winning elections. However, this mechanism works in hegemonic and competitive multiparty regimes because the incumbent party can generate information in elections. In contrast, in closed autocracies this information capacity is restricted because elections are absent or local voters have no political alternative to vote.

Third, various forms of *party linkages* between the authoritarian parties and their constituents should have different effects on income redistribution. Parties with clientelistic party linkages should have no redistributive advantage, while parties with policy and programmatic linkages should have a redistributive advantage because their positions on redistributive policies are easier to identify for constituents in the parties' general programmes. Therefore, programmatic linkages should have a greater effect under higher electoral pressure. Thus, in competitive multiparty autocracies, policy and programmatic linkages should have a positive effect compared to a neutral effect expected in closed autocracies.

Distinct party platforms relate to publicly available party manifestos and the degree to which they are distinct from each other. Publicly available party manifestos should enable voters to identify different redistributive policy positions of authoritarian parties and, thus, should increase the pressure on incumbent parties to introduce redistributive policies due to the potential electoral competition with opposition parties. Therefore, the same difference for regime types applies as for *party linkages*: The effect should be more pronounced for multiparty regimes than for closed autocracies.

As discussed before, I assume that the different subcomponents of party institutionalization have limited impacts on income redistribution. However, according to Rasmussen and Knutsen, who make an argument for the universalism of welfare policies (Rasmussen & Knutsen, 2019), party institutionalization should have a general impact on income redistribution. Hence, the *bottom-up* mechanisms should be stronger under competitive multiparty authoritarianism than in hegemonic multiparty autocracies or closed autocracies. In closed autocracies, I expect to see a small positive effect of party institutionalization based on a higher policy responsiveness of the incumbent party to demands from the population. Overall, I assume that incumbent parties still care about policy positions of the voters and mass demands for redistribution for various reasons, including the need to avoid revolutionary threats by the masses (Acemoglu & Robinson, 2006; Michael K. Miller, 2015b) and to mitigate palace coups or displacement of the incumbent elites by other political elites (Svolik, 2012). However, parties in competitive environments should particularly care about the policy positions of the voters (Michael K. Miller, 2015b). Therefore, if party institutionalization increases in competitive authoritarian regimes, the level of income redistribution should increase as well. In hegemonic multiparty regimes, I anticipate that with increasing party institutionalization, the level of income redistribution decreases due to the missing electoral competition. In a highly institutionalized party, the incumbent generates valuable information by multiparty elections, and thus can compensate swing voters. In particular, the expected effects of bottom-up mechanisms of party institutionalization should be more impactful when authoritarian ruling parties rely on winning elections in competitive environments. Overall, highly top-down institutionalized parties ‘‘may thus try to represent the preferences of different local and social groups, and, at the same time, be capable of doing so with national policy solutions’’ (Rasmussen & Knutsen, 2019, p. 7).

As such, I anticipate that:

> **H2a**: Autocracies with greater party institutionalization redistribute more compared to those authoritarian regimes with lower party institutionalization.
>
> **H2b**: The effect of party institutionalization should be more powerful in competitive

multiparty autocracies, should be less powerful in hegemonic multiparty autocracies and should be marginal in closed autocracies.

2.3 Research design

To estimate the impact of electoral uncertainty on income redistribution, I compiled a time-series cross-sectional dataset on 105 autocratic countries from 1960 to 2016. The unit of analysis is the country-year.[2] I excluded all democratic country-years (Lührmann et al., 2018). My sample identifies autocratic regime-years using the Regimes of the World (RoW) data.[3]

2.3.1 Dependent variable

To measure income redistribution, this article pursues a twofold strategy. First, it uses the Standardized World Income Inequality Database (SWIID). The SWIID measures redistribution as the difference between pre-tax/pre-transfer and post-tax/post-transfer income inequality (Solt, 2020).[4] Redistribution is defined as the percentage by which market income inequality is reduced in a given year (Solt, 2020, p. 10).[5] By using relative income redistribution instead of absolute redistribution levels, I use the better proxy for measuring the progressive tax rates (Luebker, 2014, pp. 137–138).

Second, I use a proxy that measures the universalism of welfare state policies (Rasmussen, 2016). The Universalism Index from the SPaW dataset counts the number of social groups that are covered by six different policies areas, such as old-age pensions or sickness insurance (Rasmussen, 2016). The resulting index ranges from 0-54.

By using this twofold strategy, this article tests the theoretical claims for two types of redistribution in authoritarian regimes: those policies that alleviate income inequality, and those policies that do not directly alleviate income inequality, such as welfare state policies.

2.3.2 Explanatory variables

Data on the political ruling strategies of authoritarian regimes and on party institutionalization come from the Varieties of Democracy project (Coppedge et al., 2019b).

[2] The including criterion is that a least five or more observations for each country are available.

[3] Compare Appendix A.1.5 for definitions of RoW data.

[4] For a discussion on the SWIID, see Appendix A.1.3.

[5] For calculating redistribution in the original SWIID, at least three different sources for market inequality and disposable inequality are necessary to construct the redistribution variables (Solt, 2020, p. 10). In this article, I calculate relative redistribution whenever market inequality and disposable inequality have at least one data source. This different calculating strategy increases the measurements uncertainty of the redistribution measurement, but leads to an increase in the temporal and spatial coverage. In the Appendix, I recalculate the regression analysis with the original coding of redistribution.

I construct a categorical independent variable measuring three regime types: closed autocracies, hegemonic multiparty autocracies, competitive multiparty regimes. I classify authoritarian regime types based on three criteria: (a) de facto inclusion of different political parties, (b) minimal competitiveness in practice, and (c) minimal suffrage in practice (cf. Bernhard et al., 2020). Closed autocracies are those regimes in which opposition parties or all parties are excluded.[6] Hegemonic multiparty autocracies have elections that may include at least one real opposition party, but do not allow at least 25% of the adult population to vote and/or show irregularities that affect the outcome of elections. In contrast, competitive multiparty regimes allow for substantial electoral competition, and at least 25% of the adult population is allowed to participate.

Based on Neundorf et al., I construct an inclusionary ruling strategy indicator, that is calculated by taking ''the average score between two indicators: power distribution by social group and by socioeconomic status.'' (Neundorf et al., 2020, p. 1901) The first component measures whether political power is distributed according to social groups. The second component measures whether a socioeconomic position translates into more political power (Coppedge et al., 2019b, p. 190). The resulting indicator ranges from -1.82, indicating political inequality, to 2.41 indicating political equality between social groups and by socioeconomic position. To illustrate it, I depict three different countries: Vietnam (closed autocracy) turned from 0.03 in 1992 to a more exclusionary regime in 2016 (-0.7). Belarus (hegemonic multiparty autocracy) is a politically inclusionary regime (mean of 1.55 between 1990 and 2016), while Singapore (competitive multiparty autocracy) ranges somewhere in between those two regimes (mean of 0.42 between 1993 and 2016).

The *party institutionalization index* by V-Dem covers the theoretical concept well and measures various attributes of political parties. The index includes five sub-components: (1) number of parties with permanent organizations at the national level, (2) the number of parties with permanent local party branches, (3) the most common type of linkage to constituents in major parties, (4) the number of parties with distinct party platforms, and (5) the legislative party cohesion in terms of voting together. Party institutionalization ranges from 0 to 1, where higher values indicate greater institutionalization. The party institutionalization index measures incumbent and opposition parties in multiparty autocracies, while the index measures only the incumbent party in single-party autocracies. However, it considers the attributes of all parties with an emphasis on larger parties, representing mainly the dominant incumbent party in all regime types.

In addition, I also disaggregate party institutionalization based on the individual indicators that are summed up in the index. For example, Vietnam has a mean party institutionalization index of 0.69, Singapore has one of 0.72 and Belarus one of 0.68. Overall, all three

[6] Compare Appendix A.1.4.

countries differ mainly in the level of political inclusiveness and the authoritarian regime type.

2.3.3 Control variables

The empirical models control for economic, demographic and regime factors. First, I control for the socioeconomic development and for the size of the population by using the logarithms of the GDP per capita and the population size. I control for communist ideology by using a legitimation measure provided by V-Dem.[7] This step is necessary due to the potential effect of regime ideology on the distribution of private and public properties. The models also include the percentage of urban population and the size of the manufacturing sector to proxy for the importance of income redistribution. Demand for income redistribution may increase with rising urbanization and make increased income redistribution more politically salient. The size of the manufacturing sector is measured as the percentage of the GDP, taken from World Bank Data, and is a proxy for unionization in a country. In addition, the models control for time trends.

2.3.4 Model specification

Analyzing TSCS data presents several challenges such as unit heterogeneity and serial correlation (e.g., Bell et al., 2019; Bell & Jones, 2015). To handle these issues, I run within-between random effects models (REWB). REWB models can model heterogeneity at both the country and the country-year level (Bell et al., 2019; Bell & Jones, 2015) as well as heterogeneity in the effect of explanatory variables at both the country-year and country level. Including random intercepts into the models allows to consider complex level-1 variance functions and makes the results more robust regarding the reliability of the countries' estimates. Following Bell, Fairbrother, and Jones (2019), I use a simple random-intercept model that yields the same results as a fixed-effects model. The advantage is that we have information about the random effects, and the model can incorporate time-invariant covariates.[8] The equation for the REWB is combined to form:

$$\begin{aligned} redistribution_{it} = \beta_0 + \ \beta_{1W}\ (inclusion_{it} - \ \overline{inclusion_i}) + \ \beta_{2B}\ \overline{inclusion_i} + \\ \beta_{3W}\ (pi_{it} - \ \overline{pi}_i) + \ \beta_{4B}\ \overline{pi}_i \ + \beta_5\ authoritarian\ regime\ types + \\ \beta_6\ ART * (inclusion_{it} - \ \overline{inclusion_i}) + \ \beta_7\ ART * (pi_{it} - \ \overline{pi}_i) + \\ \beta_{8W}(X_{it} - \ \overline{X}_i) + \ \beta_{9B}\overline{X}_i \ + \upsilon_{i0} + \epsilon_{it} \end{aligned} \tag{2.1}$$

[7] Compare Section A.1.2 for variable descriptions of control variables.

[8] In contrast to Bell, Fairbrother and Jones (2019), I did not incorporate a random slope for the time variable (year), because tests indicated that this did not lead to a better model fit, and moreover leads to convergence problems due to the complex random effects structure.

where β_{1W} and β_{3W} are weighted averages of the within-country effects of the explanatory variables in each country; υ_{i0} measures the random effect of each country, while ϵ_{it} is an error term in the within-country part. β_{2B} and β_{4B} represent the average between effect of the explanatory variables.[9]

2.4 Empirical findings

Table 2.2 presents REWB model estimates of the effects of authoritarian regime types, inclusionary ruling strategies and party institutionalization on relative redistribution (Model 1, 3, 5) and on universalism of welfare state policies (Model 2, 4, 6).[10] Models 1 and 2 test the effects of all three explanatory variables. Models 3 and 4 add control variables. Models 5 and 6 add three-way interaction effects between party institutionalization, inclusionary ruling strategies and authoritarian regime types. I distinguish between within-country and between-country variances. Variables that show between-country effects end with (b).

Consistent with hypothesis H1a, Models 1 and 2 show that all else being equal, more inclusionary regimes, on average, have a positive and significant effect on relative redistribution. That is, an inclusionary regime is more likely to have higher income redistribution compared to regimes with a more exclusionary ruling strategy. Within authoritarian regimes, the effect of inclusionary ruling strategies is not robust across all model specifications.

Turning to the effect of party institutionalization on redistribution (H2a), the results show that party institutionalization in the between-country part has a positive effect on redistribution, indicating that countries with higher party institutionalization redistribute more income. The effect of party institutionalization is robust across all model specifications. Within regimes, party institutionalization has a strong and significant effect on income redistribution, as seen in Models 1, 3 and 5. In the models with the universalism index as the dependent variable, more party institutionalization within a regime is associated with more particularistic welfare spending. As shown, the between-country variance of party institutionalization only has insignificant effects on the amount of redistribution, reinforcing that it is necessary to separate the within- and between-country effects. Table A.10 in the Supplementary Appendix shows the disaggregated effects of party institutionalization redistribution.

[9] i stands for country, t is for year, and β_0 is an intercept. X is a vector of time-varying variables. ART stands for authoritarian regime types. The year variable controls for time trends.

[10] Table A.11 presents the Table 2 with control variables.

Table 2.2: Linear within-between model

DV	Model 1 Rel. Red.	Model 2 Universalism	Model 3 Rel. Red.	Model 4 Universalism	Model 5 Rel. Red.	Model 6 Universalism
(Intercept)	29.36***	−434.52***	54.92*	−351.08***	62.08**	−304.78***
	(6.60)	(6.86)	(21.84)	(29.85)	(22.02)	(29.26)
Year	−0.01***	0.23***	−0.03***	0.17***	−0.03***	0.15***
	(0.00)	(0.00)	(0.01)	(0.01)	(0.01)	(0.01)
Pol Inclusiveness	−0.05	1.57***	−0.08	−0.75***	−0.15	−0.50*
	(0.13)	(0.17)	(0.15)	(0.23)	(0.15)	(0.23)
Pol Inclusiveness (b)	2.83*	1.94*	2.48†	2.38*	2.50†	2.40*
	(1.31)	(0.82)	(1.36)	(1.05)	(1.36)	(1.03)
Party Institutionalization	2.98***	−7.36***	2.82***	−2.48	2.73***	−1.91
	(0.69)	(0.92)	(0.74)	(1.62)	(0.81)	(1.58)
Party Institutionalization (b)	8.69	9.25*	5.29	4.21	5.28	4.02
	(5.41)	(3.60)	(6.05)	(4.24)	(6.05)	(4.18)
Ref. Category: Closed Autocracy						
HM Autocracy	−0.07	−0.26	0.22†	0.45*	0.29*	0.56**
	(0.11)	(0.18)	(0.12)	(0.20)	(0.12)	(0.20)
CM Autocracy	−0.24*	−0.85***	0.04	0.32†	0.06	0.16
	(0.11)	(0.17)	(0.12)	(0.19)	(0.12)	(0.18)
HM Autocracy * Inclus.	1.26***	−0.47†	1.59***	2.13***	1.67***	2.26***
	(0.20)	(0.27)	(0.21)	(0.43)	(0.22)	(0.46)
CM Autocracy * Inclus.	1.56***	−1.53***	1.52***	1.00**	1.61***	0.41
	(0.18)	(0.25)	(0.19)	(0.32)	(0.19)	(0.33)
HM Autocracy * PI	−3.01**	4.81***	−3.86***	0.48	−4.13***	1.44
	(0.92)	(1.29)	(1.01)	(2.02)	(1.08)	(1.99)
CM Autocracy * PI	−2.19*	12.98***	−2.11*	3.08	−1.89†	−3.99*
	(0.93)	(1.36)	(0.99)	(1.99)	(1.09)	(2.02)
PI * Inclusiveness					−2.94**	1.20
					(1.10)	(2.72)
HM Auto. * PI * Inclus.					−3.01†	−8.53**
					(1.71)	(3.30)
CM Auto. * PI * Inclus.					1.56	15.31***
					(1.42)	(2.94)
					(1.42)	(2.94)
Control Variables	No	No	Yes	Yes	Yes	Yes
Random effects						
τ_{00}	97.36	47.29	89.20	52.71	89.07	51.30
σ^2	1.15	10.90	1.14	4.95	1.13	4.58
AIC	6802.85	19716.13	6258.93	9139.93	6240.82	8989.03
BIC	6881.40	19803.03	6391.76	9273.80	6390.24	9139.62
Log Likelihood	-3387.42	-9844.06	-3105.47	-4545.97	-3093.41	-4467.51
Num. obs.	2020	3669	1871	1954	1871	1954
Num. countries	105	110	96	90	96	90

$^{***}p < 0.001$, $^{**}p < 0.01$, $^{*}p < 0.05$, $^{\dagger}p < 0.1$

To test hypotheses H1b and H2b, I include interaction terms between authoritarian regime types, party institutionalization and inclusionary ruling strategies. All models include two-way interaction effects, while three-way interaction terms are implemented in Models 5 and 6. To illuminate the effects of party institutionalization and inclusionary ruling strategies on relative redistribution across regime types,[11] I predict the marginal effects

[11]Interaction effects for the effects of party institutionalization and inclusionary ruling strategies on

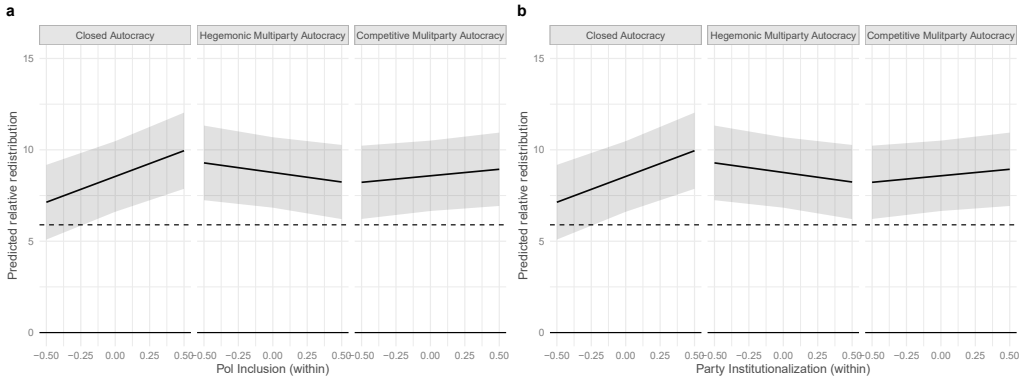

Figure 2.1: Marginal Effects of Inclusion (a), and Party Institutionalization (b) (based on Model 3) across regime types

Notes: The solid lines indicate the estimated coefficient. Shaded regions show adjusted 95% confidence intervals. The coefficient estimate is significant at a $p < 0.05$ where the confidence intervals do not include zero.

with all control variables held at their means. Because interaction effects are not directly interpretable, Figure 2.1 plots the estimated marginal effects of ruling strategies and party institutionalization on closed autocracies, hegemonic and competitive multiparty autocracies. The solid lines indicate the predicted levels of redistribution and the shaded regions depicts the 95% confidence intervals. The additional dashed line indicates whether the entire confidence band spans a common value.

Figure 2.1(a) compares the predicted effects of ruling strategies on relative redistribution across regime types. In a closed autocracy, such as Vietnam between 1992 and 2016, a change in the inclusionary or exclusionary ruling strategy dimension within the country should not result in an increase of relative redistribution. In a hegemonic multiparty autocracy, such as Belarus between 2000 and 2016, a change in the level of political inclusiveness should result in a sharp increase in income redistribution. The same pattern is true for relative redistribution in competitive multiparty autocracies, such as Singapore between 1973 and 2016. These graphical patterns support hypotheses H1b and suggest that hegemonic and competitive multiparty regimes with more inclusionary ruling strategies are more likely to have higher income redistribution, while more inclusionary ruling strategies have a negative or null effect in closed autocracies.

Figure 2.1(b) compares the effect of party institutionalization across regime types. Figure 2.1(b) provides evidence against hypothesis H2b: for relative redistribution in closed autocracies the within-country variance of party institutionalization is highly relevant,

universalism of welfare state policies across regime types are presented in the Supplementary Appendix A.1.10.

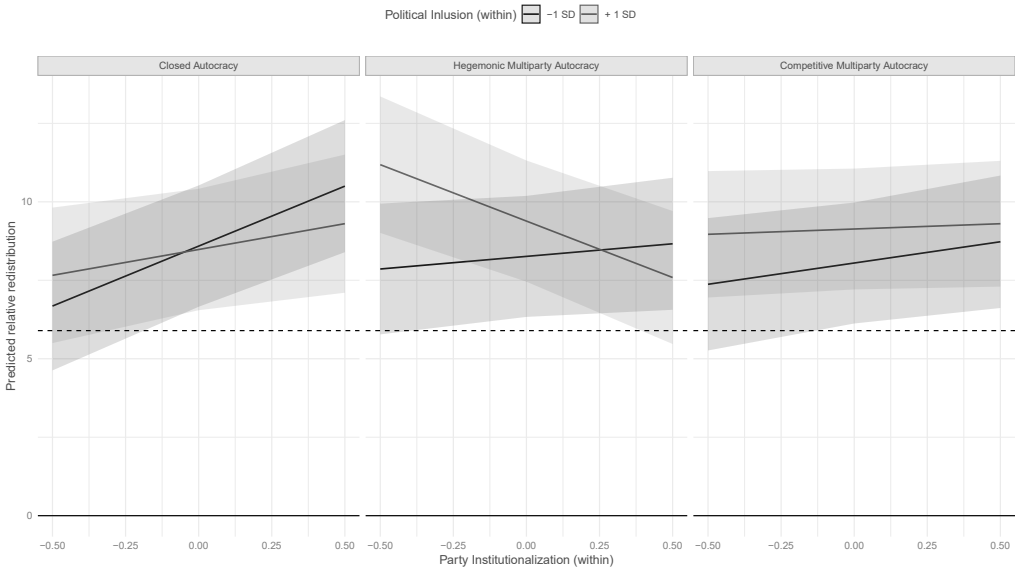

Figure 2.2: Marginal Effects of Inclusion, and Party Institutionalization on Redistribution by Regime Types (based on Model 5)

Notes: The solid lines indicate the estimated coefficient. Shaded regions show adjusted 95% confidence intervals. The coefficient estimate is significant at a $p < 0.05$ where the confidence intervals do not include zero.

while the within-country variance of party institutionalization in hegemonic and competitive multiparty autocracies does not have such an impressive effect. In multiparty regimes, the level of income redistribution is relatively high at all levels of party institutionalization, while in regime without multiparty elections, party institutionalization results in an increase in income redistribution.

Figure 2.2 plots the three-way interaction terms in Model 5. Figure 2.2 clearly indicates that in closed autocracies the positive effect of party institutionalization does not differ substantially between more inclusionary and more exclusionary regimes. In hegemonic multiparty regimes, the effect of party institutionalization is dependent on the level of political inclusion. In more exclusionary regimes, party institutionalization has a small positive effect on income redistribution, while in more inclusionary regimes the effect of party institutionalization is negative. In competitive multiparty regimes, this does not matter much at all.

As Figure A.9 in the Supplementary Appendix reveals, the models adequately estimate redistribution in the illustrative cases Singapore, Belarus, and Vietnam. The fitted values of relative redistribution deviate moderately from the actual values.[12] In 2016, Singapore

[12]The average difference between real values and predicted values (Model 3) are 0.0053 (SD = 1.11) for Belarus, 0.0003 (SD = 0.74) for Singapore, and 0.0027 (SD = 0.44) for Vietnam.

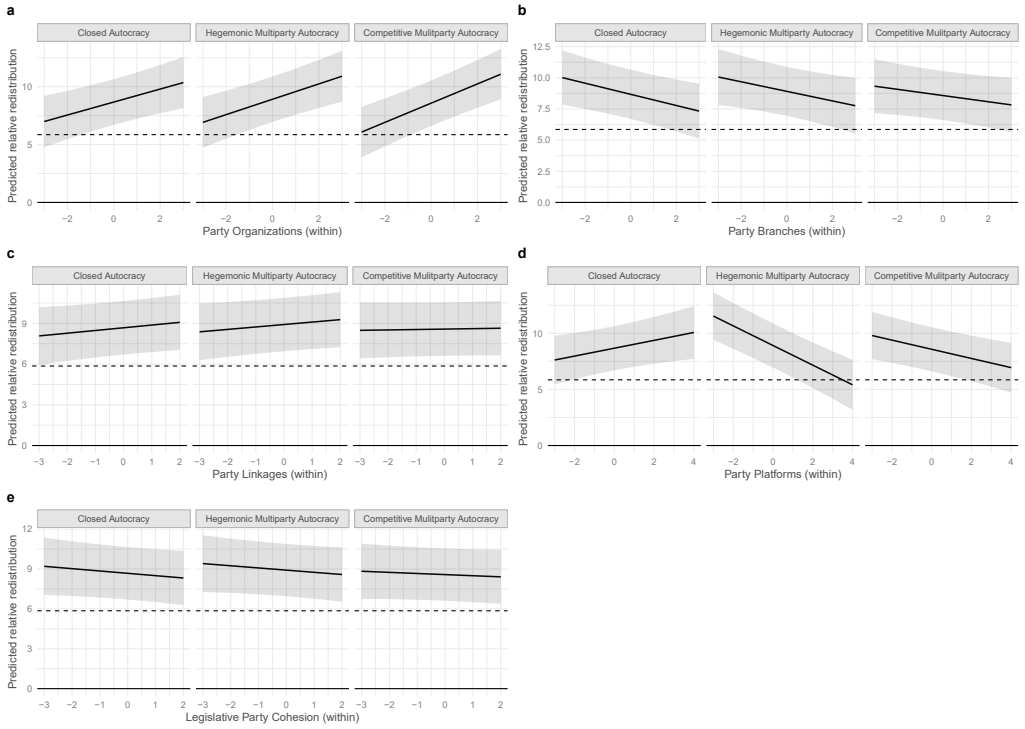

Figure 2.3: Marginal Effects of (a) Party Organizations, (b) Party Branches, (c) Party Linkages, (d) Party Platforms, and (e) Legislative Party Cohesion on Redistribution by Regime Types (based on Model 3.1)

Notes: The solid lines indicate the estimated coefficient. Shaded regions show adjusted 95% confidence intervals. The coefficient estimate is significant at a $p < 0.05$ where the confidence intervals do not include zero.

has a real relative redistribution of 11.47 and a predicted redistribution of 9.95, Vietnam has a real value of 12.97 and a predicted value of 13.07, while Belarus has the highest real redistribution of 27.1, and a predicted value of 26.55.

Figure 2.3 shows the interaction effect between regime types and the subcomponents of party institutionalization.[13] It indicates that the effects of party branches, and legislative party cohesion are slightly negative and do not differ considerably between regime types, while the effect of party platforms and to a lesser extent the effect of party organizations differ between authoritarian regime types. Overall, these findings indicate that the depicted positive interaction effect between party institutionalization and competitive multiparty autocracy relies on the interplay between the different subcomponents. Consistent with hypothesis H2b, Figure 2.3 indicates that party platforms and party organizations have different effects in closed, hegemonic and competitive autocracies.

[13] Compare Table A.10 in Supplementary Appendix.

In sum, I find evidence for two key conclusions: First, electoral incentives as well as the political inclusion of citizen's matter for the degree of redistribution in electoral authoritarian regimes (cf. Figure 2.1a). Second, party institutionalization has theoretical unexpected effects on the redistributive nature of autocracy, particularly in hegemonic multiparty regimes (cf. Figure 2.1b). It seems that the effect of party institutionalization on the redistributive nature of regimes is the greatest in closed autocracies, contrary to the theoretical implications.

2.5 Robustness tests

The Supplementary Appendix shows that the empirical findings are robust to additional tests. First, Appendix A.2 replicates Table 2.2 with a smaller sample of authoritarian regimes that is based on the original calculation of relative redistribution (cf. Solt, 2020). The findings of the main models only held for party institutionalization but not for inclusionary ruling strategies.

Second, the results are robust to the use of a complete sample of democratic and autocratic regimes. Appendix A.3 reveals that the theoretical argument holds, meaning more inclusionary ruling strategies in competitive and hegemonic multiparty regimes are associated with greater income redistribution compared to closed autocracies. Furthermore, it shows that the effect of greater party institutionalization is positive in closed autocracies and democracies but has a slightly negative effect in both other regime types.

Third, I use data by Albertus and Menaldo (2014) to measure redistribution. Overall, Appendix A.4 reiterates the general patterns that the effects of party institutionalization and political inclusion strategies differ between authoritarian regimes types measuring electoral uncertainty.

Fourth, as an additional test I re-run the main models using a measure of the type of expenditure on social and infrastructural spending in the national budget by V-Dem (Appendix A.5). The results confirm the main findings.

Fifth, findings are not driven by the model specification. Appendix A.6 replicates Table 2.2 by using Pooled OLS and Fixed OLS regressions with panel-corrected standard errors. The results are largely unchanged and show the expected signs. Overall, I find support for the theoretical arguments with various model specifications, different samples, and including different measures for redistribution.

2.6 Discussion and conclusion

This article argues that authoritarian regimes vary in the degree of electoral uncertainty. Those differences should have considerable impacts on the incentives and capabilities of authoritarian regimes to redistribute income and provide public goods. First, I argue that a more inclusionary ruling strategies lead to more incentives for the political leader to redistribute income and financial assets to strengthen his support coalition. However, the effects of these incentives are dependent on the electoral uncertainty.

Second, I identify two sets of mechanisms that connect party institutionalization and income redistribution in authoritarian regimes: the *top-down* mechanisms and *bottom-up* mechanisms. I argue that both mechanisms function in the same direction, implying that authoritarian regimes with highly institutionalized parties should redistribute more income compared to less institutionalized authoritarian party arrangements. However, the theoretical expectation is that the effects of the *bottom-up* impact, and therefore the overall impact of party institutionalization, vary between different levels of electoral uncertainty.

The statistical analysis finds that countries with more inclusionary ruling strategies and highly institutionalized parties have higher degrees of redistribution compared to countries with inclusionary and less institutionalized parties. The findings show that the effects of more inclusionary ruling coalitions are more pronounced in competitive authoritarian regimes compared to closed autocracies and hegemonic regimes. I further find that party institutionalization has a greater effect on redistribution in closed autocracies, with the effect shrinking dramatically in competitive multiparty regimes. Even though this finding restricts hypothesis H2b, nevertheless the general argument that authoritarian regime types, party institutionalization and ruling strategies do matter still holds. An alternative explanation for this counterintuitive finding may be that more institutionalized parties are better at assessing support for policies in competitive regimes compared to their hegemonic or closed counterparts. By holding elections that generate fewer incentives for obscuring preferences of voters, incumbents are able to provide less redistributive policies while benefiting from higher approval ratings.

This research adds to several distinct literatures. The theoretical arguments and the empirical findings provide evidence for the theoretical model by Albertus and show that differentiating between incentives and capacities is also theoretically and empirically promising for income redistribution.

In addition, this research contributes to the literature on inequality under authoritarian rule by applying an existing theoretical heuristic to the case of income redistribution under authoritarianism (Albertus & Menaldo, 2014; Bueno de Mesquita et al., 2017; Kammas & Sarantides, 2019; Teo, 2019). Additionally it models the cases by relying on two research

strands: (1) how institutionalized parties, in particular ruling parties, and (2) how the size and the composition of the ruling coalition shape public policies, regime stability, and the prospect of democratization. The findings suggest that we should pay greater attention to both factors when modelling public policies under authoritarian rule.

This study also contributes to the literature focused on public support for authoritarian regimes (Albrecht, 2005; Ciftci, 2018; Geddes & Zaller, 1989). Public support, as well as public views on distributive policies should affect the distributive nature of authoritarian regimes, in particular in competitive authoritarian regimes. However, this article has been silent on the linkage between public views on distributive policies and the redistributive nature of autocracies. Although this article provides an indirect test of the causal mechanism between electoral pressure and redistributive policies, it will be helpful to arrive at a more precise specification of the causal mechanisms between public opinion and distributive policies under authoritarianism.

Furthermore, the findings that authoritarian ruling strategies, party institutionalization and electoral uncertainty in authoritarian regimes do matter for redistribution, suggest long-term implications for democratization and democratic consolidation. Because former authoritarian regimes with more inclusionary and greater institutionalized parties had been more redistributive, these public policies should continue to have an effect after democratization.

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Chapter 3

Party institutionalization, authoritarian regime types and women's political equality

ABSTRACT

This article examines the association between women's political inclusion and incumbent party strength in authoritarian regimes. It argues that the degree of party institutionalization is the main determinant of women's political inclusion under authoritarian rule. Institutionalized party rule determines the incentive and capacity for authoritarian parties to introduce more gender equal political processes and political outputs. Using different measurements of women's political inclusion and data on 108 countries between 1946 and 2010, this article estimates within- and between-country effects of party institutionalization, regime types and political inclusion of women. Although previous research stressed the link between authoritarian regime types and gender equality, this study finds regime types to explain little gender equality variation. In contrast, regimes with higher levels of party institutionalization provide more gender equal politics and policies than regimes in which authoritarian parties are less institutionalized. This article improves our understanding of how regime characteristics affect gender politics in autocracies.

KEYWORDS

women's equality, authoritarian regime types, women's politics, party institutionalization

Note: This chapter is identical published as Pelke (2021) in *Contemporary Politics*; https://doi.org/10.1080/13569775.2021.1908724.

3.1 Introduction

This article explores the determinants of women's political inclusion under authoritarian regimes. At the beginning of the 20th century, women were systematically excluded from political power in nearly all countries. According to the women's political exclusion index (Coppedge et al., 2019a, p. 265), democracies had an average exclusion score of 0.52 in 1900[1], while autocracies had a much higher average exclusion score of 0.87 (Figure 3.1). During the 20th century, the gender-based political inclusion from power increased through different measures, e.g., women's rights advocates and electoral quotas. The improving representation in politics and international advocacy for women's rights also affects authoritarian regimes. In 2018, the average women's exclusion index was 0.49 compared to 0.22 in democracies. However, the spectrum of women's political inclusion in authoritarian regimes is tremendous: Women are almost entirely excluded from political power in Somalia (0.92), Saudi Arabia (0.87), Yemen(0.85), Syria (0.82) and Afghanistan (0.79), while in other autocracies, such as Singapore (0.06) and Rwanda (0.11), women's political inclusion is comparable to established liberal democracies.

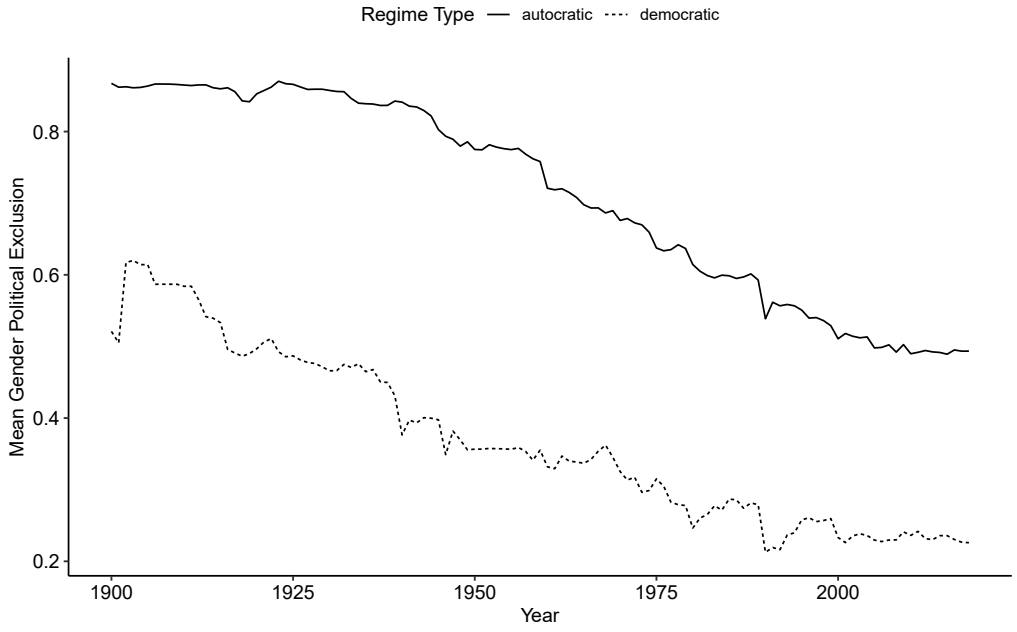

Figure 3.1: Mean Political Exclusion by Gender by Regime Type, 1900 - 2018

Data on political exclusion and regime types comes from Coppedge et al., 2019b.

Previous studies have mainly examined women's legislative representation in democratic regimes (e.g., Bernauer, Giger, & Rosset, 2015) or compared gender representation between

[1]On a scale between 0 (low gender exclusion) to 1 (high gender exclusion).

democracies and autocracies (Krook, 2010a; Stockemer, 2009). Only a few studies have investigated the role of women in authoritarian politics (Al Subhi & Smith, 2019; Donno & Kreft, 2019; Joshi & Thimothy, 2019; Thames, 2017). Donno and Kreft found that greater economic and political rights for women are associated with institutionalized party rule in autocracies, but not with multiparty elections (Donno & Kreft, 2019). Nevertheless, the evidence of the determinants of women's political inclusion in authoritarian regimes is inconclusive.

What explains these differences in the level of gender inclusion between authoritarian regimes in the 20$^{\text{th}}$ century? The existing literature argues that authoritarian regime type is the key explanatory variable (e.g., Donno & Kreft, 2019). But while it is true that women's political inclusion[2] differs between authoritarian regime types (cf. Figure B.1),[3] the distribution of women's political inclusion also varies extensively within different regime types. Therefore, this article proposes an alternative approach. It argues that authoritarian regime types and the degree of party institutionalization determine women's inclusion in non-democratic regimes by representing the size of the ruling coalition, and through incentives for dictatorships to integrate women into authoritarian politics.

This article explains why specific authoritarian regime types show higher levels of gender equality. Furthermore, it refers to women's political exclusion as the initial state in authoritarian regimes at the beginning and in the middle of the 20$^{\text{th}}$ century and investigates why certain authoritarian states have incentives and capabilities to be more gender equal. In doing so, the article identifies two related arguments that explain women's political inclusion among authoritarian regimes. First, it argues that party-based regimes, which are often based on more institutionalized authoritarian party rule, are associated with more political gender equality. Second, beyond the self-contained effect of regime types, the major determinant of gender equality is authoritarian party institutionalization. This article reinvestigates the findings from Donno and Kreft (2019) and identifies two mechanisms: party institutionalization enables and provides incentives for authoritarian leaders to be more inclusive towards women on the political power dimension.

I test my argument using a dataset covering 108 autocracies between 1946 and 2010. Using within-between random effects analysis (Bell & Jones, 2015), I estimate the effect of authoritarian regime types and institutionalized party rule on the inclusion of women on the political power dimension. This analysis finds compelling evidence for my argument that regime types matter: Party-based regimes and communist regimes are positively associated with more political inclusion of women, while military regimes have negative effects on the

[2]Measured by the *Exclusion by Gender index* from Coppedge et al. (2019b).

[3]Figure B.1 shows descriptive evidence that women's political inclusion differs between authoritarian regime types. Women's political inclusion averages lowest in monarchies, differs little between military and personalist regimes by the mean, and is the highest on average in party regimes.

political inclusion of women. In addition, I find that party institutionalization, irrespective of regime type, has the largest effect on the political equality of women and men under authoritarian rule.

The theoretical argument and empirical results of this article contribute to different strands of the literature. First, this article contributes to work on authoritarian regime types and their effects on women's political representation (e.g., Fallon, Swiss, & Viterna, 2012; Stockemer, 2009; Thames, 2017) and women's rights (Donno & Kreft, 2019; Forman-Rabinovici & Sommer, 2019).

Second, this article contributes to work on political parties in authoritarian regimes and their effects on politics and policy outputs under non-democratic rule (Gandhi, 2008; Magaloni, 2008; Svolik, 2012). It adds to these literatures by showing that party institutionalization matters for women's political inclusion in the context of authoritarian regimes. Enabling women's political participation has substantial effects on the logic of authoritarian rule by including the other half of the population in the political process. Moreover, the findings have implications for democratization research because they provide new insights into how regime types affect women's political inclusion, which is one aspect of democratic quality.

3.2 Existing research on gender inequality and autocratic regimes

There is a small but expanding literature on gender inequality in authoritarian regimes. Some works examine institutional differences in the representation of women in parliaments between democracies and autocracies (Fallon et al., 2012; Ross, 2008; Stockemer, 2015). Others study the effect of gender quotas on women's representation (Bjarnegård & Zetterberg, 2016; Hughes, Krook, & Paxton, 2015; Tripp & Kang, 2008), though few investigate quotas in authoritarian regimes (Bjarnegård & Zetterberg, 2016, p. 466). Finally, some authors examine the mechanisms of how ruling parties benefit from women's representation by generating electoral legitimacy (e.g. Bjarnegård & Zetterberg, 2016; Tripp, 2019; Valdini, 2019).

These studies provide three pertinent insights about women's political inclusion in authoritarian regimes. First, the introduction of gender quotas may electorally favour ruling parties in democracies and autocracies. Quotas (and particularly reserved seats) have become an important mechanism for the political representation of women in parliaments in democracies and autocracies (Dahlerup, 2009; Hughes et al., 2015; Krook, 2010b; Tripp & Kang, 2008). However, Bjarnegård and Zetterberg find that "the extent to which gender concerns are prioritized in a quota implementation process in a dominant party state is

highly contingent on the electoral power of the party in which quotas are implemented'' (Bjarnegård & Zetterberg, 2016, p. 466). However, what motivates authoritarian ruling coalitions and dictators to implement gender quotas and foster women's political representation? The representation of women in legislative institutions and party politics, as well as the introduction of quotas, may electorally favor the ruling parties, which motivates authoritarian incumbents especially in competitive multiparty regimes (e.g., Bjarnegård & Zetterberg, 2016; Tripp, 2019). In particular, highly institutionalized ruling parties may be able to reconcile gender equality measures with electoral success and may be able to control the electoral system.

Second, democratization affects female legislative representation, while the effect of democracy is negligible. For example, Fallon et al. find a curvilinear effect of democratization on female legislative representation and claim that democratization largely affects female legislative representation, while the effect of regime types is overestimated (Fallon et al., 2012, p. 380). Tremblay shows that the length of the democratic experiment explains the proportion of women parliamentarians through various interacting factors (Tremblay, 2007). However, in contrast to this research, which has shown that democracies and autocracies both have a higher representation of women than regimes in the middle range of the democracy scale, Inglehart et al. (2002) find a significantly higher proportion of women in parliaments in democratic regimes than in all other regimes, based on a sample of 65 countries. In contrast, Stockemer (2009) claims that the level of democracy does not affect the proportion of women in parliaments but finds that communist regimes have a significantly higher representation of women. In addition, there is some evidence that communist states are the most likely to have more equal gender representation (Pothier, 2003).

Third, some authoritarian regimes use the inclusion of women into politics as a legitimacy advantage. In this regard, Donno and Kreft argue that some authoritarian regimes hold incentives and the capacity to supply and politically capitalize on women's rights provisions. They argue that institutionalized party-based regimes are associated with greater economic and political rights for women because these regimes use the inclusion of women as a tool for coalition building (Donno & Kreft, 2019). Similarly, other studies highlight that ruling parties can benefit from women's political inclusion by generating political legitimacy (e.g., Bush & Zetterberg, 2020; Tripp, 2019). Tripp argues that providing women's rights is a political symbol, and political leaders in the Middle East and North Africa strategically use women's rights provisions to counter extremist Islamist tendencies and to "garner the voters of women" (Tripp, 2019, p. 25). Another study presents a conceptual framework for understanding different sets of motivation for political leaders to include women in politics (Valdini, 2019). Valdini argues that ''under conditions of declining party or

government legitimacy, citizens are not only updating their beliefs on women's roles but are also temporarily changing their understanding of the ideal leader'' (Valdini, 2019, p. 18). Therefore, political incumbents calculate the likely costs and benefits of women's inclusion in their political party.

In addition, other studies analyze women's representation in politics as well as the interplay between Islam and women's rights in Arab countries (Al Subhi & Smith, 2019; Lorch & Bunk, 2016; Norris, 2009; Ross, 2008). Ross argued that oil production, not Islam, reduces the number of women in the labour force, and this link reduces the political influence of women in countries with high values of oil production (Ross, 2008). Norris contradicted Ross's *petroleum patriarchy* thesis. She argues that ''long-standing religious traditions leave an enduring mark on the norms and beliefs, the attitudes and values'' (Norris, 2009, p. 12), affecting the political representation of women. However, one can conclude that religious backgrounds and natural wealth are background factors that operate under political institutions. In sum, by focusing on a legitimacy rationale the studies by Valdini and Tripp expand our understanding of when authoritarian leaders engage in women's rights policies.

3.3 Party institutionalization, regime types and women's political exclusion

Building on research showing that authoritarian incumbents have different incentives and capacities for coopting and including women into the support coalition, I explore how different authoritarian regime types (e.g., communist party regimes, and military regimes) are associated with different levels of women's political inclusion, and how institutionalized incumbent parties facilitate more gender equal policies. In this section, I present my theoretical argument regarding the link between authoritarian regime types, party institutionalization and women's political inclusion. However, the main argument of this paper is that the incumbent party institutionalization matters for women's political inclusion.

These arguments rest upon the finding that almost all authoritarian regimes are gender unequal at the beginning of the 20^{th} century (compare Figure 3.1). This article investigates the historical sequences that lead to more gender equal authoritarian politics and argues that authoritarian regimes that are governed by highly institutionalized ruling parties have greater capacities to control and capitalize from more gender equal politics. Furthermore, those regimes have more incentives to introduce women's political inclusion compared to less institutionalized regimes parties. However, the main argument is that the level of party institutionalization differs largely between authoritarian regime types, and thus regime

types are unsuitable to model institutionalized party rule. In addition, the theoretical discussion presented below assigns the different mechanisms to capacity and incentives rationales.

Building on Donno and Kreft's rationales for why party-based regimes can capitalize politically on the provision of women's rights (Donno & Kreft, 2019), this article argues that authoritarian regime types are connected with the political inclusion of women through a wide set of theoretical mechanisms. In addition, it argues that authoritarian regime types are largely unsuitable to model institutionalized party rule in authoritarian regimes. It further strengthens the arguments made by Donno and Kreft and distinguishes between bottom-up and top-down mechanisms (cf. Rasmussen & Knutsen, 2019) that connect women's political inclusion and party institutionalization. Furthermore, in contrast to Donno and Kreft (2019), I argue that multiparty elections in the context of authoritarian regimes still make a difference for the political inclusion of women.

3.3.1 Regime types

Based on Geddes et al. (2014), I differentiate between five authoritarian regime types: military regimes, monarchies, personalist regimes, and party regimes. In addition, I differentiate between communist party regimes and non-communist party regimes. In order to distinguish between both types of party regimes, I use V-Dem data on the regime ideology of authoritarian regimes.[4] By using the Geddes et al. and the Wahman et al. classifications of regimes, this article focuses on the characteristics of the political elites and the impact of those elites on women's political inclusion, and the effect of the modes of power maintenance on women's political inclusion. However, the literature on comparative authoritarianism highlights that the choice of regime types data is likely to have an impact on the results. The main regime classification is the Geddes et al. regime dataset (2014) for making valid comparisons and inferences to the study from Donno and Kreft (2019), who use Geddes et al.' classification. In addition, this article also uses additional robustness tests with regime types data from Wahman et al. (2013) that focuses on different modes of political power maintenance. The theoretical arguments presented in this section benefit from both approaches —elite characteristics and modes of power maintenance. In addition, this paper argues that the mode of power maintenance and elite characteristics are often empirically intertwined and thus the theoretical arguments rely on both approaches.

My first line of argument focuses on the relationship between regime types and the political inclusion of women. First, I expect that party-based regimes have a positive effect on the inclusion of women, and those regimes should outperform monarchies, personalist and military regimes. One-party regimes establish various linkages to society by providing

[4]See v2exl_legitideol_1 variable in the V-Dem dataset.

party-sponsored women's organizations and women's wings and use the integration of women into formal politics and civil society for cooptation (capacity rationale). In addition, as shown by Donno and Kreft, party-based regimes ''are associated with higher economic and political rights for women'' (2019, p. 720). Better economic and political rights correlate with a higher inclusion of women in politics and a greater likelihood of participation in civil society organizations by providing the essential basis for political participation.

While this logic refers to the input dimension of authoritarian politics, one-party regimes also have incentives to expand the inclusion of women in policy outputs. In addition, party-based regimes capitalize politically on the inclusion of women into policy outputs, e.g., by providing access to public services and state business opportunities. By providing access to public services for women and enabling women's economic and political participation in public life, party-based regimes generate a broader legitimacy, which can reimburse them in authoritarian elections (cf. Tripp, 2019). Furthermore, providing more gender equal policy outputs is a strategy of institutionalized parties of survival (cf. Tripp, 2019). By providing these policies, institutionalized parties are able to expand their electorate, and thus have an incentive to do so.

In accordance with the empirical findings of Donno and Kreft (2019) and Stockemer (2009), I argue that communist party regimes should have a positive effect on women's political inclusion. This positive effect occurs for two reasons. First, communist party regimes are highly institutionalized regimes (capacity rationale). This characteristic has a positive effect on women's political inclusion. The legitimation of communist regimes is based on the broad claim of providing gender equality (e.g., Pop-Eleches & Tucker, 2017, pp. 214–221). Through the provision of socioeconomic resources for all classes, communist regimes enable women to participate in politics and expand their options beyond child education and domestic work. In addition, the communist ideology is associated with the claim of equal distribution of work between genders (incentive rationale). Adapting the argument by Ross (2008), equal integration into the labor market should make female inclusion in the political process more likely. Furthermore, previous studies found that state feminism in communist or socialist ideology is likely to foster gender equality in political representation (Pothier, 2003). However, there was a significant gap between ''the theoretical emphasis on gender equality and the practical reality of 'real and existing socialism''' (Pop-Eleches & Tucker, 2017, p. 217). This gap should decrease the positive effect of communist rule on women's political inclusion. A second decreasing factor is that communist rule is often associated with a high use of repression against all types of civil society participation and civic engagement that challenge it (e.g., Brezis & Schnytzer, 1998; Hollander, 2008). This repression of civil society organizations should also affect the political inclusion of women in politics.

Monarchies are not dependent on gender equality in politics, because monarchies are based on a relatively small group of family members and functional elites (e.g., Kailitz, 2013; Lust-Okar & Jamal, 2002, p. 353). Furthermore, the traditional legitimation of rule in monarchies (e.g., Kailitz, 2013, pp. 48–49) and related traditional role models of men and women make the political inclusion of women more unlikely. Third, regarding the elite characteristic of these regime types, in most instances the monarch is a man, and thus, male monarchs are unlikely to capitalize from women's political inclusion. Queens regnant were a phenomenon in the 18th and 19th century and were largely not in power in the 20th and 21th century. The arguments for monarchies and military regimes build mainly on an incentive rationale.

Military regimes are often those transition regimes that frequently occur in post-coup situations and end often in democratization processes or new coups and political uncertainty (cf. Geddes et al., 2014). These political uncertainties of military rule and the frequent coups and coup attempts make women's political inclusion less likely. ''The vague justification of a military regime is that only the military – usually together with the bureaucracy – is able to save the nation as a rational apolitical arbiter of social conflict in a time of crisis'' (Kailitz, 2013, p. 48). In a time of crisis, women's political inclusion is not on the agenda. A high use of coercive and military force reinforces the negative effect of military regimes on women's political inclusion. In addition, militaries are male-dominated organizations, and thus the elite characteristics of the generals make women's political inclusion unlikely.

In addition, personalist regimes should have a similarly bad gender performance as military regimes because of the centralization of power within a small ruling coalition or a dictator, and the absence of institutional or traditional boundaries. The lack of institutional boundaries supposes that personalist autocracies have a low female political inclusion. In contrast to party-based regimes, monarchies, as well as personalist and military regimes are not as dependent on political parties for organizing power and controlling the recruiting of political personnel as party-based regimes. Therefore, these regimes lack the capacity and the incentive to provide gender-equal politics. These regime types are based on small support coalitions and a more traditional legitimation of rule. The lack of institutional boundaries and greater political uncertainties under those regimes result in lower female political inclusion at the input and output dimension of politics. Overall, I expect to see a negative effect of monarchies, personalist, and military regime types on women's political inclusion.

> **H1** Party-based autocracies and communist party regimes outperform all other regime types in the level of political inclusion of women into authoritarian politics.

3.3.2 Multiparty competition

My second line of argument emphasizes that the effect of those regime types should differentiate whether the regime allows multiparty competition and holds elections. In contrast to Donno and Kreft (2019, p. 728), I argue that multiparty competition and holding regular elections make a difference for the political inclusion of women depending on the regime type. They argued that ''the means and incentives for coopting women [...] exist even in closed systems where restrictions on political competition can coincide with politics of state-promoted gender equality'' (Donno & Kreft, 2019, p. 728).

For at least two reasons, however, I argue that regimes with multiparty elections, characterized by limited electoral and party competition, enjoy greater incentives to allow women's political inclusion. First, in multiparty elections, parties serve as a selection mechanism for political personnel. Multiparty competition in those regimes should result in a higher degree of women's participation in party politics by introducing a competitive environment between authoritarian parties that are integrating women into party politics. Increasing the electorate for authoritarian parties should result in an incentive to integrate women into party politics and to provide more gender equal access to public services and business opportunities. Nevertheless, electoral competition is limited in autocratic regimes (Schedler, 2013, pp. 78–101) and elections are unfair and less competitive. Second, by integrating women in the political process, multiparty competition generates formal linkages to this part of the potential electorate. In addition, by allowing limited competition and integrating women into parliamentary and civil society politics, regimes with multiparty elections increase their support coalition and enjoy more processual legitimation (cf. Tripp, 2019). I agree with Donno and Kreft that a ''bottom-up'' logic of pressure for gender equality should not operate in authoritarian settings. However, the aforementioned arguments reflect ''top-down'' mechanisms. To substantiate the argumentation, the multiparty competition and election mechanisms are clearly based on an incentive rationale as elaborated above.

These ''top-down'' mechanisms do not work equally in different regime types. I expect that the positive effect of multiparty elections is particularly strong in those regimes with low legitimation claims and a small support coalition. Therefore, I expect that monarchies, personalist and military regimes with multiparty elections should be more politically inclusionary towards women compared to their regime counterparts without multiparty competition. In party regimes and communist regimes, women's political inclusion does not benefit from multiparty competition.

> **H2** Monarchies, military and personalist regimes with multiparty elections are more politically inclusive towards women than their counterparts without multiparty electoral competition.

3.3.3 Party institutionalization

However, my main argument is that party institutionalization enables and provides incentives for authoritarian leaders to be more inclusive towards women on the political power dimension. This article refines the arguments and empirical implementation linking party institutionalization and women's political inclusion. Donno and Kreft investigated the effect of party-based regimes on women's rights and put party-based regimes on the same level as party institutionalization. However, party institutionalization is a matter of degree (e.g., Bizzarro et al., 2017).

Building on Rasmussen and Knutsen (2019), I distinguish between *top-down* and *bottom-up* mechanisms linking facets of party institutionalization with women's political inclusion. The *top-down* mechanism addresses ''how institutionalized parties can create comprehensive bargains in order to arrive at credible policy proposals and override politicians or social groups aspiring to veto'' (Rasmussen & Knutsen, 2019, p. 5). Thus, the top-down mechanism of party institutionalization is mainly based on a capacity rationale. The *bottom-up* mechanism refers to demands from citizens and organized interests and how those demands and interests are institutionalized by parties through local party branches and linkages with the civil society (cf. Rasmussen & Knutsen, 2019). Thus, the bottom-up mechanisms are associated with incentives and capacities to include women in the political process and to provide more gender equal policy outputs (cf. Donno & Kreft, 2019, p. 725).

Top-down mechanisms relate to decision-making power in national-level party institutions and the legislative cohesion of authoritarian incumbent parties. As Rasmussen and Knutsen argued (2019, p. 5), strong *party organizations* enable regime leaders to overcome veto players within the incumbent party by implementing tools for sanctioning and monitoring party members. Strong party organizations can implement candidate selection mechanisms that focus on gender equal selection. Low institutionalized parties cannot overcome such veto players.

Turning to the *bottom-up* mechanisms, I refer to how parties differ in their recruitment practices, how the party is linked to their voters (e.g., Bizzarro et al., 2017) and how they aggregate and perceive voter preferences (e.g., Rasmussen & Knutsen, 2019). Authoritarian parties with *local party branches* should be better at gathering information on the local level and should be able to notice the policy preferences of the local residents better. Those local connections lead to the capacity of authoritarian parties to ''separate signals from noise'' (Rasmussen & Knutsen, 2019, p. 7) and make those parties less likely to focus on particular interests that are expressed more effectively or more vociferously. These mechanisms should lead to greater political inclusion of women into the political process and on the output side of the political process. *Distinct party platforms* relate to publicly available

party manifestos and the degree to which they are distinct from each other. Publicly available party manifestos should enable voters to identify different policy positions of authoritarian parties and, thus, should lead to an increased pressure on incumbent parties to introduce women's inclusion policies due to the potential electoral competition with opposition parties.

In addition, incumbent parties in competitive environments should particularly care about the positions of the opposition parties and the voters. Therefore, the degree of opposition parties' institutionalization should also matter for the incentive of incumbent parties to introduce women's inclusion policies, due to the fact the more institutionalized opposition parties are a greater threat to their rule. These considerations lead to the following hypothesis:

> **H3** Autocracies with greater party institutionalization are more politically inclusive towards women compared to those autocracies with less party institutionalization.

3.4 Methodology and cases

My sample identifies autocratic regime-years using the Geddes et al. data (2014). Geddes et al. defined autocratic regime-years as those years in which the minimal conditions for suffrage and party competition are not satisfied (2014). They classified regimes as dominant-party dictatorships, monarchies (a royal family), military regimes (ruled by military institutions), or personalist dictatorships (narrower group centered on an individual leader). The sample for this study incorporates all authoritarian country-years[5] into the quantitative analysis and covers 4,185 observations in 108 autocratic regimes between 1946 and 2010. The unit of analysis is based on a country-year format.[6]

3.4.1 Dependent variables

This article's measure of women's political inclusion is based on Coppedge et al.'s (2019a, p. 265) measure on exclusion by gender index. It is defined as the political exclusion of women in and restricted access to institution-based political processes, such as under-representation in legislative chambers and political parties, as well as political inequality in political and civil rights and public services that are provided or guaranteed by the state. Women are politically excluded when they are denied access to public services and participation in governed spaces (Coppedge et al., 2019a, p. 265). Please note that I

[5] The including criterion is that at least five or more observations for each country are available.

[6] Using regime-spell format comes with problems with group-mean centering and calculating within and between independent and control variables, because in the regime-spell format, the group-means are highly correlated within countries, and this will bias the estimators. The benefits of the Bell and Jones approach (2015) will be destroyed by using regime-spells.

report the effects of my explanatory variables for women's political inclusion as a positive framing to avoid double negatives, while the dependent variables used in this paper measure exclusion.[7]

It combines components from two dimensions. First, it includes components from the political input side of the coin: *political power distributed by gender* and *equality in respect for civil liberties by gender* are contextualized on the political input side and reflect the question of who participates in political-decision making. Second, it includes components from the political output dimension: *access to public services*, *access to state jobs*, and *access to state business opportunities* are conceptualized on the political output side and represent the results of the political input dimension. However, in authoritarian regimes, these indicators are correlated strongly to warrant being collapsed into a unified index of political gender inequality, as shown in Table 3.1. The variable covers 108 autocratic regimes between 1946 and 2010 with 4,185 country-year observations (see Table B.2).

Table 3.1: Bayesian factor analysis for the Exclusion by Gender Index components

	Loadings (Λ)	**CIs***	**Uniqueness (Ψ)**
power distributed by gender	0.612	[0.583; 0.64]	0.627
equality in respect for civil liberties by gender	0.783	[0.758; 0.809]	0.388
access to public services by gender	0.755	[0.728; 0.782]	0.431
access to state jobs by gender	0.889	[0.865; 0.914]	0.212
access to state business opportunities by gender	0.909	[0.885; 0.934]	0.176

Note: Entries are factor loadings, 95% confidence intervals and uniqueness from a normal theory Bayesian factor analysis model, run through the MCMCfactanal() command in the MCMC package for R (Martin, Quinn, & Park, 2011); n = 4185 country-years; CIs: Confidence Intervals.

The aggregated data on these five indicators are arguably reflective indicators caused by the latent trait ''political exclusion by gender''. To test this assumption, I run a Bayesian factor analysis (BFA) model for the complete sample of authoritarian regimes in this study. Power distributed by gender has somewhat weaker loading and a larger share of its variance unaccounted for (uniqueness). However, the fit to a unidimensional index of

[7] Using the original scaled women's political exclusion variable from V-Dem rather than transforming the indices in reverse order is caused by the calculation of the original indicators and their standardization procedure in the V-Dem country sample.

exclusion by gender is adequate for the sample of authoritarian regimes. Nevertheless, in the empirical chapter of this article, both dimensions are also analyzed as separate latent traits alongside the unified political gender inequality index.

However, even as the indicators in Table 3.1 are reflective for the common cause of political gender inequality, the political input dimension and the output dimension have different causes and consequences in authoritarian regimes.

Therefore, the key dependent variables are women's political exclusion on the input dimension, on the output dimension, as well as a unified index of political gender exclusion. I capture women's political exclusion on the input dimension using the point estimates from a Bayesian factor analysis model of the indicators *power distributed by gender* and *equality in respect for civil liberties by gender*. The output dimension of women's political exclusion is measured by the point estimates from a Bayesian factor analysis model of the indicators *access to public services by gender*, *access to state jobs by gender*, and *access to state business opportunities by gender*. The aggregated data for the input side on the two indicators as well as the data for the output side on the three indicators are arguably reflective indicators caused by two latent traits. The point estimates for both dimensions were re-scaled between 0 (low political exclusion) to 1 (high political exclusion). To test this assumption, I run two BFA models for the complete sample of authoritarian regimes in this study. The results are reported in Tables B.7 and B.8.

Table 3.2 shows the average women's political exclusion on the input side as well as on the output side by regime types and adds country examples for each regime type. It clearly indicates that communist regimes with multiparty elections have the highest political inclusion on the input side, while the political inclusion on the output side was the highest on average in communist regimes without multiparty elections. The worst for women's political inclusion on average are monarchies without multiparty elections for both the input and output side of women's political inclusion. However, the average women's political inclusion by regime type only serves as a first step in dismantling the relationship between regime types, party institutionalization, and women's political inclusion.

Table 3.2: Average Women's Political Exclusion by regime type

Regime Type	Average WPE on the input side	Average WPE on the output side	Country example
communist party	0.328	0.403	Albania 1964-89 Poland 1946-88
communist party with ME	0.288	0.448	Angola 1992-2006 Cuba 1962-92
military regime	0.562	0.54	Chile 1974-88 Niger 1975-88
military regime with ME	0.486	0.562	Brazil 1966-1985 Algeria 1993-2010
monarchy	0.742	0.749	UAE 1972-2010 Iran 1946-1962
monarchy with ME	0.65	0.644	Jordan 1947-2010 Nepal 1959-1980
party regime	0.41	0.54	Gabon 1967-89 Cambodia 1976-92
party regime with ME	0.458	0.562	Botswana 1969-2010 Egypt 1976-2010
personalist regime	0.538	0.656	Benin 1961-63 1979-1990
personalist regime with ME	0.412	0.539	Burkina Faso 1965-80 Bangladesh 1976-90

Note: WPE: Women's Political Exclusion. Based on the sample for Model 1 and 2. n = 4185.

3.4.2 Independent variables

The theoretical considerations predict the effects of different authoritarian regime types on women's political inclusion. Theoretically, the distinction between one-party rule and communist rule is important for investigating effects on gender equality. To measure those regime types, this contribution uses data from Geddes et al. (2014) differentiating between party, military, and personalist regimes as well as monarchies. To construct a separate category for communist regimes that ''is essential in a historical and theoretical perspective'' (Kailitz, 2013, p. 41), I use V-Dem data on the regime ideology of authoritarian regimes.[8] For all party regimes in the Geddes et al. dataset (2014), I check whether or not the regime

[8]See v2exl_legitideol_1 variable in the V-Dem dataset.

ideology was communist or socialist according to the V-Dem measure.[9] All countries have only one regime classification each year.

The second independent variable is whether those regime types hold multiparty elections. To construct regime types that distinguish between regime-years with and without multiparty electoral competition, I use an indicator for multiparty competition from V-Dem. All regimes in which multiparty competition is > 1 are regimes with multiparty electoral competition.[10] Thus, I can match these data with the Geddes et al. regime types and differentiate between those regime types with and without multiparty competition. In order to test Hypothesis 2, this distinction within regime types is theoretically indicated. It is furthermore an appropriate way to combine two aspects of authoritarian regimes: the identity of political elites (Geddes et al., 2014) and the electoral dimension of regimes (Coppedge et al., 2019a).[11]

In my sample, I can identify 457 communist regime-years without multiparty competition, and 188 with multiparty competition. 152 military regime-years are without multiparty competition, while in 375 military regime-years multiparty competition was in place. This distinction provides us with unique opportunities to answer the question of whether multiparty elections matter, and to further advance the insights that are possible with the Geddes et al. regime classification (2014).

I also rely on V-Dem data to measure party institutionalization. Donno and Kreft have used regime types in order to argue that more institutionalized party regimes are more likely to provide women's rights. However, as Figure B.3 shows, the degree of party institutionalization differs substantively within party-based regimes, as well as within other regime types. Therefore, measuring institutionalized party rule by regime type proxies is at the least problematic.

Thus, I use a more convincing measure of institutionalized party rule. The *party institutionalization index* measures various attributes of political parties. The index includes five subcomponents: (1) the number of parties with permanent organizations at the national level, (2) the number of parties with permanent local party branches, (3) the most common type of linkage to constituents in major parties, (4) the number of parties with distinct party platforms, and (5) the legislative party cohesion in terms of voting together.[12] Party institutionalization ranges from 0 to 1, where higher values indicate greater institutionaliza-

[9] Communist or socialist ideology is observed when the v2exl_legitideol_1 variable is > 0.8 on the scale between 0 and 1.

[10] v2elmulpar_osp.

[11] However, one possible concern may be that by combining different dimensions of authoritarian rule, my regime typology combines different aspects that are not directly comparable. To deal with this concern, additional robustness tests examine the effect of multiparty regimes on women's political inclusion by using the Wahman et al. typology (2013).

[12] Coppedge et al., 2019a, p. 281.

tion. The index measures incumbent and opposition parties in multiparty autocracies, while it measures solely the incumbent party in one-party autocracies. However, it considers the attributes of all parties with an emphasis on larger parties, representing mainly the dominant incumbent party in all regime types. Measuring party institutionalization on the country-year level in autocracies is an important limitation of this study due to the fact that the relative strength and institutionalization of the autocratic ruling party vis-à-vis the opposition parties in multiparty autocracies cannot be measured at this level of inquiry. However, cross-national data for the institutionalization of autocratic ruling parties is until now not available (e.g., Michael K. Miller, 2020b), and therefore an avenue for future research.

In addition, I also disaggregate party institutionalization based on the individual indicators that are summed up in the index. Disaggregation informs us about different theoretically relevant mechanisms that connect subcomponents with women's political inclusion. Please note that in all analyses[13] that include the party institutionalization index, only those regime-years are covered in which at least one regime party is in place. Those regimes without any party are excluded.[14] An additional empirical limitation of the empirical approach measuring the explanatory variables is the inability to distinguish between capacity and incentive rationales within the models, in particular the fact that the capacity and incentives of authoritarian regimes do not necessarily go together. However, this can be a starting point for future research.

3.4.3 Control variables

The models include a series of control variables whose inclusion may confound the relationship between party institutionalization, regime types and women's political inclusion (see Table B.1). I control for natural logarithmized GDP per capita, with data from the Maddison Project Database (2019), because higher income levels have a positive effect on women's political inclusion by promoting gender equal values due to modernization and an increase of the capacity of the state to implement gender-related policies (e.g., Stockemer, 2015). I control for population size (measured by the natural logarithm, World Bank, 2019) as a standard control for country-specific factors and the effect of population size on socioeconomic processes. Following the rentier state literature, natural resource incomes could also affect autocratic regimes' capacities to repress gender equality. The control variable is based on data from Haber and Menaldo (2011) and measures the real value of a country's yearly natural resource income. Furthermore, autocratic regimes

[13] See Models 5-8.

[14] However, this should be not problematic because almost all contemporary autocracies use political parties for institutionalizing power. Nevertheless, comparing the results with the results from Models 1-4 should be done with caution due to different inclusion criteria.

with a high ratio of the population excluded for ethnic or religious reasons have a lower proportion of female legislators or less civil society participation due to potential ethnic or religious conflicts. The variable ethnic excluded population is taken from the Ethnic Power Relations dataset (Wimmer, Cederman, & Min, 2009).

Statistical procedures

The dataset used in this article is hierarchically constructed: it comprises country-years as measurement occasions nested within countries. To test how relevant the modelling is within and between variance, I estimated the intra-class correlation coefficient (ICC). The ICC shows that 92% of the variation in the data comes from the between-country sample, while 8% of the variation comes from the within-country sample.[15] Modelling between- and within-sample information are therefore both crucial to understanding the effects of regime types and control variables on women's political inclusion. By showing that only 8% of the variation in the data comes from the within-country sample, this article provides empirical evidence that regime type changes within countries[16], as well as increasing party institutionalization over time within countries, do not largely affect the variation in women's political inclusion of authoritarian regimes. Thus, the differences in independent variables between countries are explanatory for the variance in gender politics under authoritarianism.

Random effect models with within-between estimators can model dependence within groups by partitioning variance at country-years and country levels (Bell & Jones, 2015). Furthermore, within-between random effects models enable the study of major statistical considerations ''regarding the data such as dependency within countries; data points within a country are more dependent on each than occasions in different countries; making the assumption of homoscedasticity of standard linear regression modelling implausible'' (Bell & Jones, 2015, p. 457). Within-between random effects models ''also explicitly model heterogeneity in the effect of predictor variables'' (Bell et al., 2018, p. 6) at both the country-year and country level. Including random intercepts and random slopes into the models allows for considering complex level-1 variance functions (heteroscedasticity) and randomly varying predictors between autocratic regimes, and makes the results more robust regarding the reliability of the country estimates (Snijders & Bosker, 2011, p. 62). I follow Bell and Jones when mean-centering all continuous independent and control variables and calculating deviations from the country means for each of the centered variables.

In this article, within and between effects are modelled as separate effects, which are allowed to differ by including the country mean of the variables. The equation for the

[15] ICC calculated for Model 1.

[16] There are 104 regime type changes within countries in the data.

simple random intercept model[17] is combined to form:

$$Women's\ Political\ Exclusion_{it} = \beta_0 + \beta_{1W}\ (x_{it} - \overline{x}_i) + \beta_{2B}\ \overline{x}_i + \beta_3\ z_i\ + \upsilon_i + \epsilon_{it}$$

and for complex random slope effects model:

$$Women's\ Political\ Exclusion_{it} = \beta_0 + \beta_{1W}\ (x_{it} - \overline{x}_i) + \beta_{2B}\ \overline{x}_i + \beta_3\ z_i\ + \upsilon_{i0} + \upsilon_{i1}\ (x_{it} - \overline{x}_i) + \epsilon_{it} \tag{3.2}$$

where x_{it} is a series of time-variant independent and control variables while $\overline{x}_i$ is the higher-level countries' i's mean. β_{1W} is an estimate of the within (longitudinal) effect while β_{2B} is an estimate of the between (cross-sectional) effects of x_{it}; z_i is a vector of time-invariant variables. Through this equation (within-between random effects model), the effects are clearly separated from one another (Snijders & Bosker, 2011, p. 58).

I fit the two following random effect models:

1. Models 1 - 4 with linear covariates and a growth curve for women's political exclusion, with the variance separated between countries and country-years (simple random intercept model)
2. Models 5 - 8 as above, but with the within effect of party institutionalization allowed to vary at both levels 1 and 2 (complex random slope model).

3.5 Empirical findings

Before turning to the empirical findings of the *REWB* models, Table 3.3 and Table 3.4 show the top and bottom ten regime spells for the input side of political exclusion (Table 3.3) and the output side of women's political exclusion (Table 3.4). Regime spells are defined as a period in which the regime type according to Geddes et al. (2014)[18] and the multiparty elections indicator does not change. Table 3.3 shows that six out of ten regime spells with the lowest political inclusion on the input side are monarchies. However, also some party regimes, such as Bolivia, are especially exclusionary towards women. On the other hand, five out of ten regime spells are countries with party-based rule and three out of ten are communist regimes. These findings provide preliminary support for Hypothesis 1.

[17] In this simple random intercept model, I have a growth curve for testing for time effects.
[18] Updated by the author with communist regimes.

Table 3.3: Highest and Lowest Authoritarian Regimes on Women's Political Exclusion (Input Side)

Country	Regime Type	Begin	End	Mean WPE on the input side
	Bottom Ten Regime Spells			
Saudi Arabia	monarchy	1946	2010	0.961
Yemen	monarchy	1946	1962	0.934
Kuwait	monarchy	1962	1962	0.894
Bolivia	party regime	1946	1946	0.866
Bolivia	party regime with ME	1947	1951	0.86
Chile	military regime	1974	1988	0.85
Chile	military regime with ME	1989	1989	0.84
Kuwait	monarchy with ME	1963	2010	0.831
Burundi	monarchy	1963	1964	0.822
Burundi	monarchy with ME	1965	1966	0.822
	Top Ten Regime Spells			
Bulgaria	party regime with ME	1990	1990	0
Bulgaria	party regime	1949	1989	0.006
Rwanda	party regime with ME	2003	2010	0.029
Hungary	party regime with ME	1990	1990	0.085
Venezuela	personal regime with ME	2006	2010	0.088
Bulgaria	party regime with ME	1946	1948	0.098
Romania	communist party with ME	1947	1974	0.13
Romania	communist party	1975	1989	0.132
Uganda	personal regime with ME	1996	2010	0.143
Hungary	communist party with ME	1985	1989	0.156

Note: Top ten and bottom ten regime spells are selected by the mean of women's political exclusion on the input side. WPE: Women's Political Exclusion.

Table 3.4 shows the best and worst regime spells on the output side of political inclusion. It reveals that seven out of ten regime spells with the highest political inclusion on the output side are regimes with multiparty elections, such as Belarus (1994-2010) or Ghana (1982-2000). On the other hand, regime spells with the worst performance on the output side are a mixture of party-based, communist, military regimes, and monarchies, contradicting Hypothesis 1.

Table 3.4: Highest and Lowest Authoritarian Regimes on Women's Political Exclusion (Output Side)

Country	Regime Type	Begin	End	Mean WPE on the output side
	Bottom Ten Regime Spells			
Yemen	monarchy	1946	1962	0.985
Peru	military regime	1949	1955	0.957
Bolivia	party regime with ME	1947	1951	0.951
Bolivia	military regime with ME	1952	1952	0.951
Bolivia	party regime	1946	1946	0.951
Iran	monarchy	1946	1962	0.928
Cambodia	communist party	1977	1979	0.919
Cambodia	party regime	1976	1976	0.919
Honduras	party regime	1946	1947	0.917
Saudi Arabia	monarchy	1946	2010	0.903
	Top Ten Regime Spells			
Hungary	party regime with ME	1990	1990	0
Singapore	party regime with ME	1968	2010	0.117
Ghana	personal regime with ME	1982	2000	0.157
Singapore	party regime	1966	1967	0.169
Belarus	party regime with ME	1994	1994	0.176
Belarus	personal regime with ME	1995	2010	0.176
Belarus	party regime	1992	1992	0.177
Cuba	party regime with ME	1960	1961	0.188
Cuba	communist party with ME	1962	1992	0.188
Cuba	communist party	1993	2010	0.188

Note: Top ten and bottom ten regime spells are selected by the mean of women's political exclusion on the output side. WPE: Women's Political Exclusion.

In the following, the results are reported for women's political inclusion on the input side. Results for the output side and the comprehensive index of women's political exclusion are discussed in Sections B.2.1 and B.2.2 of the Supplementary Appendix. Table 3.5 reports the results for Models 1-4. Model 1 estimates the relationship between women's political exclusion (input side) and regime types. Model 2 estimates the relationship between women's political exclusion using the modified Geddes et al. regime types (2014) and testing for the effect of multiparty competition within regimes. Model 3 adds control variables to Model 1, while in Model 4 controls are added to Model 2.

Model 1 shows the estimates of the relationship between women's political exclusion and regime types, without controlling for economic, demographic, and temporal factors.

Drawing on 4,182 observations from 107 autocratic countries, it suggests a significant and negative effect for communist regimes, indicating that communist regimes are associated with a higher political inclusion of women (H1) compared to military regimes (reference category). Furthermore, personalist regimes and party regimes have positive effects on women's political inclusion, even if these findings were not expected for personalist regimes compared to military regimes (H1). Also monarchies perform better compared to military regimes regarding the political inclusion of women. Figure 3.2 reports the marginal effects on women's political exclusion of the regime types for Model 1 and Model 3. The results indicate that communist regimes, as well as party regimes, monarchies, and personalist regimes have a positive effect on the political inclusion of women compared to military regimes, whether I control for socioeconomic controls or not.

Table 3.5: Linear Within-Between Model Predicting Women's Political Exclusion

	Model 1	Model 2	Model 3	Model 4
(Intercept)	8.55***	8.19***	9.52***	9.00***
	(0.14)	(0.15)	(0.59)	(0.58)
Year	−0.00***	−0.00***	−0.00***	−0.00***
	(0.00)	(0.00)	(0.00)	(0.00)
Communist Party Regime	−0.04***		−0.03***	
	(0.01)		(0.01)	
Monarchy	−0.02**	−0.02*	−0.04***	−0.02
	(0.01)	(0.01)	(0.01)	(0.01)
Party Regime	−0.01**	−0.03***	−0.02**	−0.05***
	(0.00)	(0.01)	(0.01)	(0.01)
Personal	−0.04***		−0.04***	
	(0.01)		(0.01)	
Communist Regime		−0.07***		−0.08***
		(0.01)		(0.01)
Communist Regime with MC		−0.07***		−0.06***
		(0.01)		(0.01)
Military Regime with MC		−0.04***		−0.06***
		(0.01)		(0.01)
Monarchy with MC		−0.08***		−0.10***
		(0.01)		(0.01)
Party Regime with MC		−0.05***		−0.06***
		(0.01)		(0.01)
Personal Regime		−0.07***		−0.07***
		(0.01)		(0.01)
Personal Regime with MC		−0.08***		−0.09***
		(0.01)		(0.01)
GDP pc log			0.01*	0.00
			(0.00)	(0.00)
GDP pc log (b)			−0.03	−0.02
			(0.02)	(0.02)
Population log			−0.01	−0.01
			(0.02)	(0.02)
Population log (b)			−0.00	−0.00
			(0.03)	(0.03)
Ethnic Excluded Population			0.02*	0.02†
			(0.01)	(0.01)
Ethnic Excluded Population (b)			0.23**	0.23**
			(0.08)	(0.07)
Resource Income			−0.00*	−0.00
			(0.00)	(0.00)

	Model 1	Model 2	Model 3	Model 4
Resource Income (b)			0.04***	0.04***
			(0.01)	(0.01)
Random Effects				
σ^2	0.00	0.00	0.00	0.00
τ_{00}	0.00	0.01	0.01	0.01
τ_{11}	0.00	0.00	0.00	0.00
ρ_{01}	0.00	-0.00	-0.00	-0.00
AIC	-10996.95	-11060.46	-7973.43	-8045.06
BIC	-10933.56	-10965.38	-7865.62	-7907.31
Log Likelihood	5508.47	5545.23	4004.72	4045.53
Num. obs.	4182	4182	2949	2949
Num. countries	107	107	100	100

$^{***}p < 0.001$, $^{**}p < 0.01$, $^{*}p < 0.05$, $^{\dagger}p < 0.1$

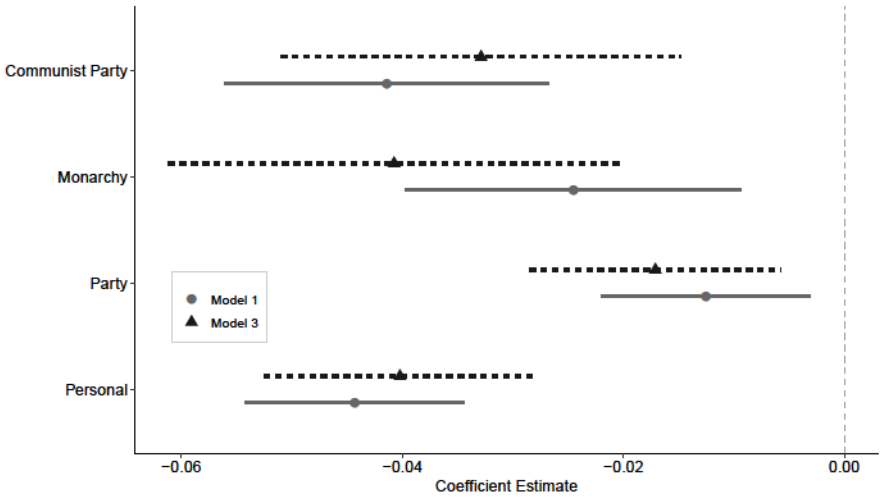

Figure 3.2: Marginal Effects on Women's Political Exclusion of Party Institutionalization

This figure reports the marginal effects on women's political exclusion of party institutionalization and modified regime types. The figure is based on Table 3.5, Models 1 and 3.

Model 2 indicates that multiparty electoral competition in authoritarian regimes matters for explaining women's political inclusion. Figure 3.3 shows the marginal effects on women's political exclusion of the modified regime types. It indicates that multiparty electoral competition still makes a difference within the regime categories. Thus, Figure 3.3 reports that military regimes with multiparty elections have more political inclusion of women compared to those without multiparty elections. In addition, monarchies with multiparty competition are more politically inclusive towards women compared to their counterparts without electoral competition. Models 2 and 4, as well as Figure 3.3 clearly indicate

that Hypothesis 2 holds for my sample of authoritarian regimes when controlling for socioeconomic factors.

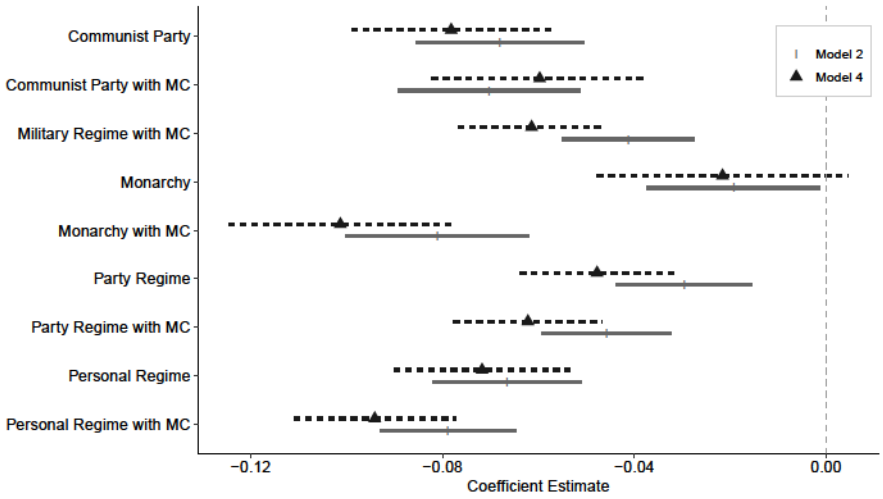

Figure 3.3: Marginal Effects on Women's Political Exclusion of Party Institutionalization

This figure reports the marginal effects on women's political exclusion of party institutionalization and modified regime types. The figure is based on Table 3.5, Models 2 and 4.

Despite the regime type effects, one might worry that other confounders or time-trends generate a spurious link between the regime types and women's political inclusion. While Models 1 and 2 only include a time trend and the regime types, Models 3 and 4 add socioeconomic and population controls. While Models 3 and 4 suggest that high levels of per capita GDP in the between-country part systematically increase women's political inclusion, they also suggest that high levels of ethnically excluded population and resource income in the between country part are negatively related to women's political inclusion. In addition, the results in Table 3.5 indicate that in the within part only a few of the controls are significantly associated with women's political inclusion. This finding indicates that modelling between- and within-effects separately reveals that within countries there is not a lot of variation to explain.

I now turn to my main argument. Models 5-8 in Table 3.6 display the models including the between and within effects of party institutionalization on women's political exclusion.[19] As Figure 3.4 clearly indicates that a one-unit increase in party institutionalization between countries increases the women's political inclusion by 0.37 (Model 5). The result holds when controlling for income, population, resource income, and excluded population in Model 7, and party institutionalization only drops from 0.37 to 0.26 and remains highly significant.

[19]These models use the complex random slope architecture that allows the effects of party institutionalization to vary at the country-year and the country level.

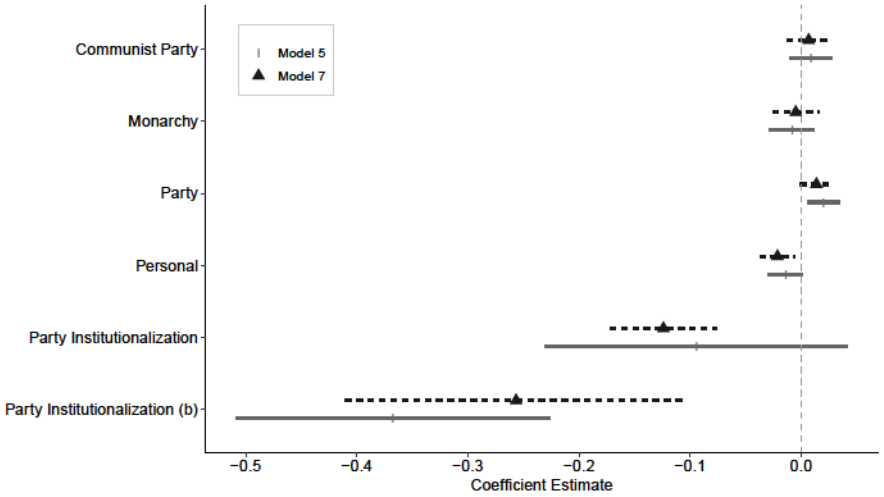

Figure 3.4: Marginal Effects on Women's Political Exclusion (Input Dimension) of Party Institutionalization

This figure reports the marginal effects on women's political exclusion of party institutionalization and modified regime types. The figure is based on Table 3.6, Models 5 and 7.

Within countries, party institutionalization increases women's political inclusion by 0.12 and remains highly significant when including controls in Model 7. While the degree of party institutionalization is the main driver of women's political inclusion, the regime type effects become substantially irrelevant and are statistically insignificant, as indicated by my theory and depicted in Figure 3.4.

Figure 3.5 displays the results for Models 6 and 8 when controlling for the regime types with and without multiparty competition and the effect of party institutionalization. As the marginal effect plot indicates, between countries party institutionalization increases women's political inclusion, while whether the specific regime types have multiparty electoral competition or not does not affect the level of women's political inclusion much. Only for monarchies and military regimes I identify an effect of multiparty electoral competition. Monarchies and military regimes without that kind of competition significantly decrease the inclusion of women compared to their counterparts with multiparty competition.

In summary, increased party institutionalization within a country over time leads to improved gender equality in this country. Moreover, among different authoritarian countries, those regimes with higher degrees of party institutionalization outperform other authoritarian countries with less institutionalized parties. However, multilevel modelling tells us that 92% of the variation comes from differences between authoritarian regimes, while only 8% of the variance can be explained by within-country factors. It seems that within countries, increased party institutionalization is the main explanatory variable.

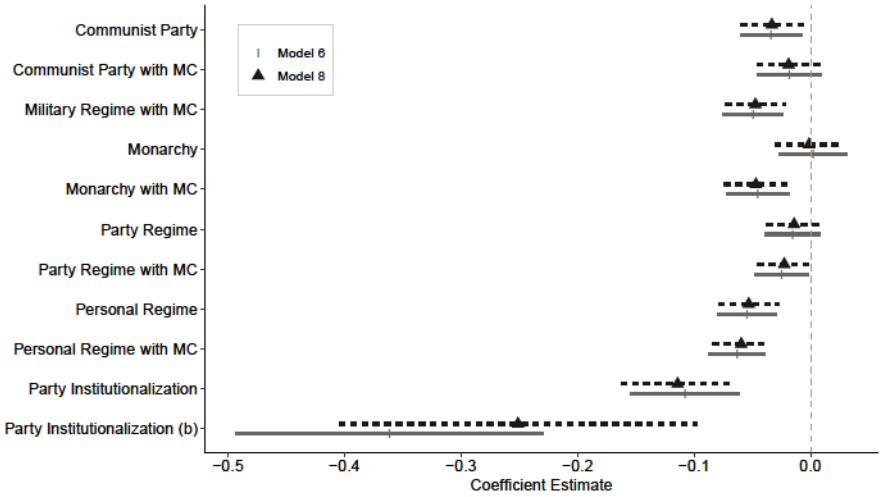

Figure 3.5: Marginal Effects on Women's Political Exclusion (Input Dimension) of Party Institutionalization

This figure reports the marginal effects on women's political exclusion of party institutionalization and modified regime types. The figure is based on Table 3.6, Models 6 and 8.

Table 3.6: Linear Within-Between Model Predicting Women's Political Exclusion

	Model 5	Model 6	Model 7	Model 8
(Intercept)	6.96***	7.13***	7.07***	7.01***
	(0.21)	(0.23)	(0.57)	(0.57)
Year	−0.00***	−0.00***	−0.00***	−0.00***
	(0.00)	(0.00)	(0.00)	(0.00)
Communist Party Regime	0.01		0.01	
	(0.01)		(0.01)	
Monarchy	−0.01	0.00	−0.00	−0.00
	(0.01)	(0.01)	(0.01)	(0.01)
Party Regime	0.02**	−0.02	0.01†	−0.01
	(0.01)	(0.01)	(0.01)	(0.01)
Personal	−0.01†		−0.02**	
	(0.01)		(0.01)	
Party Institutionalization	−0.09	−0.11***	−0.12***	−0.11***
	(0.07)	(0.02)	(0.02)	(0.02)
Party Institutionalization (b)	−0.37***	−0.36***	−0.26**	−0.25**
	(0.07)	(0.07)	(0.08)	(0.08)
Communist Regime		−0.03*		−0.03*
		(0.01)		(0.01)
Communist Regime with MC		−0.02		−0.02
		(0.01)		(0.01)
Military Regime with MC		−0.05***		−0.05***
		(0.01)		(0.01)
Monarchy with MC		−0.05***		−0.05***
		(0.01)		(0.01)
Party Regime with MC		−0.02*		−0.02†
		(0.01)		(0.01)
Personal Regime		−0.05***		−0.05***
		(0.01)		(0.01)
Personal Regime with MC		−0.06***		−0.06***
		(0.01)		(0.01)

	Model 5	Model 6	Model 7	Model 8
GDP pc log			0.01***	0.01**
			(0.00)	(0.00)
GDP pc log (b)			−0.00	−0.00
			(0.02)	(0.02)
Population log			−0.01	−0.01
			(0.02)	(0.02)
Population log (b)			0.01	0.01
			(0.03)	(0.03)
Ethnic Excluded Population			−0.02*	−0.02**
			(0.01)	(0.01)
Ethnic Excluded Population (b)			0.17*	0.17*
			(0.07)	(0.07)
Resource Income			−0.00*	−0.00†
			(0.00)	(0.00)
Resource Income (b)			0.03**	0.02*
			(0.01)	(0.01)
Random Effects				
σ^2	0.00	0.00	0.00	0.00
τ_{00}	0.00	0.00	0.00	0.00
	0.02	0.00	0.00	0.00
τ_{11}	0.00	0.00	0.00	0.00
	0.35	0.02	0.02	0.02
ρ_{01}	0.00	-0.00	0.00	-0.00
	0.00	0.00	0.00	0.00
AIC	-8170.48	-7773.57	-7755.28	-7750.64
BIC	-8083.31	-7657.33	-7621.60	-7587.90
Log Likelihood	4100.24	3906.78	3900.64	3903.32
Num. obs.	2470	2470	2470	2470
Num. countries	99	99	99	99

$^{***}p < 0.001$, $^{**}p < 0.01$, $^{*}p < 0.05$, $^{\dagger}p < 0.1$

3.6 Robustness tests

I undertake a series of additional robustness tests that, briefly summarized, show that the main findings on party institutionalization and the regime type effects are very robust.

First, I estimate the above-performed models with two different dependent variables as additional tests in Section B.2.1 and B.2.2 of the Supplementary Appendix. Section B.2.1 estimates the effects on women's political inclusion, measured as a comprehensive index including the input and output side. Section B.2.2 estimates the effects on the women's political inclusion at the output side. Overall, these models show that the results from the models hold.

One concern is that the indicators of the women's political exclusion index should be analyzed separately to avoid inadvertent conflation. A comprehensive index tends to perform poorly when the indicators are not reflective of a common cause. However, as shown in Table 3.1, B.7 and B.8, these indicators are reflective indicators. I thus use the five subcomponents as dependent variables and replicate the models. Sections B.3.1 to

B.3.5 replicate Table 3.5 and Table 3.6 by using the sub-indicators of the women's political exclusion index. These additional tests largely confirm that party institutionalization is the main driver of women's political inclusion in authoritarian regimes.

Another concern is that my main independent variable, the party institutionalization index, is too broad. A comprehensive measure may mask the individual effects of the subcomponents of the concept. I thus disaggregated party institutionalization in its subcomponents. Table B.23 employs women's political exclusion as the dependent variable but uses the individual indicators of party institutionalization in Model 5.1 to 5.5. For women's political inclusion, all of the five indicators in the between country part have a strong and statistically positive effect. Within countries, three of the five components have a positive and statistically significant effect. Model 5.6 uses all components simultaneously and finds that the observed effects remain for *party organizations* and *local branches*. All robustness tests confirm that party institutionalization has a clear relationship with women's political inclusion.

A third concern is that the choice of data to measure authoritarian regime types affect the results. Therefore, Section B.4 in the Supplementary Appendix tests whether the main results hold when using the regime typology by Wahman et al. (2013). The findings in Section B.4 of the Appendix indicate that the results are robust among different regime type data. In particular, Figures B.13, B.15, and B.17 show that party institutionalization is the main explanatory factor for women's political inclusion irrespective of the outcome variable.

A final concern may be that the within-between random effect models do not adequately account for country and year fixed effects. However, this claim is not appropriate (cf. Bell & Jones, 2015). In Table B.24 and B.25, I use a fixed-effects specification with country and year fixed effects. The FE models include corrected standard errors to account for country-specific effects. Party institutionalization (Models 5-8) remains comparable in size to the benchmark model in Table 3.6 and remains significant at 1%.

3.7 Discussion and conclusion

This article argues that (1) different types of authoritarian regimes explain women's political inclusion in the context of non-democratic rule, and (2) regimes with highly institutionalized parties have both the incentive and capacity to provide more political inclusion of women. It identifies different mechanisms that contribute to the relationship between regime types, party institutionalization, and women's political inclusion. The theoretical model expects that party-based regimes and communist party regimes should outperform monarchies, personalist, and military regimes in the inclusion of women into politics by providing highly

institutionalized political environments and political legitimation claims. In addition, it defines the effect of party institutionalization on women's political inclusion more precisely, and tests for party institutionalization within and between countries. Party institutionalization is theorized to pull women's political inclusion, implying that regimes with highly institutionalized parties should make for greater political inclusion of women.

Both expectations find empirical support. First, I find evidence consistent with the claim that regime types matter in women's political inclusion (H1). However, the findings concerning women's political inclusion in personalist dictatorships and monarchies are unexpected. Theoretically, both should have notably negative effects on gender equality because of the non-existence of institutional constraints and the reduction due to a strongman leader. Rather, both have positive effects on women's political inclusion on the input side.

Whenever contemplating party institutionalization as a more valuable measure of institutionalized political environments the regime type effects largely disappear. Party institutionalization is the main driver for more political inclusion of women under non-democratic rule (H3), both within countries and between countries. I also find evidence that multiparty electoral competition does not affect women's political inclusion in general, but in military regimes and monarchies, multiparty competition still makes a difference (H2).

The reported patterns are also pertinent for the output side of women's political inclusion as well as the unified index. Whenever contemplating party institutionalization, the regime type effects are substantially irrelevant, while the effects of the regime types differ partially between the dependent variables. This finding contributes to the idea that women's political inclusion in autocracies on the input and output side is substantially related even if both have different causes and consequences.

This research contributes to the literature on (gender) inequality under authoritarian rule (e.g., Donno & Kreft, 2019; Stockemer, 2009; Tripp, 2019). My findings support Donno and Kreft's analysis stating that multiparty electoral competition is not systematically associated with better women's rights in general (cf. Donno & Kreft, 2019). However, I refine the argument and empirically test the argument that party institutionalization matters. In addition, the results suggest long-term implications for democratization and democratic consolidation because gender inequality should continue to have an effect on democratization processes and after democratization. However, future work might use the theoretical framework developed in this study and examine (a) how countries with regime type changes perform compared to those without regime type changes, and (b) how the party institutionalization of incumbent parties and the opposition interact with each other,

affecting the equation between incentives and capacity.

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Replication files are available at Harvard Dataverse:

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Chapter 4

Economic inequality, income, and their effects on electoral and civil society participation in authoritarian regimes

ABSTRACT

What effect does economic inequality in authoritarian regimes have upon the political participation of its citizens? Do individual income and repression each have a greater effect than economic inequality? Three prominent theories, namely the Conflict, Relative Power, and Resource Theories address the inequality-participation puzzle in the context of democracies. However, theoretical arguments and empirical evidence for non-democratic regimes are scarce. I argue that it is individual income and the level of repression rather than economic inequality that explain political participation in autocracies. Using three-level hierarchical models that combine micro and macro level data for 65,000 individuals covering a various set of 34 authoritarian regimes and 54 country-years, this analysis demonstrates that higher levels of economic inequality hardly suppress political participation among all citizens. However, individual income has a more powerful effect on civil society participation, while the level of repression decreases the voting likelihood more powerfully than income. These findings suggest that the Resource Theory generates the greatest empirical support for autocracies.

KEYWORDS

economic inequality, political participation, voting, civil society, authoritarian regimes, World Value Survey

Note: This chapter is identical to an article published as Pelke (2020a) in *Zeitschrift für Vergleichende Poltikwissenschaft*; https://doi.org/10.1007/s12286-020-00463-4.

4.1 Introduction

Recent academic debates on the relationship between economic inequality and political participation (the inequality-participation nexus) focused on democratic regimes and western countries (Filetti & Janmaat, 2018; Karakoc, 2013; Lancee & Van de Werfhost, 2012; Ritter & Solt, 2019; Solt, 2008, 2010). In contrast, this study investigates the theoretical and empirical connections among economic inequality, income, and political participation[1] for non-democratic regimes with data from the World Value Survey for over 65,000 individuals covering a various set of 34 authoritarian regimes. Only few studies have examined the effect of economic inequality on political participation and individual political preferences in non-democratic regimes (cf. Haggard, Kaufman, & Long, 2013; Karakoc, 2013). However, as indicated by Figure C.2 in the Supplementary Appendix, the distribution of economic inequality in autocracies is comparable with the distribution in democracies, even though more autocracy-years cluster around a GINI of 40. Even if the distribution of economic inequality is comparable, the mechanisms that drive political participation in autocracies are fundamentally different from those in democracies.

Many scholars have arrived at empirical confirmations of the Relative Power Theory, and have argued that economic inequality should have a negative effect on political participation in general, and that the negative effect should be larger for poorer individuals (Ritter & Solt, 2019; Solt, 2008). Other studies have found evidence that the Resource Theory explains the political participation of individuals (e.g., Alesina & La Ferrara, 2000; Uslaner & Brown, 2005). The Resource Theory argues that higher individual income has a positive impact on political participation, and that economic inequality has a negative or positive effect on participation. In contrast to the empirical evidence for the Relative Power and the Resource Theories, the Conflict Theory has not generated much empirical evidence for a positive effect of income inequality on political participation (e.g., Solt, Hu, Hudson, Song, & Yu, 2016, 2017). The Conflict Theory suggests that greater economic inequality leads to incompatible views on the distribution of political power between rich and poor citizens. Karakoc found that greater economic inequality leads to lesser civil society participation by all income groups, but can also mobilize civic participation of poor individuals at high levels of inequality (Karakoc, 2013, p. 214). This finding supports the predictions of both the Conflict and Resource Theories.

Theoretically, this article builds on the above mentioned theories developed for democratic contexts and tests whether the theories can applied in authoritarian contexts. The aim

[1] In this article political participation is used in its broad sense. Political participation is here defined as activities undertaken by citizens to influence political decisions (e.g., H. E. Brady, 1998; Deth, 2001, 2016). This encompass electoral participation as well as civil society engagement. However, these two branches have different causes and consequence for authoritarian regimes. For better legibility, the distincition between both is used later in the article.

of this paper is to redefine the theories for authoritarian context and to arrive at a more precise theoretical specification of the causal mechanisms between inequality and political participation under authoritarianism. This article refers to the Resource Theory and argues that the theoretical mechanisms which connect individual income and political participation are affected by the level of repression and patronage in authoritarian regimes. I use the insights of the literature on repression in authoritarian regimes (e.g., Davenport, 2007; Escribà-Folch, 2013; Gerschewski, 2013) and argue that individual income in conjunction with repression can affect political participation in authoritarian regimes. This article argues that individual income has a more powerful effect on political participation than macro-level inequality and the interaction between income and inequality. In contrast, it further argues that repression decreases individual participation in authoritarian politics. In contrast to the Relative Power and Conflict Theories, this article expects that economic inequality will not work as a suppressing factor on political participation in authoritarian regimes, because individual political behaviour is not an extension of economic interests in authoritarian regimes. Political participation under authoritarianism is affected by information distortion, corruption and patronage networks, as well as forced mobilization and clientelism. Therefore, income inequality should be misperceived by individuals (Gimpelson & Treisman, 2018). In sum, this article expects that individual income is the main individual factor that affect participation, because richer individuals are less prone to forced mobilization and information distortion.

To demonstrate the effect of individual income and to arrive at a nuanced empirical picture of the political consequences of economic inequality in authoritarian regimes, I test my theoretical argument using three-level hierarchical models and data from the World Value Survey for over 65,000 individuals nested in 54 country-years across in 34 countries.

I find evidence that inequality has a less powerful effect than individual income. The results clearly demonstrate that economic inequality has the same effect, both for poor and for rich individuals. The effect of economic inequality is insignificant and very uncertain. The results also show that individual income and education have a major impact on the political participation of citizens under non-democratic rule. In accordance with my theoretical expectations, repression in the context of elections decreases voting likelihood. The results support the Resource Theory and challenge the explanatory power of the Conflict and the Relative Power Theories for authoritarian regimes.

This study contributes to the existing literature in three ways. First, by transforming the theoretical expectations as articulated by the three theories on political participation to the context of authoritarian regimes. By developing theoretical assumptions for authoritarian regimes, this article presents empirical evidence for the inequality-participation nexus in the context of authoritarian regimes. Second, this study challenges important assumptions of

the distributive conflict models. By investigating the determinants of political participation in autocracies, this study contributes to the literature on authoritarian elections (cf. Knutsen, Nygård, & Wig, 2017; Levitsky & Way, 2010; Schedler, 2013). Third, it contributes to the research on the political behavior and trust of individuals under authoritarianism (cf. Gandhi & Ong, 2019; Mauk, 2020). By presenting evidence that political participation is distributed unequally based on income and education, autocracies foster political participation indirectly by facilitating economic development and providing education that may have long-term effects for the stability of those non-democracies (cf. Acemoglu, Johnson, Robinson, & Yared, 2005; Paglayan, 2020).

4.2 Previous research on political participation and economic inequality

A large volume of the extant literature examines the effect of economic inequality on political participation, such as voting and participation in campaigns, protests, and in civil society organizations (e.g., Filetti & Janmaat, 2018; Karakoc, 2013; Lancee & Van de Werfhost, 2012; Solt, 2008, 2010). However, most studies have concentrated on democracies, while very few have examined political participation in non-established democracies and non-democratic regimes (Table 4.1). There are at least two reasons for this. First, data on political participation issues as well as economic inequality are limited for non-established democracies and non-democratic regimes. However, new surveys on individual attitudes have produced data on political participation outside the OECD (e.g., World Value Survey, International Social Survey Programme). Second, comparative research on authoritarian regimes has not focused on individual participation thus far. However, research investigating the role of individual political behavior in authoritarian regimes is emerging slowly (e.g., Blaydes, 2006; Brownlee, 2011; Gandhi & Ong, 2019; S. V. Miller, 2017).

Under democratic rule political participation is thought to influence public policy outcomes and to install an elected government. In contrast to the government-forming role in democracies, political participation in authoritarian regimes has different mainly regime-stabilizing effects. By holding regular elections, authoritarian regimes try to legitimize their rule internally and externally (e.g., Gandhi & Lust-Okar, 2009; Magaloni, 2006), and showing strengths towards potential challengers in the regime elite or on the opposition (e.g., Geddes et al., 2018, pp. 129–153). Turning to the individual incentives to participate in authoritarian regimes, we can differentiate between forced participation, self-motivated participation and clientelism. Most literature argues that people participate in authoritarian elections because they expect a material reward, such as economic transfers via vote buying

or patronage (cf. Letsa, 2020), or they use their participation as a signal of regime support (e.g., Greene, 2009; Magaloni, 2006). All three types of incentives could be influenced by the level of economic inequality, the individual income and the level of repression in authoritarian regimes.

Table 4.1: Recent studies investigating the inequality-participation puzzle. Independent variable: macro-level inequality

Dependent Variable	Source	Theory supported
Voting in elections	Solt, 2008; Solt, 2010	Relative Power Theory
Political participation (in general)	Filetti and Janmaat, 2018	
Participation in civil society	Lancee and Werfhorst, 2012	
Participation in campaigns	Ritter and Solt, 2019	
Political interest	Solt, 2010; Solt, 2008	
Political participation (voting, civil society participation)	Karakoc, 2013; Krishna, 2008	Resource Theory
Political participation (civil society participation, voting)	Karakoc, 2013; Bratton, 2008	Conflict Theory

Source: Authors compilation of studies and findings based on a review of the literature.

There is some evidence that the Relative Power Theory can explain political participation of individuals under different levels of economic inequality (Ritter & Solt, 2019; Solt, 2008, 2010). Unfortunately, we do not know much about this relationship in authoritarian regimes. Therefore, this article reviews the Relative Power, the Resource, and the Conflict Theories in this section, and examines their significance for political participation under non-democratic rule.

4.2.1 Resource Theory

The Resource Theory maintains that it is individual income and not economic inequality that operates as the main driver behind political participation. Political participation, such as voting or engaging in civil society campaigns, involves investing "time to take part, money to contribute to campaigns and other political causes, and skills to use time and money effectively" (Verba, Schlozman, & Brady, 1995, p. 16). Its main argument is that with increasing income, individuals are more likely to participate in political processes. Macro-level economic inequality affects political engagement by defining the distribution

of economic resources among individuals. Higher macro-level economic inequality results in a greater concentration of money in few hands and leads to less dependence on the time invested in working (Ritter & Solt, 2019, p. 679). Overall, the Resource Theory predicts, ‘‘that greater inequality will result in more participation by the relatively affluent and less participation only among the relatively poor’’ (Ritter & Solt, 2019, p. 679). The Resource Theory assumes that the effect of individual income should be greater than the effect of economic inequality on participation. Karakoc has shown empirical evidence for the Resource Theory for non-democratic regimes and has demonstrated that the Resource Theory explains civil society participation in post-communist countries, by both repressing and mobilizing civil society participation (Karakoc, 2013).

4.2.2 Conflict Theory

The Conflict Theory argues that macro-economic inequality increases individual political participation. Based on the assumptions of the Meltzer-Richard theorem (Meltzer & Richard, 1981), the Conflict Theory assumes that greater inequality implies that poor individuals are poor in relative comparison with rich individuals, ‘‘so redistributive policies should become more attractive to them as a means of improving their circumstances’’ (Solt, 2008, p. 49). If the poor intend to demand redistributive policies, they are more likely to either participate in organizations that demand redistribution or to vote for parties that advocate for them and their rights. In contrast to the demands of the poor, the rich are interested maintaining the status quo, so they participate in political parties and organizations that aim to implement policies that reduce the likelihood of redistribution. The Conflict Theory predicts that at higher levels of macro-level inequality, the views of the poor and the rich will oppose each other strongly. Therefore, greater economic inequality should result in more political interest and participation, on parts of both the rich and the poor. In sum, higher economic inequality leads to more incompatible preferences which generates more conflictive politics.

A few studies on political participation under authoritarianism have suggested that the poor are more likely to participate in politics than the rich (e.g., Bratton, 2008; Krishna, 2008). Bratton showed that the poor are more likely to participate in community meetings and vote more frequently than the affluent in 12 African countries (Bratton, 2008). However, these findings mainly support the Conflict Theory, but do not include measures of economic inequality. Haggard et al. (2013) investigated the effect of macro-level inequality on perceptions of redistribution for 41 developing countries. They found that inequality only has limited effects on demands for income redistribution, while preferences of low-income groups ‘‘vary significantly depending on occupation and place of residence’’ (Haggard et al., 2013, p. 113).

Recent studies have indicated that perceived inequality and not the real level of inequality constitutes the main driver for the demand for redistribution (Ansell & Samuels, 2011; Gimpelson & Treisman, 2018; Lupu & Pontusson, 2011). Political participation should not affected by economic inequality. Rather, it should be affected by the perception of inequality by each individual. Gimpelson and Treisman found that less than one-third of the respondents in their study chose the actual country's inequality level correctly by using survey data for 40 democratic countries (Gimpelson & Treisman, 2018, p. 32). These findings indicate that macro-level inequality cannot be a predictor of redistributive conflicts between the rich and the poor. Thus, the Conflict Theory cannot predict the likelihood of participation, when we assume that redistributive preferences are the main driver of political participation in authoritarian regimes.

4.2.3 Relative Power Theory

The Relative Power Theory has generated the most consistent empirical findings explaining the political participation of individuals in democracies. Solt (2008) studied 23 democracies and showed that economic inequality powerfully depresses electoral participation, and also noted that this effect is more powerful for those with lower levels of income. This confirmes the Relative Power Theory. Ritter and Solt (2019) noted in the context of US elections that ''higher levels of economic inequality mean that poorer people will have less and richer people more of the resources needed not simply to participate in campaign activities, but to shape the scope of politics'' (Ritter & Solt, 2019, p. 11). Economic inequality should normally decrease political participation, and should have a more negative effect on the participation of the poor. The theory argues that economic inequality produces political inequality. Consequently, the Relative Power Theory argues that ''contexts of greater economic inequality enable richer individuals not simply to prevail more often in an actual political contest, but also to more fully reshape the political agenda to exclude whatever issues that poorer citizens would have otherwise wished to debate, and even to more completely convince these poorer citizens to abandon preferences they would have otherwise held'' (Ritter & Solt, 2019, p. 679). However, why should poor individuals participate in politics when there are high levels of inequality? The Relative Power Theory offers different reasons for this. As a result of the power imbalance under a state of high economic inequality, the poor have less political power than rich individuals, and are more likely to fail in their political initiatives and demands. Repeated failures lead to the political demobilization of the poor and this, in turn, leads to less political participation in elections and civil society activity. This effect should all the more pronounced in authoritarian regimes because political participation rights are either restricted or absent based on the competitiveness of those regimes, and the poor have lesser capacity to use informal channels

that influence political decisions of the ruling coalition.

4.3 Theoretical argument and hypotheses

I argue that it is not economic inequality that causes political inequality, but individual income and the effects of repression that affect the likelihood of political participation in authoritarian regimes. This section builds theoretical arguments and proposes mechanisms that connect individual income, repression, and political inequality.[2] Based on the literature review above, this article tries to apply theoretical assumptions of widely-used theories for democratic contexts to the authoritarian environment. In doing so, this article engages with the specific characteristics of political participation under authoritarianism.[3]

Contemporary authoritarian regimes hold elections regularly and enable civil society organizations to participate in authoritarian politics. Therefore, civil society participation and electoral participation are two types of restricted political participation in contemporary authoritarian regimes, even when such types of participation are not directly connected to demands for democratization. Nevertheless, research shows that authoritarian regimes with multiparty elections are more likely to democratize after elections (e.g., Knutsen et al., 2017; Wright & Escriba-Folch, 2012). Therefore, elections and large-scale political mobilization in civil society can be major factors that affect the stability of authoritarian regimes (e.g., Hadenius & Teorell, 2007; Knutsen et al., 2017; Morgenbesser & Pepinsky, 2019). However, political participation in general does not necessarily affect the balance of power.

Political participation under authoritarianism is influenced by information distortion through controlled media environments (e.g., J. Chen & Xu, 2017; Guriev & Treisman, 2015), corruption and patronage networks (e.g., E. Chang & Golden, 2010), and forced mobilization by vote buying and economic incentives for pro-regime voting (e.g., Gonzalez-Ocantos, Jonge, Meléndez, Osorio, & Nickerson, 2012; Nichter, 2008). Individuals can express their demand for policy change through different forms of political participation and mobilization, such as participation in mass protests and voting for regime opponents.

In addition, individuals have different incentives to participate in authoritarian regimes. Individuals can be self-motivated to participate in politics in the context of dictatorship to

[2] I define political inequality as a participation gap between rich and poor individuals and the political consequences of this participation gap.

[3] According to Yom's (2015) distinction between a deductive template and inductive iteration of research practices and hypothesis formulation, this article uses a twofold strategy of theory and hypothesis formulation. In a process of deductive inquiry the above mentioned theories were adapted to the field of participation under autocracies, while in a later stage inductive iteration was used to further elaborate the theoretical arguments concerning vote-buying and repression in a dialog with the data presented in the article.

demand for leadership or policy change. This self-motivated participation is connected to the economic reasons for voting (cf. Letsa, 2020) when individuals expect a material reward, such as direct transfers via vote buying or patronage networks. In addition, political participation, in particular voting in autocracy, can be a consequence of forced participation in a compulsory voting system or by incentives via vote buying or repression. In this section, this article connects the question why people choose to participate in politics when it is clear that political participation will not bring policy change with individual characteristics and contextual factor of authoritarian regimes.

This article refers to the empirical literature and its findings, and argues that economic inequality cannot influence the likelihood of political participation in authoritarian regimes at a large scale. In the next section, it presents four related mechanisms connecting income, economic inequality, and repression with political participation in authoritarian regimes. I rely on the Conflict, Resource and Relative Power Theories and adjust the assumptions of these theories to suit the context of political participation in authoritarian regimes. This article argues that economic inequality is not the main driver of political inequality in authoritarian regimes.

4.3.1 The role of repression and income

First, I argue that inequality should neither increase nor decrease political participation in authoritarian regimes more than individual income, although economic inequality increases the gap in policy preferences between the poor and the rich individuals. This has at least three reasons: first, economic inequality is largely misperceived by individuals and therefore cannot be a good predictor of individual participation (Gimpelson & Treisman, 2018; Haggard et al., 2013). Second, the information available on economic inequality in authoritarian regimes is confined by media restrictions and information bans. This gap intensifies the likelihood of the misperception of the real levels of economic inequality. Third, individuals do not believe that economic inequality and voting for redistributive policies translate into changes in policies outputs and outcomes. Thus, I assume that economic inequality has no effect on political participation in authoritarian regimes.

Second, as the Resource Theory has argued, with increasing income, individuals are more likely to participate in political processes. I assume that this connection holds in authoritarian regimes as well. I start with incentives for individuals to participate in political processes. Individuals can participate in elections to express satisfaction or dissatisfaction with the incumbent government by voting for the regime party or the opposition. Individuals can also express their dissatisfaction with the regime by not participating in elections. Individuals can engage with both pro-regime and anti-regime civil society organizations or can participate in anti-regime organizations. I also expect

that non-participation has no signalling effect on the regime. Each individual evaluates the cost and benefits of voting for the opposition against the costs and benefits of voting for the incumbent party. Compulsory voting systems and informal social pressure in local communities influence the costs of non-voting. In some authoritarian regimes, the social pressure from local communities and village chiefs to participate in elections are high, such as in China (He, 2007). This individual decision-calculus is mainly influenced by both the individual income and resources of individuals, such as education and employment. In general, this article expects that the individual income and the perceptions of the costs and benefits of participation influence the likelihood of participation. In sum, I argue that the Resource Theory is powerful in explaining the political participation of individuals under authoritarianism.

Third, I assume that the level of repression around authoritarian elections and the repression of anti-regime civil society organizations influence the likelihood of individual participation in elections or engagement with the civil society organizations. Most authoritarian regimes are based on a relative small winning coalition that is dominated by richer individuals who are important for the authoritarian elite to survive. Repression should affect the poor more than the rich, who have the ability to compensate the effects of repression with individual income through corruption or monetary compensation for penalties.[4] In addition, richer individuals are more likely to be part of patronage networks. In contrast to the Conflict Theory, the poor are less likely to participate in regimes with high levels of repression. The level of repression should influence the individual decision-making process with respect to participation. I expect that individual income and repression will interact with each other. Repression during elections and of civil society should affect the poor people more than affluent individuals.

Fourth, I expect that vote buying increases the likelihood of individuals to vote in elections in general, while among the poor it should have a greater positive effect on participation (cf. Gonzalez-Ocantos et al., 2012; Nichter, 2008). Authoritarian regime parties can buy the votes of less affluent people more easily than the votes of the rich. The poor typically have a below average education and may be more likely not to understand when an attempt to buy their votes is made.

4.3.2 Brief review of theoretical predictions

This section presents a brief overview of the theories and its extensions. The Resource Theory predicts that the effect of inequality on political participation is conditional on

[4]Repression may not randomly distributed along individuals. Rather, it is much more likely that individual experiences of repression or vote buying cluster at the group level. Group levels can be, for example ethnic or social class membership. However, this article does not include a fourth level of analysis to account for this assumption due to the lack of mapping instruments and the problem of model interpretation.

individual income levels (line A, Figure C.1). It indicates that the effect of economic inequality is negative, but will be smaller than the effect of individual income. The product of the interaction of individual income and inequality and the effect of inequality should be smaller than the income effect. Therefore, based on these theoretical expectations, I frame the following hypothesis:

> **Hypothesis 1**: Individual income is likely to increase political participation in authoritarian regimes.

Second, the Relative Power Theory predicts that economic inequality has a negative effect on political participation (line B, Figure C.1) and that the interaction between inequality and income has a positive effect on participation (line C, Figure C.1), indicating a more negative effect for lower incomes on political participation. It maintains that the magnitude of inequality should be greater than the product of individual income and the interaction of income and inequality. It suggests the following hypothesis:

> **Hypothesis 2**: Economic inequality decreases political participation in autocracies in general, and the effect is stronger on those with lower levels of income.

Third, the Conflict Theory predicts that greater economic inequality results in greater political participation of individuals, irrespective of whether they are rich or poor (line B, Figure C.1). It suggests the following hypothesis:

> **Hypothesis 3**: Economic inequality increases political participation in authoritarian regimes, independent of the individual income level.

Fourth, this article assumes that repression of civil society organizations and repression in the context of authoritarian elections would decrease the likelihood of political participation (line D, Figure C.1). My theory assumes that the decreasing effect of repression should be more pronounced for the poor (line E, Figure C.1). Thus, the following hypothesis is presented:

> **Hypothesis 4**: Repression is likely to decrease political participation in autocracies in general, and should affect lower levels of income more strongly than higher levels of incomes.

Fifth, my theory predicts that vote buying should increase the likelihood of individual participation in authoritarian elections. However, the effect would be conditioned by individual income levels. The theory predicts the following hypothesis:

> **Hypothesis 5**: Vote buying increases electoral participation in autocracies in general, and increases the likelihood of voting more powerfully on lower levels of incomes.

4.4 Data and methods

This study addresses the effects of economic inequality, income, and repression on the political participation of individuals by examining the relationships among them in a diverse sample of authoritarian regimes. Democratic country-years are excluded because this study focuses on political participation in non-democratic regimes. As mentioned earlier, political participation and the effects of income, repression, and inequality have features that are different from those in democracies. To differentiate between democratic and autocratic regime-years, I use the *Regimes of the World* distinction based on V-Dem indicators (Lührmann et al., 2018).

Drawing accurate cross-level inferences requires information on individual characteristics and contextual factors. The individual data used in this study are sourced from the World Value Survey (2016). The contextual data comes from Solt's data on economic inequality (SWIID, 2020) and from the Varieties of Democracy dataset (Coppedge et al., 2020b). Information on countries and country-years included in this study is presented in Appendix C.2.

This article combines the cross-national survey data collected in different waves of the WVS with data on inequality from the SWIID (Solt, 2020) and political regimes (Coppedge et al., 2020b). Two datasets are built: The electoral participation dataset includes 35,678 respondents in 28 country-year contexts in 22 multiparty authoritarian regimes from the fifth and sixth wave of the World Value Survey. The civil-society participation dataset includes 65,713 respondents in 54 country-contexts in 34 authoritarian regimes from wave 2 - 6 of the World Value Survey.[5] The including criteria are the following: (1) A respondent has information on the dependent and individual independent and control variables; (2) a country-year has information on all country-year independent and control variables.[6]

In contrast to Civil Society Participation dataset, the Electoral Participation dataset only includes those country-years in which the authoritarian regime is classified as a multiparty authoritarian regime. Multiparty authoritarian regimes are those regimes in which at least one real opposition party is allowed to compete in authoritarian elections. However, the political competition can be legally and/or informally highly constrained by the authoritarian incumbent party.[7]

[5] Compare Table C.1- C.5 in the Appendix.

[6] In the Supplementary Appendix C.4.5 and C.5.6 additional robustness tests are implemented using multiple imputation for individual missing observations. Information on what country-years are excluded can be found in Supplementary C.2.

[7] By excluding closed autocracies, such as China or Qatar, this study decreases the potential bias of self-censorship by respondents in surveys in highly repressive environments.

4.4.1 Dependent variables

Self-censorship of political preferences and regime support in authoritarian regimes can produce a significant bias on questions regarding the citizen-regime relationship (e.g., Robinson & Tannenberg, 2019; Tannenberg, 2017). The potential of self-censorship may be more problematic in more autocratic regimes (Tannenberg, 2017, p. 21). Respondents have two options in context of high political fear: preference falsification and item non-response (cf. Mauk, 2020, pp. 88–92). Preference falsification can be detected by examining interviewer evaluations of the respondents' demeanour during the interview (e.g., Mauk, 2020) or by evaluating survey item on perceived survey sponsors (e.g., Tannenberg, 2017).

The first way to detect preference falsification leads to the conclusion that on average 5.8 percent of the respondents appeared suspicious and 2.3 percent appeared dishonest in African autocracies, while in Asian autocracies 2.3 of the respondents seemed insincere in answering interview questions (Mauk, 2020, p. 89). Mauk concluded that the falsification rates are similar to the ones in democracies. The second way to detect preference falsification introduced by Tannenberg (2017) results in the conclusion that survey items on trust in different government institutions and political preferences of respondents suffer from autocratic trust bias for political sensitive survey questions. Therefore, preference falsification is more problematic, the more potentially sensitive a question is and the more the respondent believe that the government has commissioned the survey. Unfortunately, the WVS do not ask a question on the perceived survey sponsor or on interviewer evaluations of the respondents' demeanor. In addition, Robinson and Tannenberg (2019) found that the level of self-censorship ranges from 24.5 to 26.5 percentage points in China and is more prevalent among the wealthy, urban, young respondents. However, these rates of self-censorship apply for highly repressive regimes, such as China, and are more relevant for more sensitive questions, such as trust in ruling party, or perception for democracy.

Item non-response is the second indicator for autocratic trust bias. ''Respondents afraid of repercussions may refuse to answer to politically sensitive questions or pretend to 'don't know' or 'can't choose' an answer'' (Mauk, 2020, p. 90). Mauk found that there is no systematic pattern of non-response across regime types and the level of repression.

However, survey data from authoritarian regimes are the more problematic, the more politically sensitive a question is. The questions used in this study, ask whether respondents voted in the last elections. This question may be less sensitive because regimes cannot generate approval rates for the incumbent party in multiparty authoritarian regimes. Moreover, the survey items regarding the civil society participation may be also a less sensitive question because such questions ask whether someone take part in a wide spectrum of civil society organizations that can be part of the political regime infrastructure as

well as the opposition. Yet, if we want to study political actions and preferences across authoritarian regimes on a global scale, we must rely on public opinion surveys. However, we should be careful in interpreting such findings regarding the potential autocratic trust bias.

4.4.1.1 Electoral participation

Data on individual voting behavior in the last elections were collected for 22 multiparty authoritarian regimes and 28 country-years from the World Value Survey. The survey examined whether respondents voted in the last national or legislative elections. However, the World Value Survey asked this question only in the last two rounds. Therefore, only authoritarian regimes after 2005 have data on this item. The average reported turnout across elections was 76%. However, voting varies across countries, over time, and among individuals with different economic capacities. In Thailand, over 98% of the citizens said that they had voted[8] in the last national elections in 2013, while in Morocco only 39.3% reported that they had voted in the last national elections.

4.4.1.2 Civil society participation

Data on civil society participation come from questions that ask whether respondents belonged to any of the following types of civil society organizations, such as social welfare service, cultural or educational societies, labor unions, political parties, local political organizations, human rights groups, professional organizations, youth movements, sports clubs, women's organizations, peace movements, heath organizations, and other civil society organizations. When a respondent indicated belonging to any of these groups, the civil society variable was marked as 1, and 0 if the respondent indicated non-participation.[9] Data for civil society participation were collected for 34 authoritarian regimes over 54 country-years. On average, individuals in Jordan in 2007 and Egypt in 2012 had the lowest levels of civil society participation. The highest civil society participation was recorded in Armenia in 1997 and in Rwanda in 2012 with over 80% individual participation rates.[10]

However, my coding of civil society participation is subject to some degree of uncertainty. Some authoritarian regimes have used regime-founded civil society organizations to monitor and integrate civil society into a broader strategy of legitimation of the regime. For example, youth movements such as the Free German Youth in the German Democratic Republic or

[8] Thailand has a compulsory voting system.

[9] Compare the original coding by Karakoc (2013). In additional robustness tests, I excluded membership in political parties and belonging to a party from the civil society participation variable to consider the fact that political party membership is informally or formally compulsory in some authoritarian regimes.

[10] Figures C.4 and C.5 present descriptive evidence of the fact that individual political participation is influenced by individual income in my sample of authoritarian regimes.

the Hitler Youth in Nazi Germany were used by the regime for co-optation and monitoring of the civil society. Contemporary authoritarian regimes also use regime-controlled civil society organizations such as the ''General Confederation of Labour'' which is controlled by the Communist ruling party in Vietnam. Therefore, the civil society participation variable does not offer a flawless measure of participation. Nevertheless, it provides important insights on individual participation in civil society and is the only available cross-national measure of civil society participation.

4.4.2 Independent and control variables

The main independent variables are countries' economic inequality and individual income. Unfortunately, data on economic inequality for non-western countries are scarce. The Standardized World Income Inequality Database (SWIID 8.3) provides comparative data on market income inequality and post-tax and post-transfer inequality. Solt (2020) generated a comprehensive dataset for a rich sample of countries, including several authoritarian regimes. The dataset is based on the methodological standards of the Luxembourg Income Study and provides information on uncertainty in the point-estimators for income inequality. This study uses data for both market income and post-tax inequality.[11] While 0 indicates that each household receives an equal share of income, 1 indicates that a single household receives all income. The median-voter theorem argues that market inequality is relevant for individual redistribution preferences. However, this study aims to estimate the effect of inequality on political participation and not individual redistribution preferences. Therefore, I use both inequality measures to study whether market or disposable income inequality matters for the likelihood of political participation.[12] The results reported in this paper are based on market inequality. Results based on post-tax inequality are reported in the Supplementary Appendix.

The second main independent variable is individual income. The theories argue that the effect of economic inequality on the country-level depends on individual income. Therefore, the empirical models test for individual income and the cross-level interaction between individual income and economic inequality. The income quintile of each respondent's household was used for measuring income in this study.[13]

At the individual level, this article controls for a series of variables that have been found to affect the political participation of individuals: gender (dummy variable), age (continuous), children (dummy variable, 1 = parents), formal education (eight categories, from no formal education to university degree), and labor status (dummy variable, 1 = unemployed).

[11] Post-tax inequality is based on disposable household income distribution. Disposable inequality = post-tax/transfer inequality.

[12] For a discussion on market and disposable inequality, see Schmidt-Catran (2016).

[13] In the Appendix, additional robustness tests used income deciles for measuring individual income.

Education foster political participation by increasing civic skills and political knowledge "that functions as the causal mechanisms triggering participation" (Persson, 2015, p. 698). However, education can also work as a proxy variable for other factors, such as socialization or social status among others (Croke, Grossman, Larreguy, & Marshall, 2016; Persson, 2015). Therefore, I would assume that education is a main driver of political participation under authoritarian rule.

At the country-year level, the models includes a series of contextual factors that should have a substantial effect on individual participation. However, because the country-year sample is small with around 28 to 54 country-years, I selected the country-year controls carefully. A recent study has shown that multilevel models with a small number of upper level-units produce unbiased estimates and confidence intervals while using frequentist maximum likelihood estimators (Elff, Heisig, Schaeffer, & Shikano, 2021). Nevertheless, the results should be interpreted with caution.

Political participation under authoritarianism is influenced by the perception of individuals on facing repression for divergent behavior. This article expects that individuals behave differently under higher and under lower levels of perceived repression. Unfortunately, data on perception of repression are not available at the individual level. Therefore, the models uses macro-level data to measure these variables. To analyze voting likelihood, it uses the clean elections index by V-Dem to measure perceived repression in context of elections. This index measures the ''absence of registration fraud, systematic irregularities, government intimidation of the opposition, vote buying, and election violence'' (Coppedge et al., 2020c, p. 47) and, therefore, covers the concept of perceived repression more precisely than a variable on violence in elections. To analyze civil society participation, this article uses civil society organization repression to test the effect of repression on the likelihood of participation. The variable measures whether ''the government attempt to repress civil society organizations'' (Coppedge et al., 2020c, p. 182). The models also control for vote buying using an indicator on this (Coppedge et al., 2020c, p. 63). However, vote-buying measurements are notoriously uncertain due to different effects: e.g., preference falsification of respondents, indirectly measured proxies, selection bias, and non-notice of vote buying efforts (e.g., Hicken, Leider, Ravanilla, & Yang, 2015; Mares, Muntean, & Petrova, 2017). Therefore, the findings based on my macro-level proxy for vote-buying should be interpreted with caution.

In addition, the models control for previous democratic experiences of authoritarian countries. Citizens who grew up under democracy or experienced democratic elections and political participation in a democratic context may be more willing to participate under autocracy. Previous democratic experience is measured by the maximum value of the liberal democracy index (Coppedge et al., 2020c, p. 43) when a country had a democratic

period according to the *Regimes of the World* indicator. Otherwise, it was coded as a 0. The models also control for the social support base of authoritarian regimes. By using the *Regime support groups* indicators by V-Dem (Coppedge et al., 2020c, p. 132), this article controls on which social groups the authoritarian regime rely on in order to maintain power. The Relative Power Theory expects that repeated failures of political initiatives and demands lead to political demobilization of the poor. However, this expectation is dependent on the social power base of the authoritarian regime. Authoritarian regimes that largely rely on the rural and urban working class and the middle class should have higher electoral participation as well as civil society participation rates compared to regimes that rely largely on party and business elites.[14] They also control for economic prosperity (GDP per capita) on the country-year level.

All country-year variables and continuous or categorical independent variables are mean-centered by the grand mean for the sake of better interpretation of coefficients in multilevel models and faster estimation of binary dependent models. In addition, the theories predict that income inequality and individual income interact with each other. Therefore, the models test for interaction effects between income and inequality. They also test for interaction effects between individual income and the repression variables as well as the vote buying variable.

4.4.3 Empirical method

The theoretical models that are presented in this paper need multilevel modelling to examine the effect of contextual factors on participation. Therefore, this analysis uses three-level hierarchical models: individuals i are nested in country-years t that are nested within countries j. The model has the following form:

$$political\ participation_{jti} = \beta_0 + \beta_1 X_{jti} + \gamma_1 Z_{jt} + \upsilon_j + \mu_{jt} + \epsilon_{jti} \tag{4.1}$$

The use of random slope models (Model 5-7) allows the effect of individual income to vary in terms of both magnitude and effect direction among country-years. Using separate error terms for countries υ_j and country-years μ_{jt} my models enable the inclusion of independent variables at all three-levels. However, the models do not include country-variables. Since measures for political participation take binary values, all models were estimated using logistic hierarchical models.

[14] The indicator *regime support group* is built by taking the country-year maximum of the following indicators: v2regsupgroups_9 (urban working class), v2regsupgroups_10 (urban middle class), v2regsupgroups_11 (rural working class), and v2regsupgroups_12 (rural middle class). The resulting indicator ranges from -0.226 to 0.524.

4.5 Empirical findings

In this section, I present the empirical results of the three-level hierarchical analysis of the impacts of inequality, income, and repression on political participation. First, I graphically present the results of the empirical models for the likelihood of voting in authoritarian regimes. Second, I show the results of my models estimating the likelihood of civil society participation.

4.5.1 Voting in elections

Figure 4.1 reports the results of the main models estimating the effects of inequality, individual income, and repression on political participation in elections. The intra-class correlation coefficient of the empty model shows that 73.6% of the variance comes from between-individuals, and 26.4% comes from the country-year level.[15] Model 1 is the baseline model without any independent predictors. Model 2 includes all individual-level variables. Models 3 to 7 add country-year predictors and estimate the effects of income inequality on the likelihood of voting. Figure 1 shows the results of Models 2 to 7 as a dot-whisker plot. The dots represent the logit coefficients and the whiskers show the 95% confidence intervals (see Solt & Hu, 2015). For comparability, all ordinal and continuous predictors were rescaled by multiplying the unstandardized coefficients of these variables by two standard deviations. Using this standardizing technique, the rescaled coefficients were made directly comparable with those of the dichotomous predictors. The coefficients represent the expected change in the logged odds of the participation variable occurring for a change in an independent variable from one standard deviation below to one standard deviation above the mean (cf. Ritter & Solt, 2019, p. 684).

Individual control variables mainly performed as expected. I found that better-educated people are more likely to vote and that age has a positive effect on the likelihood of voting as well. Those that are unemployed are less likely to vote, while those who have children are more likely to vote than those who are childless.

The two variables of main interest in the Resource, Conflict, and Relative Power Theories, namely macro-level income inequality and individual income, do not show such consistent results with the theoretical expectations. Figure 1 suggests that a change of one standard deviation below the mean to one standard deviation above the mean in the macro-level economic inequality results in a 0.35 decrease in the logged odd ratio of voting.[16] An estimated change from a 1.3 decrease, a substantial negative effect, to a 0.61 increase, a substantial positive association, shows the uncertainty of the predicted estimate. For

[15] Based on the baseline model.
[16] Based on Model 6.

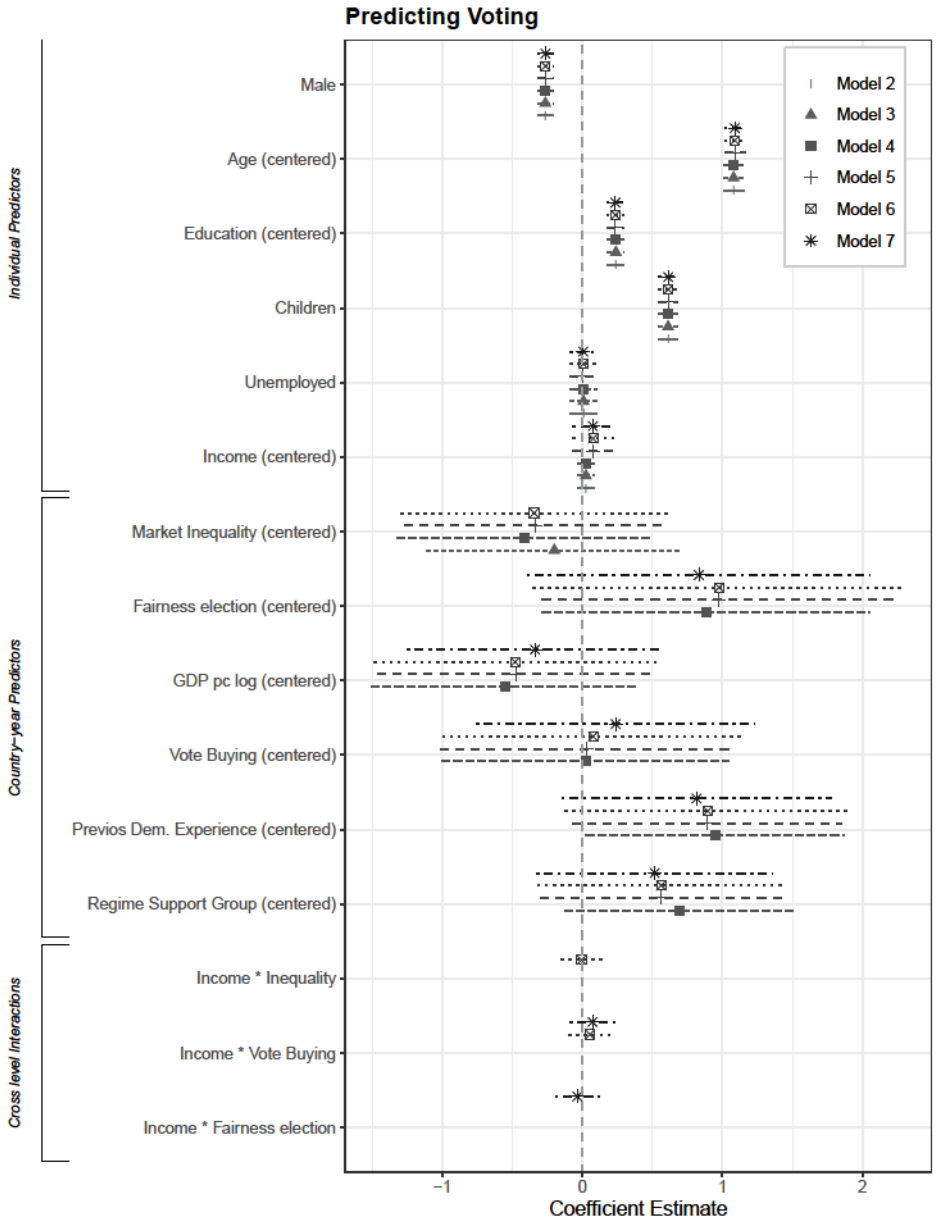

Figure 4.1: Effects of Income, Inequality, and Fairness of Elections on Voting.

Note: The dots represent estimated changes in the logged odds of voting (dependent variable) occurring for a change of two standard deviations in the predictor variables. The whiskers show the 95% confidence intervals of these estimates.

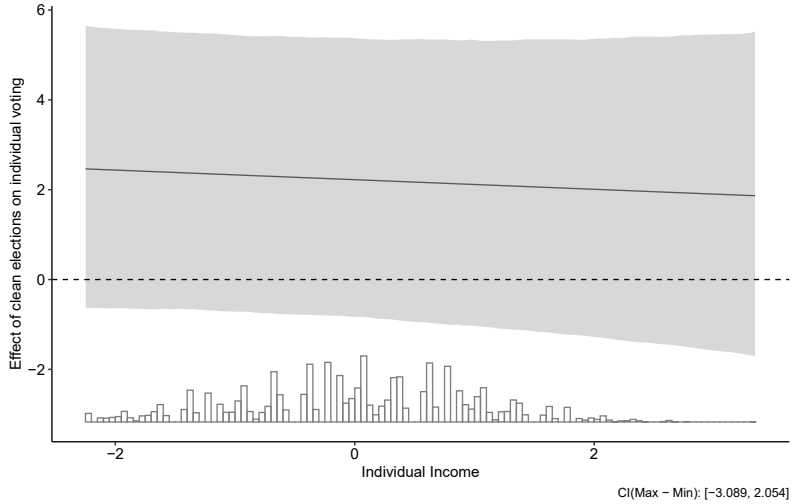

Figure 4.2: Estimated Coefficients of Clean Elections by Individual Income.

Notes: Based on Model 7 in Figure 4.1. Conditional effects of individual income and clean elections. The lines represent the estimated change in the logged odds of the dependent. The shaded regions show adjusted 95% confidence intervals.

the effect of individual income, one can see that the coefficient is positive but very small, indicating only a weak association of individual income with voting likelihood. Models using disposable inequality (post-tax and post-transfer) are reported in Section C.3.1 in the Supplementary Appendix. The results hold irrespective of whether I use pre-tax or post-tax income inequality measures.

The Relative Power and the Conflict Theories expect the impact of interactions between macro-level inequality and individual income on individual voting, while the Resource Theory claims that macro-level inequality does not matter more than income for individual behavior. Figure C.3 shows that, in contrast to the assumption under the Relative Power Theory, economic inequality does not play an important role in suppressing the likelihood of the poor voting. The expectation of the Conflict Theory does not hold: Individuals at lower income levels do not have an increased likelihood of voting under higher economic inequality.

In the next step, I test H4 and H5, which postulate that repression decreases and vote buying increases the voting likelihood. Both should affect the poor more than more affluent people. As Figure 4.1 demonstrates, the fairness of elections has a positive effect on voting likelihood, thus indicating a negative effect of repression. I also tested the interaction effect between individual income and clean elections using the effect of clean elections over different income levels. Figure 4.2 shows that the estimated coefficient of clean elections is positive across different individual income levels. It clearly indicates that the effect

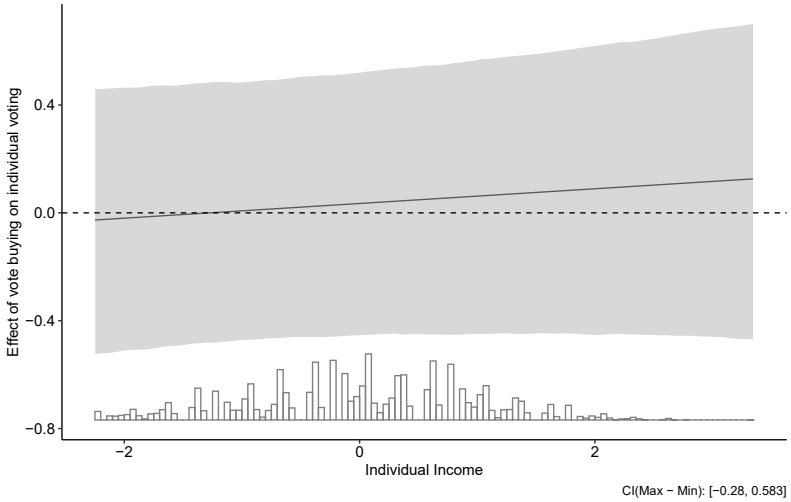

Figure 4.3: Estimated Coefficients of Vote Buying by Individual Income.

Notes: Based on Model 7 in Figure 4.1. Conditional effects of individual income and vote buying. The lines represent the estimated change in the logged odds of the dependent. The shaded regions show adjusted 95% confidence intervals.

of clean elections on voting likelihood is not conditional on the individual income level. In contrast to the assumption under H4, the effect of clean elections is not affected by individual income. Figure 4.1 also reveals that vote buying has no substantial positive effect on voting likelihood. The effect is relatively small and insignificant and does not meet the theoretical expectations. Figure 4.3 shows the conditional effect of vote buying on different levels of income and also clearly indicates that the effect of vote buying is not conditional on the individual income level.

In summary, for my sample of authoritarian regimes, neither macro-level inequality nor individual income matters for the likelihood of voting. The models, therefore, provide no empirical support for the Relative Power and the Conflict Theories. However, the effect of individual income on voting is weak and substantially smaller than other individual predictors. Individual socioeconomic predictors such as individual income do not have not a great effect on the likelihood of voting. At the macro-level, fairness of elections, previous democratic experience of an authoritarian regimes and the social group base of the regime are the main drivers of individual voting probability. The results suggest a change of two standard deviations in the fairness of election results in a 0.97 increase in the logged odd ratio of voting. However, an estimated change from an -0.35 increase, a substantial negative effect, to an 2.36 increase, a substantial positive effect, indicates the uncertainty of the predicted estimate and indicates that fairness and clean elections may matter for voting likelihood. As my theoretical expectations suggest, when authoritarian elections are

clean and free of fraud and violence, more individuals are likely to participate in them. In contrast, vote-buying does not matter for voting likelihood.

4.5.1.1 Civil society participation

Figure 4.4 reports the results of a series of multilevel models that estimate the effects on civil society participation of individuals in authoritarian regimes. Model 2 includes all individual-level variables. Individual income has a substantial positive effect on civil society participation, and confirms the assumption of the Relative Power and the Resource Theories that low individual income leads to less political participation. Furthermore, Figure 4 shows that the uncertainty of the estimate is small. Further, the individual predictors show that higher education fosters participation, while age and unemployment have negative effects on the individual likelihood of civil society participation.

Model 3 adds the Gini index. Model 4 tests whether the effects hold when economic development, previous democratic experience, regime support groups and civil society repression on the country-year level are controlled for. Model 5 allows that the effect of individual income can vary in the effect size and direction between the country-years by including random slopes. The findings show that a change of one standard deviation below the mean to one standard deviation above the mean in the macro-level economic inequality results in 0.07 decrease in the logged odd ratio of civil society participation.[17] However, an estimated change from a 0.66 decrease, a substantial negative effect, to a 0.51 increase, a substantial positive association, shows the uncertainty of the predicted estimate. However, the negative point estimate indicates that economic inequality leads to lower civil society participation. However, as indicated by Figure 4.4 the effect direction is mixed among the models. Section C.3.2 estimates the effect of disposable inequality on civil society participation, and shows that the results hold while using post-tax Gini measurements.

In contrast to the findings on voting likelihood, repression does not matter for civil society participation. Figure 4.4 indicates that a change of one standard deviation below to one standard deviation above the mean in the repression of civil society organizations results in a non-substantial change in the logged odd ratio of civil society participation. However, an estimated change from a 0.32 decrease, a substantial negative effect, to a 0.87 increase, a substantial positive association, shows the uncertainty of the predicted estimate.[18] This indicates that the level of civil society repression by authoritarian regimes is not the main factor driving the likelihood of individual participation in civil society. Therefore, my theoretical expectation in H4 does not hold for civil society participation. In addition,

[17] Based on Model 6.
[18] Based on Model 6 in Figure 4.4.

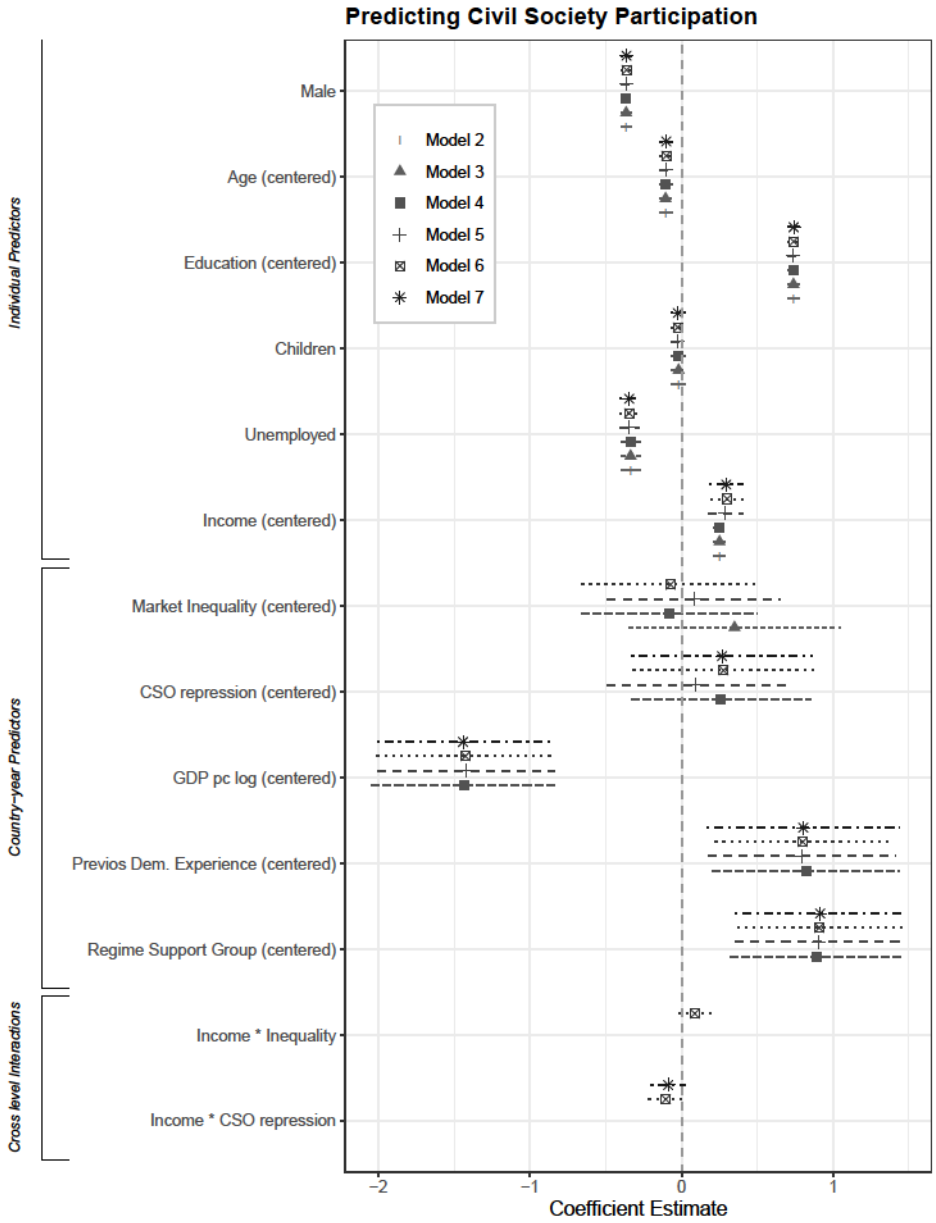

Figure 4.4: Effects of Income, Inequality, and Repression on Civil Society Participation.

Note: The dots represent the estimated changes in the logged odds of civil society participation (dependent variable) occurring for a change of two standard deviations in the predictor variables. The whiskers show the 95% confidence intervals of these estimates.

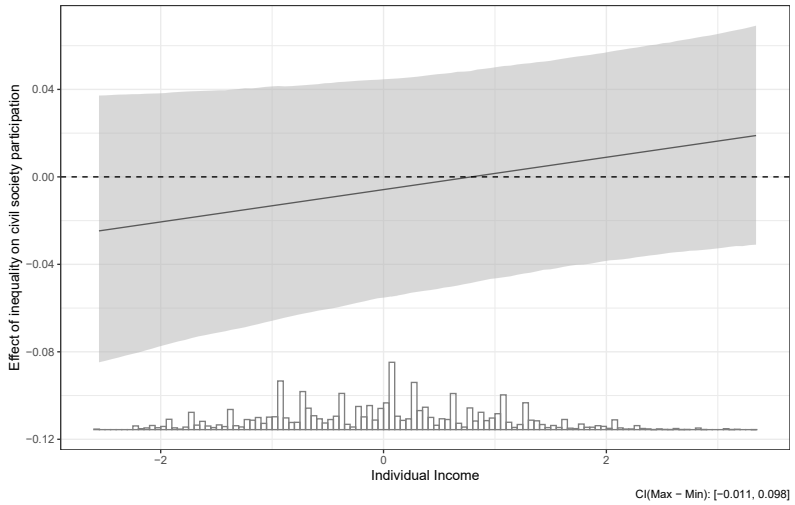

Figure 4.5: Estimated Coefficients of Inequality by Individual Income on Civil Society Participation.

Notes: Based on Model 6 in Figure 4.4. Conditional effects of individual income and market inequality. The lines represent the estimated change in the logged odds of the dependent variable. The shaded regions show adjusted 95% confidence intervals.

Figure 4.4 shows that previous democratic experience as well as the regime support groups have a positive and significant effect on civil society participation in all models.

Figure 4.5 plots the cross-level interaction of income and inequality and clearly indicates that with increasing individual income, inequality was estimated to decrease political participation of the lower-level income group and to increase the political participation of the higher-level income groups. However, the expected interaction effects range from small negative to strong positive associations at different income levels, thus indicating that the effect is highly uncertain. This finding is consistent with the Resource Theory and contradicts the Relative Power and the Conflict Theories. The Relative Power Theory assumes that the effect of income inequality and the interaction between income and inequality matter more than individual income. The Conflict Theory assumes that economic inequality increases political participation at all levels of income. In contrast, the findings support the Resource Theory, which maintains that the effect of individual income is greater than the product of inequality and the interaction.

Figure 4.6 plots the estimated effect of the repression of CSO across income levels. This interaction indicates that the repression of civil society organizations was estimated to increase political participation in the lower-level income group and decrease political participation in the higher-level income groups. However, the expected interaction effects range from small negative to strong positive associations at different income levels, indicating the effect of repression of CSO on the participation likelihood is highly uncertain. Where

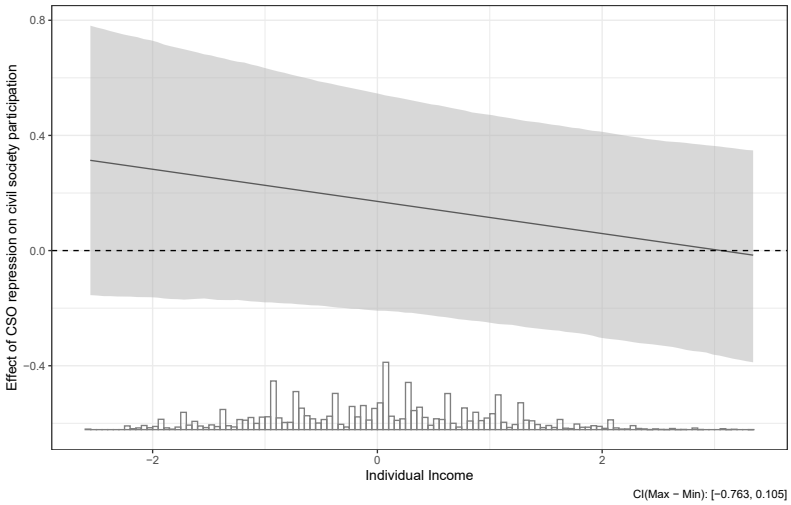

Figure 4.6: Estimated Coefficients of Repression of Civil Society Organization by Individual Income on Civil Society Participation.

Notes: Based on Model 7 in Figure 44.4 Conditional effects of individual income and market inequality. The lines represent the estimated change in the logged odds of the dependent variable. The shaded regions show adjusted 95% confidence intervals.

there is a greater repression of civil society organizations, individuals with low income are more likely to participate in civil society, while individuals with higher income are less to do so. The finding clearly contradicts H4, and indicates that the repression of civil society organizations can affect the poor more than the rich.

To sum up the interaction effects, in authoritarian regimes the poor are less likely to participate in civil society when the macro-level inequality is high. Therefore, the models support the Resource Theory. In authoritarian regimes with high levels of repression of civil society organizations, the poor are more likely to participate in civil society than more affluent individuals.

4.5.2 Robustness tests

The results in the Supplementary Appendix show that the findings estimated by the main models are robust to additional tests. First, I tested to see if the findings remained stable, when I used income deciles. Sections C.4.1.and C.4.2 indicate that the effect and the strength of the association of individual income on electoral participation remain largely unchanged by using income deciles for measuring individual income. Sections C.5.1 and C.5.2 test the effect of income deciles for civil society participation predictions. The main results hold.

Second, the main analysis does not include different measurements of inequality for the

main independent variable. Sections C.4.3 and C.5.3 test to see whether the results of the main models hold while using UNU-WIDER Gini coefficients to measure macro-level income inequality. The findings show that the results are robust to the use of these different Gini measures.

Third, Section C.4.4 controls for the effect of compulsory voting systems and shows that the main results hold. Section C.5.4 and C.5.5 control for the construction of the dependent civil society participation variable. The modified variable excludes individual participation in political parties and party-based organizations. The main results hold.

Sections C.4.5 and C.5.6 use multiple imputation to address the problem of missing individual observations. The multiple imputed datasets cover 43,074 individuals in the Electoral Participation Dataset and 95,175 individuals for the Civil Society Participation dataset. Both sections show that the main results hold.

4.6 Conclusion and discussion

This article argues that individual income and the level of repression determine the likelihood of political participation, while economic inequality has no substantial effect on the participation likelihood. The intuition underlying this expectation is that individuals misperceive the actual level of inequality (Ansell & Samuels, 2011; Gimpelson & Treisman, 2018; Mijs, 2019).

The theoretical expectations were tested using three-level hierarchical models with World Value Survey Data and data from V-Dem and SWIID. This study found that economic inequality has a consistent non-significant effect on political participation, while the effect of income and repression vary across different types of political participation. By making four claims, this article has important implications for our understanding of authoritarian politics.

First, in accordance with Albertus and Menaldo (2018), Ansell and Samuels (2014), and Haggard and Kaufman (2016), this study weakens the assumption on the distributive nature of democratization. It shows that macro-level inequality does not increase political participation, both in elections and in civil society in non-democratic regimes. Thus, one causal chain of the so-called distributive conflict models (e.g., Acemoglu & Robinson, 2006; Boix, 2003) is challenged by showing that economic inequality does not lead to increased participation of the population. However, this is only an indirect test of the assumption that economic inequality leads to anti-regime mobilization due to the definition of my dependent variable.

In addition, previous studies have shown that individuals misperceive the level of economic

inequality (Ansell & Samuels, 2011; Gimpelson & Treisman, 2018; Lupu & Pontusson, 2011; Mijs, 2019). When perceived inequality correlates strongly "with demand for redistribution and reported conflict between rich and poor" (Gimpelson & Treisman, 2018, p. 27), the actual level of economic inequality should be a poor predictor of redistributive preferences, and, if the distributive conflict models are right, of the likelihood of political participation of individuals. Therefore, it cannot be the main mechanism explaining political participation.

Second, this article presents evidence that economic inequality depresses political participation in terms of voting and has no substantial effect on civil society participation (cf. H2). However, in contrast to the assumption of the Relative Power Theory, which predicts a decrease in participation at higher levels of economic inequality, I find that the relationship holds only for highly institutionalized types of participation such as voting. Nevertheless, the uncertainty of this relationship is high, indicating that economic inequality can have positive effects in some cases.

Third, this article finds a gap between the positive effects of individual income on the likelihood of civil society participation and a small effect on the voting likelihood. Individual income is, therefore, not a good predictor for voting, but for civil society engagement (cf. H1). In contrast to the assumptions of the Relative Power and Resource Theories, individual income does not matter for highly formalized and rare types of political participation such as voting, but matters for types of participation that are based on engagement that is more frequent and not as much formal as voting.

One key implication of this study pertains to the theoretical arguments linking inequality and participation under authoritarianism. The scope of the presented theoretical models, the Resource Theory, the Conflict Theory, and the Relative Power Theory is to illuminate the effect of inequality under democratic rule. However, this study readapts these theories in the context of authoritarian regimes and finds mixed results. It is important to note that the inferences made from this study do not curtail the validity and explanatory power of those theories for democratic contexts. Moreover, the findings indicate that the theoretical assumptions are inconclusive and the development of an original theory of inequality and participation in autocracies is indicated. This study has made a first step towards theory development.

Finally, this study has important implications for future studies on participation in authoritarian regimes. Authoritarian regimes do not fear political participation in general, in fact they promote such participation. What they worry about is losing (competitive) elections. This study provides preliminary evidence that authoritarian regimes should not agonize about rising economic inequality as a driver of anti-regime participation and mobilization. However, using World Value Survey data, this study cannot distinguish between pro-

and anti-government voting and civil society participation. Nevertheless, this article demonstrates the need for individual-level data on voting for pro- and anti-government parties in authoritarian regimes to test the micro-foundations of the redistributive nature of regime instability and democratization.

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Chapter 5

How do past repression and indoctrination affect redistributive preferences?

ABSTRACT

It is widely established that autocracies attempt to indoctrinate their citizens to have compliant subjects. However, the long-term consequences of socialization under authoritarian rule are weakly conceptualized, and empirical evidence is rare, especially regarding citizens' economic preferences. This article sheds light on how authoritarian regimes have a lasting imprint on their citizens' ideas and values in the long term and on which mechanisms determine the redistributive preferences of their former citizens. This article proposes a distinction between three different mechanisms: state repression, political indoctrination, and exposure to autocracies during citizens' lifetimes. Using data of 1.1 million respondents from 76 countries and hierarchical age-period-cohort models, this article estimates cohort differences in citizens' redistributive preferences that result from different socialization experiences. It finds that socialization under a highly indoctrinating regime leave a strong pro-redistributive legacy, while highly repressive regimes also leave a pro-redistributive legacy. This study contributes to our understanding about how state repression and indoctrination affect ordinary citizens in the long-term.

KEYWORDS

authoritarian legacies, state repression, indoctrination, ideologies, HAPC models, redistribution

Note: This chapter was submitted to a scientific journal in March 2021 and is currently under review.

5.1 Introduction

Does exposure to autocratic rule affect the economic preferences of citizens in (post-) authoritarian countries? Although intuitively one would expect that citizens' socialization experiences affect their formation of economic preferences, the question raises a number of more difficult follow-up questions. Does the effect of exposure to different types of autocratic regimes, for example, highly repressive regimes or highly indoctrinating regimes, differ between each other? Is exposure to autocratic rule likely to have a homogenous effect across cohorts, individuals, and countries?

The collapse of communism in Eastern Europe and Eurasia, and the democratic transitions that have occurred during the third wave of democratization provide interesting cases for studying the political socialization of citizens under democratic and autocratic political systems. For example, imagine a 60-year-old woman born in 1960 in communist Poland. She was 15 in 1975, and thus was socialized in a highly indoctrinating environment with a moderate repression profile according to the physical violence index from V-Dem (see Figure 5.1). In 1989, the communist regime collapsed, and a democratic transition occurred. Thus, the imagined 60-year-old woman lived 15 years under autocratic rule with pronounced communist indoctrination since was 15 years old. In contrast, imagine a woman who was born in 1960 in Egypt. She was also 15 in 1975 but was socialized under a completely different autocratic regime. Respect for physical integrity was largely absent in the 1970s and became even worse since then (see Figure 5.1), while the indoctrination profile of Egypt was considerably lower compared to Poland. These two regimes represent only two examples of autocratic regimes with different repression and indoctrination profiles. Other regimes have been more repressive and have used more ideology for indoctrinating their citizens. Do these socialization experiences during individuals' youth and the exposure to autocracy affect redistributive preferences?

Despite a few recent contributions (e.g., Neundorf & Pop-Eleches, 2020; Pop-Eleches & Tucker, 2014; Pop-Eleches & Tucker, 2017), these questions regarding the legacies that previous autocratic rule has on economic preferences remains largely underexplored. However, redistributive preferences research is at the core of political economy investigating the connection between economic inequality, political behavior, and political attitudes (e.g., Neundorf & Soroka, 2018; Pop-Eleches & Tucker, 2014; Rueda & Stegmueller, 2019). Researchers are also paying increasing attention to legacies of autocratic regimes on attitudes and behavior (e.g., Bernhard & Karakoç, 2007; Neundorf et al., 2020; Neundorf & Pop-Eleches, 2020; Pop-Eleches & Tucker, 2020). Moreover, as more studies summarize what occurs under autocracy leave a long-lasting imprint on political preferences and political behavior (e.g., Lupu & Peisakhin, 2017; Neundorf et al., 2020; Neundorf &

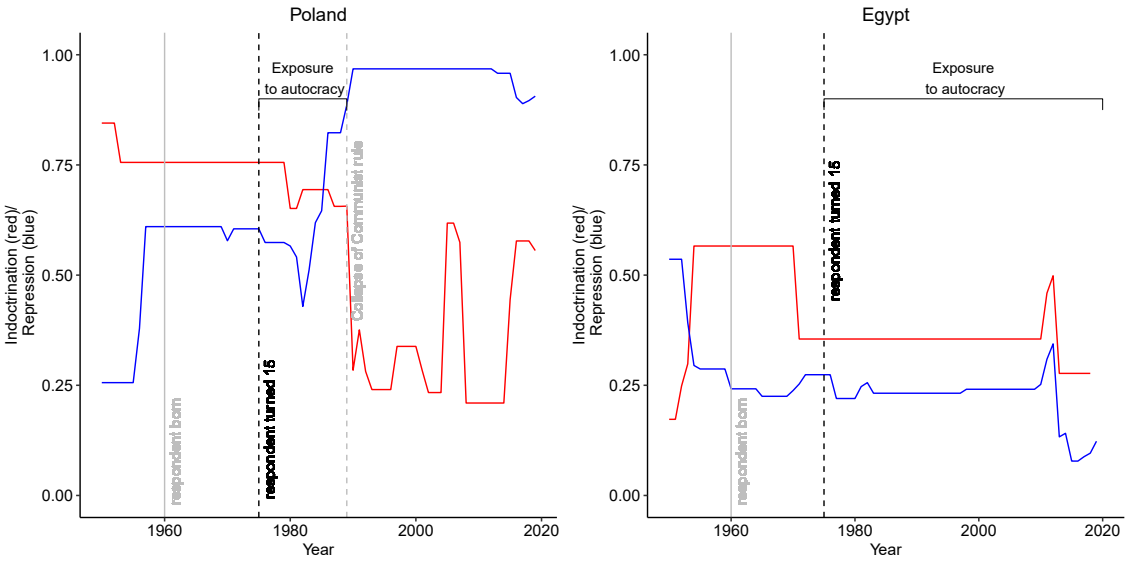

Figure 5.1: Socialization experiences for Poland and Egypt for an individual born in 1960

Notes: The red line shows the ideology variable from V-Dem (v2exl_legitideol_osp, rescaled between 0 and 1). The blue line shows the violence of physical integrity index by V-Dem (v2x_clphy).

Pop-Eleches, 2020; Pop-Eleches & Tucker, 2017, 2020; Rozenas et al., 2017; Rozenas & Zhukov, 2019), it is becoming increasingly important to account for the role of socialization experiences under different types of autocratic rule with respect to how they affect economic preferences.

Theoretically, this paper relies on political socialization theory (e.g., Krosnick & Alwin, 1989; Sears & Funk, 1999), and argues that the political socialization that someone experienced during their formative years affects their contemporary perception of economic inequality. Thus, this paper sheds light on how autocratic regimes leave a long-lasting imprint on their citizens' values and preferences and which mechanisms of political socialization under autocratic rule are distinguished from socialization in democracies. I identify two theoretically and empirically relevant mechanisms that explain why political socialization under authoritarianism have powerful long term effects after authoritarian rule has ended: state repression and indoctrination with political ideologies. Both are defining features of autocracies (e.g., Davenport, 2007; Gerschewski, 2013; Svolik, 2012; Truex, 2019) and affect citizens' trust in state institutions and each other and the citizen-state relationship, even after the collapse of an autocratic regime. This study applies a psychological approach (Nugent, 2020a) to the legacy effects of repression and indoctrination by theorizing and combining this approach with research on legacies of authoritarian regimes. To build a theoretical explanation of legacies on redistributive preferences, I draw on three different research strands.

The first strand concerns the legacies of authoritarian regimes (e.g., Neundorf et al., 2017; Neundorf et al., 2020; Pop-Eleches & Tucker, 2014; Pop-Eleches & Tucker, 2017) and focuses on the long-term effects of authoritarian political systems on political beliefs and the attitudes of citizens once a democratic political system was introduced. The second is on redistributive preferences and focuses mainly on advanced democracies (e.g., Alesina & Giuliano, 2011; Iversen & Soskice, 2001; Mares, 2003; Neundorf & Soroka, 2018; Rueda & Stegmueller, 2019). This strand has paid less attention to the role of political socialization under autocratic rule and its effects on today's redistributive preferences. The third strand regards the comparative authoritarianism literature and focuses mainly on political elites and the stability of autocratic rule (e.g., Gandhi, 2008; Magaloni, 2006; Svolik, 2012). This strand has paid less attention to the effects of non-democratic rule on citizens' beliefs and attitudes, which is the core interest of the legacy literature (e.g., Bernhard & Karakoç, 2007; Neundorf & Pop-Eleches, 2020; Pop-Eleches & Tucker, 2017).

Methodologically, the research on legacies of authoritarian regimes largely rests on hierarchical age-period-cohort (HAPC) models and estimates between and within cohort differences in citizens' democratic support (Neundorf et al., 2020; Neundorf & Pop-Eleches, 2020; Yang & Land, 2013). In this study, I also use those HAPC models to analyze the long-term effects of autocratic regimes on preferences for economic redistribution.

By theorizing and analyzing the effects of autocratic legacies on individuals' economic preferences, this study contributes to several distinct literatures. First, this study contributes to the literature on political socialization under authoritarianism by proposing a theoretical framework for the case of redistributive preferences and inequality perceptions. Second, this study increases the scope of former research on a) socialization under dictatorship that has concentrated on democratic support and antidemocratic legacies and b) communist regimes and the effects of socioeconomic preferences. In the remainder of this article, I propose a theory of how autocratic legacies affect redistributive preferences before introducing the research design and the survey data used in this article. Then, I present and discuss the empirical findings and conclude with some of this research's shortcomings and ideas for future research.

5.2 Theory: how authoritarian legacies affect redistributive preferences

This article argues that the (intensity of) exposure to autocratic rule has an important legacy effect on individuals' economic preference formation. Moreover, exposure to autocracy has no unified effect on redistributive preferences. It is intertwined with individuals' socialization experiences during their youth.

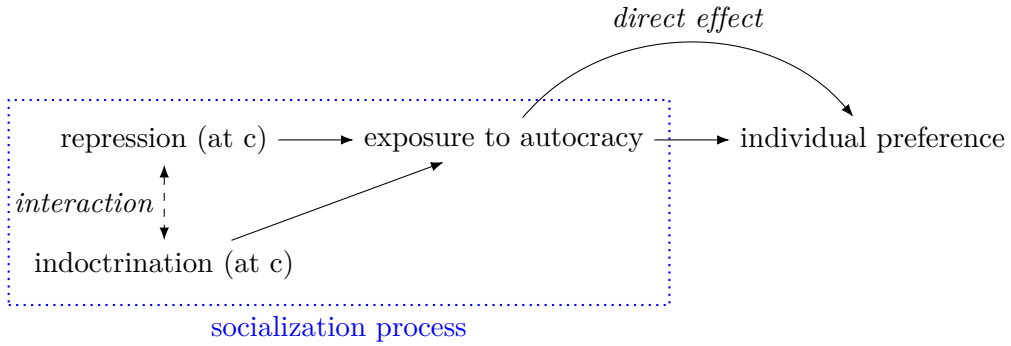

Figure 5.2: Overview Theory

Beginning with this general argument, this study theorizes that two defining features of autocracies experienced during individuals' youth influence their economic preference formation: state repression and indoctrination with political ideologies (e.g., Davenport, 2007; Gerschewski, 2013; Svolik, 2012; Truex, 2019). As shown in Figure 5.2, repression and the level of political indoctrination experienced during individuals' youth are important in explaining redistributive preferences developed under exposure to autocracy. Thus, the likelihood that the legacy effect of repression and indoctrination is important increases relative to the length of time someone lives under an autocratic regime. This article conceptualizes the socialization process people experience as the exposure (to repression and indoctrination) during individuals' youth and their subsequent exposure to autocratic rule during their life. Before detailing how repression and political indoctrination influence individuals' redistributive preferences, this section begins with two theoretical claims.

The first line of the argument contends that the exposure to autocratic rule that someone experiences is a main legacy factor affecting redistributive preferences. This line thereby follows important works by Pop-Eleches and Tucker (Pop-Eleches & Tucker, 2014; Pop-Eleches & Tucker, 2017). Their research examines the long-term effect of political socialization under communist rule, and they found that "post-communist citizens are, on average, less supportive of democracy, less supportive of markets, and more supportive of state-provided social welfare" (Pop-Eleches & Tucker, 2017, p. 1). They argue that the time someone lives under communist rule is the main explanatory factor for the long-term effects communist rule has on the hearts and minds of post-communist citizens.

The second line of the argument concerns the theory of political socialization and the "impressionable years" hypothesis (see Mannheim, 1928).[1] This theory argues that fundamental political and social values are learned in early adulthood. The main intuition behind this theory is that the values and attitudes of young citizens are not set and are

[1]Sociologists and political scientists in the 1990s tested and refined the political socialization theory (e.g., Krosnick & Alwin, 1989; Sears & Funk, 1999; Sears & Valentino, 1997).

therefore more easily influenced by external factors, such as the political regime or the state of repression in which young citizens live (cf. Bartels & Jackman, 2014; Neundorf et al., 2020). A second main assumption is that, once acquired, political and societal values and attitudes remain relatively stable in adulthood (Jennings, 1990; Prior, 2010; Sears & Valentino, 1997).

In addition, the theoretical argument relies on the common assumption that individuals are self-interested and that ''those who are or are more likely to become recipients of welfare state benefits will be more supportive of redistributive policies than those who are less likely to receive them'' (Neundorf & Soroka, 2018, p. 402). In other words, the argument assumes that people are rational and risk averse. The rationality assumption builds on the Meltzer and Richard (1981) approach, which models redistributive preferences as a simple calculation of individuals' expected income and their anticipated tax returns. It is often the unspecified starting point of political-economic literature on redistributive preferences (see Rueda & Stegmueller, 2019, p. 12).

The literature on social insurance and risk (e.g., Iversen & Soskice, 2001; Mares, 2003; Rehm, 2009) and the literature on life-cycle effects and social mobility (e.g., Alesina & Giuliano, 2011; Benabou & Ok, 2001) expand the Meltzer and Richard approach. Rueda and Stegmueller (2019) introduced an integrating framework of expected life income for explaining redistributive preferences. It considers economic and noneconomic motivations and argues that individuals' expectations of future income as they relate to negative-externality (here, the risk of being a victim of crime) and other-regarding concerns determine individuals' preferences. Neundorf and Soroka added an important argument to this debate arguing that, with the rise of the welfare state, the impact of economic change on redistributive preferences has changed over time (Neundorf & Soroka, 2018).

However, besides individualistic economic motives, other-regarding preferences, and altruistic reasons for redistributive policy preferences, I am mainly interested in the legacy effect of autocratic rule that developed during individuals impressionable years and the effect of exposure to autocratic rule during individuals' lifetimes. As shown in Figure 5.2, people are affected in their impressionable years by the degree of state repression and political indoctrination. Both repression and legitimation via political indoctrination are important instruments in the toolbox of dictatorships to create compliant citizens.

Beyond the impressionable years of political socialization, I expect that exposure to autocratic rule is also an important legacy for political preference formation (Pop-Eleches & Tucker, 2017, pp. 32–62). I expect that each additional year of exposure to autocratic rule will increase the likelihood that an individual holds the preference resulting from the socialization process mentioned below. To be clear, the effect of the impressionable

years is expected to intensify with additional years of exposure to an autocratic regime's socialization efforts (see Figure 5.2). I expect that citizens that grew up under an autocratic regime will be generally less critical about the level of economic inequality compared with citizens that were socialized in a democratic society. Citizens that grew up under autocratic rule are more likely to have experienced arbitrary rule, political exclusion from power, and persecution early on in their life. Thus, the simplest hypothesis is that each additional year under autocratic rule will increase the likelihood that an individual holds the attitudes that an autocratic regime promotes. These attitudes can involve pro-redistributive and contra-redistributive policy preferences. Because autocratic regimes build people's political exclusion from political power and the systematic elimination of accountability mechanisms by voters, individuals are likely to be less critical when evaluating public policies by the state. Therefore, I assume that:

> **H1** The longer an individual was socialized under authoritarian rule, the less critical the individual is concerning the existing level of economic inequality in the current society.

5.2.1 Repression

Political indoctrination and repression are two of the defining features of autocracies (e.g., Davenport, 2007; Gerschewski, 2013, 2018; Greitens, 2016; Pop-Eleches & Tucker, 2017; Svolik, 2012; Truex, 2019). Pop-Eleches and Tucker argue that the institutional arrangements of a communist regime could be intensifying factors, whereas pre-communist developments could provide resistance against the legacy effect of exposure to communism (2017, 49ff.).[2] This study argues that the framework by Pop-Eleches and Tucker can be transferred to the whole spectrum of dictatorships. State repression ''involves the actual or threatened use of physical sanctions against an individual or organization, within the territorial jurisdiction of the state, for the purpose of imposing a cost on the target as well as deterring specific activities and/or beliefs perceived to be challenging to government personnel, practices or institutions'' (Goldstein, 1978, p. xxvii).

Repression in autocracies has ''long-lasting psychological and identity effects'' (Nugent, 2020a, p. 38). In her book-length study, Nugent argues that repressive strategies under dictatorship affect politics and stability after democratic transitions: ''The dynamics of repression condition the level of polarization within a political system. Where repression is widespread, the opposition becomes less polarized as identities —and related affect preferences —converge over time. In a targeted repressive environment, heightened in-

[2] These antecedent conditions, in which individuals were socialized before they were exposed to authoritarian socialization efforts, are not incorporated in this study, although Pop-Eleches and Tucker (2017) have shown that these conditions matter.

group identification within the targeted group increases intergroup distance over time'' (Nugent, 2020a, p. 35). My argument is similar and argues that the psychological effects of state repression affect the level of polarization within a society and thus determine the likelihood of pro-redistributive policy preferences. However, before further detailing the long-lasting psychological effects of repression, I briefly synthesize existing works on the legacy effects of repression.

Recent studies have examined the political legacy of state repression under dictatorship on political behavior in subsequent democracies (e.g., Lupu & Peisakhin, 2017; Rozenas et al., 2017; Rozenas & Zhukov, 2019) and in (durable) authoritarian regimes (e.g., Wang, 2020). Studies by Lupu and Peisakhin (2017), Rozenas and Zhukov (2019), and Rozenas et al. (2017) examined the behavioral consequences of state repression in a democratic context after the fall of a highly repressive regime. Lupu and Peisakhin (2017, p. 836) argue that ''violence shapes identities of victims and that families transmit these effects across generations.'' Rozenas et al. (2017) also argue that large-scale state repression has an intergenerational impact on political preferences even after the overthrow of a repressive regime. All three studies investigated Soviet state violence in the former Soviet republic of Ukraine.

Wang's study on the long-term effect of state terror during the Cultural Revolution in China shows that ''individuals who grew up in localities that were exposed to more state-sponsored violence in the late 1960s are less trusting of national political leaders and more critical of the country's political system today'' (Wang, 2020, p. 1). Wang applies the legacy logic of state repression in the context of a current authoritarian regime. In contrast to the previously mentioned studies, Wang does not use a generational argument but argues in line with these studies that the level of repression under dictatorship has behavioral consequences for individuals.

Building on this prior research and assuming authoritarian imprinting and long-term psychological effects of repression, one can expect two different effects of state repression during individuals' youth on redistributive preferences. First, one could argue that state repression experienced in individuals' impressionable years induces them to be less critical about the level of economic inequality in the contemporary society. Experiences with large-scale state repression during individuals' youth can have two interrelated effects on individuals' other-regarding preferences. One possibility is that individuals will have a deeply anchored aversion toward the role of the state and its repressive capacity. By growing up in a repressive environment, individuals have learned that the state penetrates the social relationships to guarantee the survival of the dictatorship. Because economic redistribution is implemented by the state and individuals are aware of the state's role in redistribution, those socialized under highly repressive dictatorships are likely to be

risk averse and more critical about redistributive measures taken by the state still after the collapse of a dictatorship. The second possibility is that individuals distrust other citizens because they have experienced the repressive apparatus of dictatorships. Autocrats use repression to instill fear in citizens in order to control their behavior. Individuals have learned to distrust their fellow citizens when they grew up under regimes that used confidential informants, secret police, and other intelligence measures, such as the German Democratic Republic or People's Republic of China. The resulting risk aversion of individuals leads to lower incentives for economic redistribution, and therefore, the individuals are likely to be less critical about the level of inequality.

As argued above, the effect of repression during an individual's youth likely increases in relation to the amount of time an individual lived under an autocratic regime. Based on these reasons and the theoretical arguments made by Pop-Eleches and Tucker (2017), I make the following hypothesis:

> **H2a** The longer an individual was socialized under authoritarian rule and the more repressive the regime was during an individual's formative years, the less critical the individual is concerning the existing level of economic inequality in the current society.

An alternative to this hypothesis is that large scale non-targeted repression by dictatorships in citizens' impressionable years induces them to be more critical concerning the existing level of economic inequality and to demand redistributive policies because respondents have stronger inter-group identities and decreased in-group identification. Thus there are lower levels of polarization, and individuals expect to benefit from redistributive policies. This argument build upon one by Nugent (2020a, 2020b). Nugent introduced a two-stage theory and argues that ''repression affects how actors identify themselves and the extent to which they distinguish themselves from other groups through established psychological processes of group identification'' (Nugent, 2020b, p. 292). This group identification determines political preferences of the group and the distribution of preferences among other groups.

Thus, this hypothesis entails a diametrical effect of state repression on preference formation based on social psychological considerations compared to Hypothesis H2a. Individuals who experienced intense state repression during their youth are more likely to show solidarity with each other due to common socialization experiences. Thus, political polarization among these individuals should be lower. Nugent identifies three different reinforcing pathways explaining the connection between repression and identifies (Nugent, 2020a, p. 63). My argument capitalizes on her arguments and adapts her framework to the case of redistributive preferences.

She argues that, in widespread repressive environments, experiences with repression are shared and thus do not increase identification with a narrower in-group (Nugent, 2020a, p. 65): ''widespread repression creates feelings of groupness that permeate previously constructed boundaries.'' However, although large-scale repression can cause equal group status within the repressive environment, targeted repression leads to reinforcing in-group identifications (Nugent, 2020a, pp. 66–67). The common experiences with widespread violence can create common goals (i.e., opposition against the autocrat). This psychological mechanism builds on the assumption that common experiences reduce prejudice among groups.

According to these arguments, individuals who have common repressive experiences alter their reference group from the smaller group to the society, and this consequently affects their preference formation. Therefore, socialization occurring in large-scale repressive environments during individuals' impressionable years is likely to increase individuals' propensity to agree with redistributive measures because their common repressive experiences lead to more encompassing reference groups. I, therefore, assume the following hypothesis:

> **H2b** The longer an individual was socialized under authoritarian rule and the more repressive the regime was during their formative years, the more critical the individual is concerning the existing level of economic inequality in the current society.

5.2.2 Political indoctrination

Autocrats use indoctrination, which is ''the process of repeating an idea or belief to someone until they accept it without criticism or question'' (Cambridge Dictionary, 2021) in order to justify their rule. Thus, political indoctrination serves as a second tool for authoritarian incumbents to justify why they are entitled to rule (e.g., Gerschewski, 2013, 2018). By building a narrative of legitimacy, political indoctrination by various measures (e.g., ethnic exclusion, religious ideas or communist propaganda) is one aspect of the stability of authoritarian regimes (see also Gerschewski, 2013). Political indoctrination takes place via education and the media. However, the degree of political indoctrination varies depending on the type of dictatorship. So-called ideocracies (Kailitz, 2013) show presumably the highest degree of indoctrination, while more performance-based autocracies (e.g., multiparty regimes) show lower indoctrination profiles (see also Tannenberg, Bernhard, Gerschewski, Lührmann, & von Soest, 2020).[3] The varying intensity of political indoctrination that citizens are exposed to is considered in my empirical approach.

[3] As shown by Tannenberg et al. (2020), a large number of autocracies show some degree of indoctrination via political ideologies.

The first mechanism for political indoctrination is education. Authoritarian regimes use school and university education to indoctrinate their citizens to create support and foster an authoritarian political culture (e.g., Diwan & Vartanova, 2020; Neundorf et al., 2017). As Neundorf et al. argue, ‘‘schools and kindergartens are places in which the belief of citizens can be shaped already at an early age’’ (Neundorf et al., 2017, p. 7). It is likely that indoctrination in schools via political ideologies, such as communism, nationalism or religious ideas has a long-lasting imprint on attitudes toward these regimes (cf. Diwan & Vartanova, 2020).

The second mechanism of political indoctrination is the strategic control and use of the media. Authoritarian incumbents try to control the information that citizens receive by using pro-regime media outlets, and controlling and censoring critical media outlets (e.g., A.-M. Brady, 2007; Gehlbach & Sonin, 2014; King, Pan, & Roberts, 2013). Studies on the exposure to pro-regime media show that exposure increases support for controlling regimes (Adena, Enikolopov, Petrova, Santarosa, & Zhuravskaya, 2015; Crabtree, Darmofal, & Kern, 2015). In addition, autocratic regimes censor social media to prevent the collective organizing potential of social media communication, while they do not necessarily censor state critics (Gläßel & Paula, 2020; King et al., 2013). However, the phenomenon of social media was not relevant during the 20th century, the time in which most respondents were socialized. Autocracies in the 20th century vary in their handling of the media from incorporating media control among their major features (Friedrich & Brzezinski, 1965), such as was seen in the early Soviet Union and Nazi Germany, to more modern modes of media control that allows for information dissemination by various media outlets (cf. Geddes & Zaller, 1989).

Building upon this prior research and the logic of long-term psychological effects of socialization in dictatorships, I expect that political indoctrination someone experienced in their impressionable years leads to a more critical evaluation of the level of economic inequality in the current society. Individuals who experienced high levels of political indoctrination during their youth have learned that the state uses political indoctrination as a regime support mechanism and are therefore more likely to be critical of current socioeconomic inequality. In addition, political indoctrination can lead to authoritarian nostalgia (Neundorf et al., 2020). Authoritarian nostalgia may cause dissatisfaction with a current political regime, especially where there are high levels of economic inequality, and may lead to citizens who being more critical of current political and economic inequality. However, these indoctrination mechanisms should also depend on the type of political indoctrination. In additional tests, I test for the effect of socialist indoctrination and nationalist indoctrination, among others.

As argued above, the effect of indoctrination during an individual’s youth should increase

in relation to the amount of time an individual lived under an autocratic regime. I thus provide the following hypothesis:

> **H3** The longer an individual was socialized under authoritarian rule, and the more political indoctrination a regime used during an individual's formative years, the more critical an individual is concerning the existing level of economic inequality in the current society.

5.3 Research design

This article estimates between and within cohort differences in individual preferences for redistribution around the world during large parts of the 20th century.[4] I estimated hierarchical age-period-cohort (HAPC) models for 76 autocratic and democratic countries comprising more than 1.1 million individuals. The sample covers countries that are autocratic at the survey year, post-authoritarian countries at the survey year, and countries that have been democratic since the start of the 20th century. The latter serve as control cases in the models because individuals growing up in these countries had no exposure to an autocratic regime.

For the HAPC models one must distinguish between age, period, and cohort effects to find differences in the socialization experiences of generations under autocratic and democratic regimes, and under varying levels of state repression and indoctrination. In the models, I include respondents' age, the cohorts in five-year groups (when respondents turned 15), and the survey year to control for period effects. The study is mainly interested in the cohort effects of socialization under autocracy, but it also tests for contemporary effects of economic development and the level of democracy. Therefore, the models include current context variables.

5.3.1 Individual-level data

To test my hypotheses, I constructed a harmonized survey dataset on redistributive preferences (see also Claassen, 2019, 2020; Neundorf et al., 2020). The harmonized survey dataset includes publicly available survey data from numerous countries around the globe. It includes surveys from established democracies such as United States of America and France, young democracies such as Brazil and South Africa, and autocratic regimes such as Turkey or Venezuela. This study uses the following public opinion surveys:

- World Values Survey (WVS), 1981-2020, 7 Waves

[4] The first cohorts were observed in the 1930s.

- International Social Survey Programme (ISSP), 1987-2009, 4 Waves
- European Values Survey (EVS), 1981-2017, 4 Waves
- European Social Survey (ESS), 2002-2018, 9 Waves
- Latinobarometer (LB), 1997-2018, 12 Waves

The harmonized dataset included 1,131,248 respondents with valid data for the dependent variables and all control variables. To harmonize the different scales and questions, see the Supplementary Appendix D.5 through D.7. In sum, the harmonized survey dataset I used for this study combines 706 (country * wave * study) existing surveys from 76 countries from around the globe.[5]

5.3.2 Dependent variable

To measure the impact of historical legacies of autocratic regimes on people's redistribution preferences, I rely on observed measures in surveys. Redistribution preferences cannot be measured directly using survey items (e.g., Jackman, 2008; Nettle & Saxe, 2020). Therefore, I rely on a proxy variable that considers that redistributive preferences are a latent trait. In the harmonized datasets, respondents were asked two related questions. The first questions asked respondents to place themselves on a scale according to extent to which they agreed with either of the following statements: "People should take more responsibility [for reducing income differences/to ensure that everyone is provided for]" or "The government should take more responsibility [for reducing income differences/to ensure that everyone is provided for]" [ISSP, ESS/WVS, EVS].[6] The second question asked respondents to place themselves on a scale according to the extent to which they agreed with either of the following statements: "Incomes should be made more equal" or "We need larger income differences as incentives"[7] The number of response categories among the surveys varied from 5 to 10. Therefore, both variables were standardized to 0 to 100, where lower values mean less support for redistributive measures. One possible concern is that the redistributive preferences measurement includes two different survey questions on the distribution of income and the preferences for government action. This concern is addressed in additional robustness tests analyzing both survey items separately.

[5]To estimate robust HAPC models, I only included countries for which I had at least three survey waves that cover at least 10 years. The list of countries and the number of respondents per country can be found in the Supplementary Appendix D.1.

[6]Several studies have used this survey item to measure redistributive preferences (e.g., Alesina & Giuliano, 2011; Bobzien, 2020; Choi, 2019; Pop-Eleches & Tucker, 2017; Rueda & Stegmueller, 2019). A list of which words are used is available in Supplementary Appendix Table D.5.

[7]Several studies have used this survey item to measure redistributive preferences (e.g., Bublitz, 2020; Klor & Shayo, 2010). A list of which words are used is available in Supplementary Appendix Table D.5. The ISSP uses agreement with the statement "Differences in income in the country are too large." The LB uses the following question: "How fair do you think income distribution is in (country)?".

To account for dataset-specific effects due to the study or questionnaire design among different surveys, I include a dataset control variable in the models, which then also accounts for the differences in response categories.

To construct a unified variable of redistributive preferences, I took the mean of both variables whenever both questions were asked in a survey and the respondent replied to both questions. Whenever one of the questions was not asked in a survey or the respondent did not reply, I used the one asked question only. Building a unified measure for redistributive preferences is appropriate when the respective survey items load on a single latent trait. To elaborate, Table 2.1 uses a Bayesian factor analysis (BFA) model to show that both survey items load on the same latent trait. Table 2.1 provides evidence that the two survey items represent meanings relevant to the *redistributive preferences* measure. As shown in Table 2.1, the two survey items strongly load on a single dimension, while a larger share of their variance is unaccounted for (uniqueness). However, the fit to a unidimensional model is adequate.

Table 5.1: BFA for the redistributive preferences components

	Loadings (Λ)	**Confidence Intervals**	**Uniqueness (Ψ)**
Item: ''Incomes should be made more equal''	0.468	[0.453; 0.48]	0.781
Item: ''The government should take more responsibility''	0.543	[0.531; 0.561]	0.706

Note: Entries are factor loadings, 95% confidence intervals and uniqueness from a normal theory Bayesian factor analysis model, run through the MCMCfactanal() command in the MCMC package for R (Martin et al., 2011); n = 933,320 respondents.

A second methodological problem concerns missing items in the surveys. Missings are hardly *missing completely at random* or *missing at random*, especially in survey data across countries. Thus, missing data can substantially influence the results of any regression analysis, especially when using listwise deletion under *missing not at random*. Therefore, I employ multiple imputations of individual-level missing values for control variables, as described in King et al. (Honaker & King, 2010; King, Honaker, Joseph, & Scheve, 2001). Missing values are imputed for the gender, employment status, and education status of a respondent.[8] I used Amelia II (Honaker, King, & Blackwell, 2011) in R to perform

[8]In addition, there were missing values for respondents' age. However, I did not impute the age of the respondent because the age is a central identifier in the HAPC models.

multiple imputation for all individual control variables and used country IDs and years to inform the algorithm about different patterns of missings among countries. Using Amelia II, I imputed 10 datasets. I then ran HAPC regressions for each of the 10 datasets using Rubin's rules to combine results and obtain appropriate standard errors.[9]

5.3.3 Explanatory variables

My main explanatory variables' unit of analysis is the country-year at the time of political socialization for the 76 countries for which I have survey data. The data for the political socialization context come from the V-Dem dataset (Coppedge et al., 2020b).

My first explanatory variable is a measure of exposure to autocratic rule. The exposure variable was coded on an individual-level basis. It is calculated by using the individual age of a respondent and country of residence to estimate the number of years that the respondent was 15 or older while their country was under autocratic rule. For example, if an autocratic regime ended in 1990 and a respondent was 50 years old at the time of a 2010 survey, the respondent would be coded as receiving 15 years of autocratic rule (from ages 15 to 30). However, if an individual was only 35 years old at the time of a 2010 survey, they would be coded as having no years of autocratic exposure.[10] In addition, individuals that lived only under democratic regimes are all coded as having had 0 years of exposure to autocratic rule.

The second explanatory variable is the level of repression at the age of political socialization. To measure the level of repression in a regime, I used the physical violence index.[11] Physical integrity is understood as freedom from political killings and torture by the government. It ranges from low (0) to high (1). Estimates are the average from two indicators: freedom from torture and freedom from political killings. Figure 5.3a illustrates the distribution of the physical integrity variable and distinguishes between democracies and autocracies for the 76 countries in the dataset at the time of socialization of different cohorts. As expected, Figure 5.3a shows that repression is rare in democracies, while repression in autocracies varies substantially. Figure 5.4 plots the physical integrity for three different cohorts in 1940, 1960, and 1980; darker shades indicate lower physical integrity, which means more hard repression by the state. It is unsurprising that citizens that grew up in earlier cohorts were more exposed to higher levels of physical repression due to their exposure to World War II and several surrogate wars at the beginning of the Cold War.

The third explanatory variable is the level of political indoctrination. To measure political

[9] I used the mi estimate command in STATA after imputing missing data for individual control variables.

[10] Note that a country can have multiple periods of democratic and autocratic rule. Therefore, only those years under autocracy are counted as exposure to autocratic rule.

[11] V-Dem *v2x_clphy* variable.

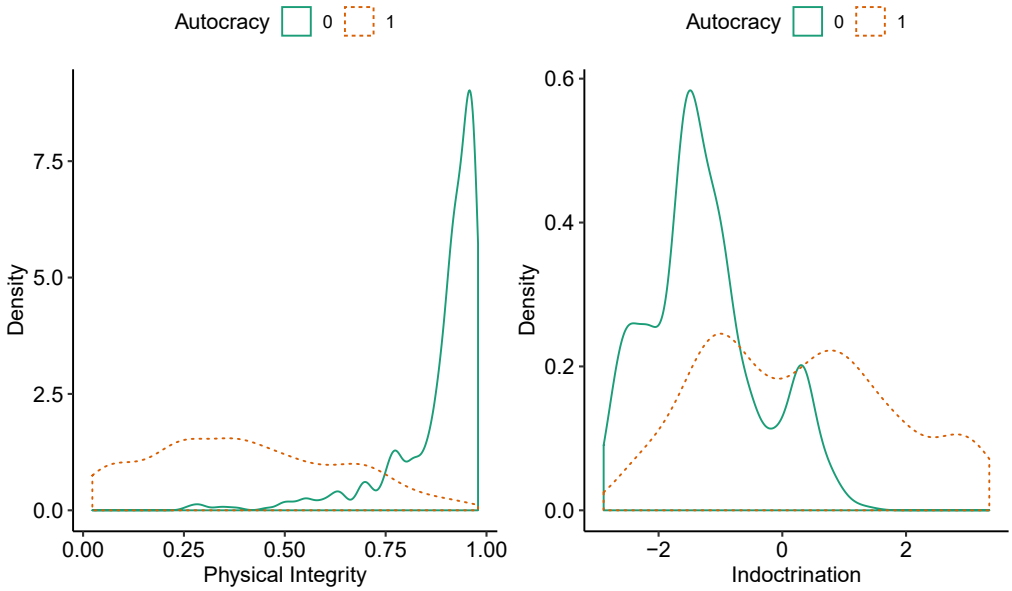

Figure 5.3: Distribution of Repression and Indoctrination variables at socialization.

indoctrination, I used a measure of the extent to which current governments promote a specific ideology or societal model in order to legitimate themselves.[12] It ranges from 0 (no specific ideology) to 4 (almost exclusively) and was converted to an interval scale via the V-Dem measurement model. Figure 5.3b shows the distribution of political indoctrination for autocracies and democracies at the time of socialization for my dataset. Figure 5.3b indicates that political indoctrination is used by autocrats in some autocracies but not in all, while indoctrination in democracies is rather rare. For both variables, I took the maximum level of each variable across five-year intervals from 1900 to 2015 and matched these to the corresponding generations. Taking the maximum of each variable is reasonable because physical integrity and ideological indoctrination leaved a long-lasting imprint in the political views of citizens.[13] Figure 5.5 illustrates the exposure to political indoctrination for three different cohorts in 1940, 1960, and 1980, where darker shades indicate less political indoctrination used by the state in the given cohort. Figure 5.5 clearly shows that the citizens in the former USSR were exposed to relatively high levels of political indoctrination, while citizens that grew up in Northern and Latin America were not exposed to such high levels of political indoctrination on average.

[12] V-Dem *v2exl_legitideol* variable.

[13] Taking the mean of a variable across five-year intervals would mask yearly outliers that are important for individuals' socialization.

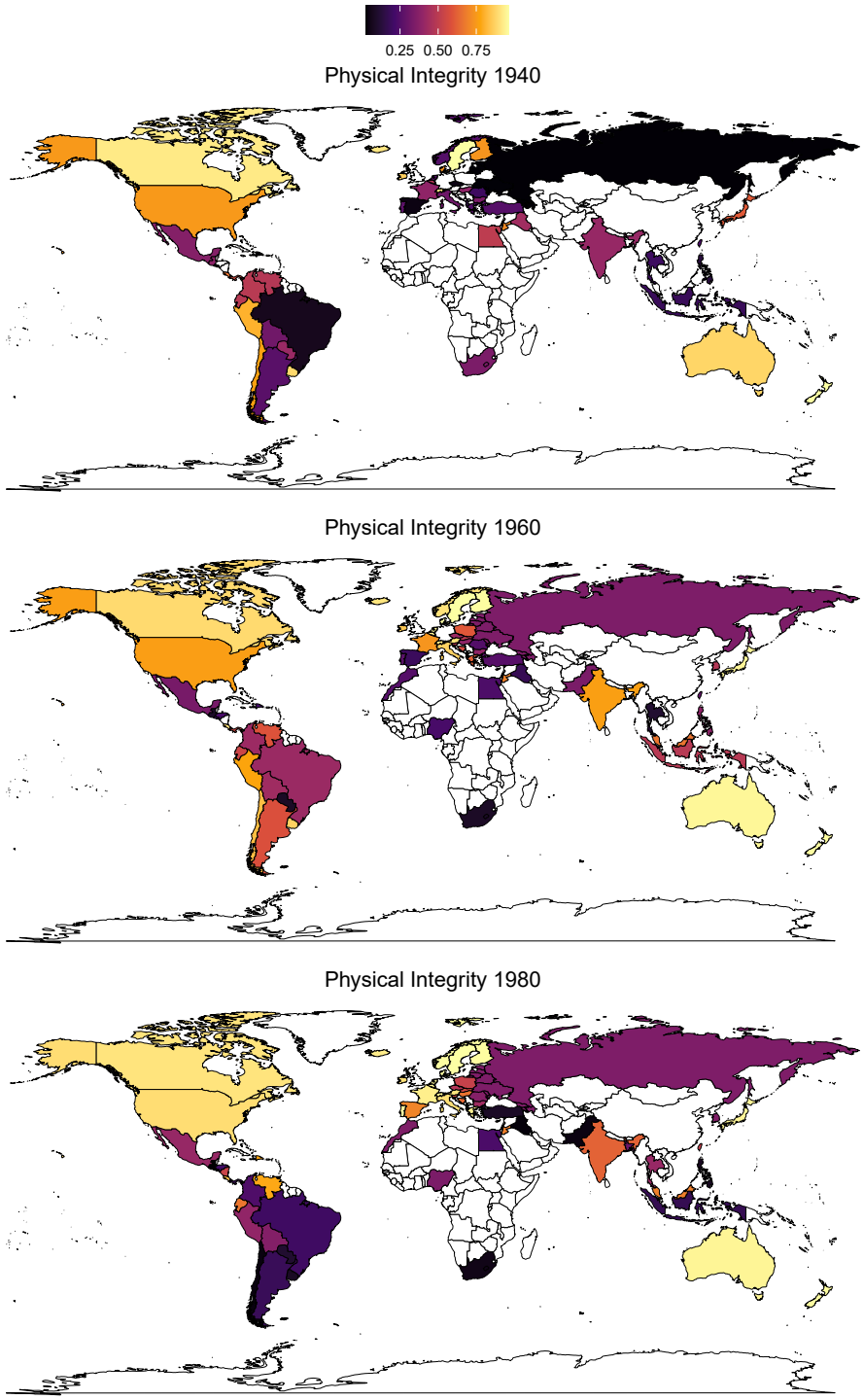

Figure 5.4: Physical Integrity at c [1940, 1960 and 1980]

The map is based on the dataset in this paper. Therefore, only countries with survey data for the cohort in the observed cohorts are plotted.

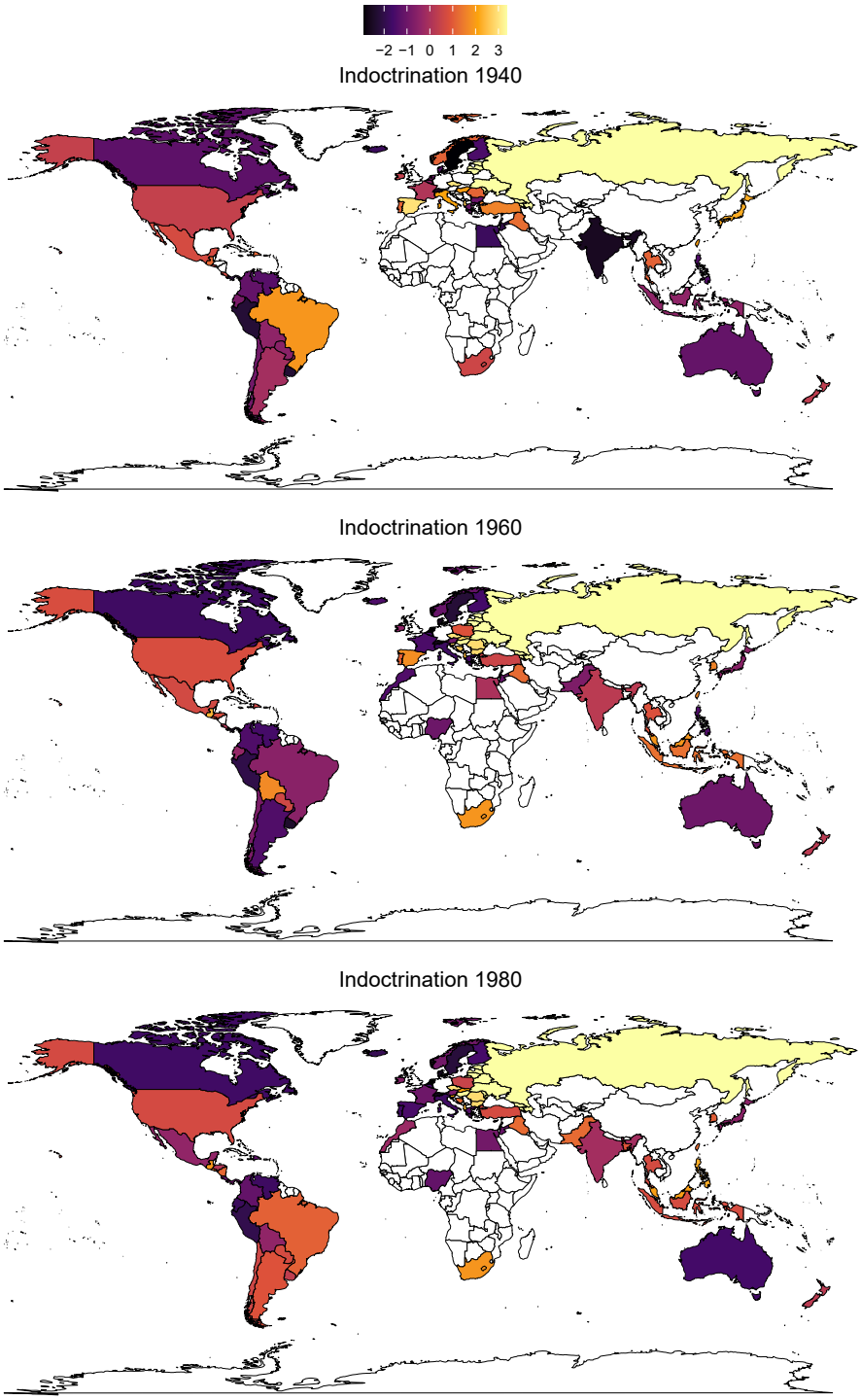

Figure 5.5: Political Indoctrination at c [1940, 1960 and 1980]

The map is based on the dataset in this paper. Therefore, only countries with survey data for the cohort in the observed cohorts are plotted.

5.3.4 Control variables

In the HAPC models, I controlled the gender, employment status, and education level (primary or less, secondary, post-secondary) of respondents.[14] These control variables are standard controls in the empirical literature (see Alesina & Giuliano, 2011; Rueda & Stegmueller, 2019). Moreover, I decided not to include the income of respondents as a control variable due to the in-comparability of income scores between different surveys, as Donnelly and Pop-Eleches show (2018).

I also included several macro-level controls in the models to rule out the possibility that citizens' redistribution preferences are explained by aspects of current political regimes. First, I included a measure for the economic development level using per capita GDP (Maddison Project, depicted in Coppedge et al., 2020b). I included the economic development level because I expect that the economic performance of a regime affects people's redistribution preferences. Second, I included the current level of democracy because I expect that the current state also affects the perception of economic inequality just as the regime type at the time of socialization affects redistributive preferences.

In additional models (see Supplementary Appendix), I controlled for the level of the economic development (GDP per capita) at the age of political socialization and the level of democracy, as measured by the Electoral Democracy Index (V-Dem) when respondents turned 15. To further control for confounders, I tested for a group of political and economic macro-level variables at the time of the survey, such as the level of income inequality measured by the Gini (Solt, 2020) or the population size.

5.3.5 The model

This study addresses the effects of authoritarian legacies by taking a generational perspective and using hierarchical age-period-cohort (HAPC) models with survey data from all world regions. In the HAPC models, the most important covariates are (1) the age of the respondents, (2) the cohort of the respondents and (3) the period of the survey (see Dinas & Stoker, 2014; Yang & Land, 2013). According to Bartels and Jackman (2014), political regimes have the strongest and most enduring impact on citizens around the age of 15, so I used five-year groupings when respondents turned this age. This study included the survey year to capture potential period effects. Unfortunately, including these three time effects simultaneously in the HAPC models creates the so-called identification problem, as

[14] I use the respondent's highest educational degree. Unfortunately, in some surveys, education was measured by education-years or age of leaving school. To transform the years of education into the three-item variable, I compiled information in the Supplementary Appendix D.6.

$$Cohort_{ijt} = Survey\ Year_{ijt} - Age_{it}. \tag{5.1}$$

In my HAPC models, I modeled periods and cohorts of respondents as cross-classified contexts in which individuals are nested. Moreover, I included macro-level independent variables that are located in the cohort context (including repression and indoctrination at the age of 15) and the period context (current level of democracy and current economic development in the same year the survey was conducted). Including both effects allows one to test the generational perspective on political socialization under an autocracy and different states of repression and indoctrination. The models are specified as

$$\begin{aligned} Redistribution\ Preference_{ijtc} = \\ \alpha_{0jt} + \beta_1\ Age_{it} + \beta_2\ Exposure\ to\ autocracy_{it} + \\ \sum_{m=3}^{M} \beta_m X_{mi} + \sum_{c=2}^{C} \gamma_c C + \epsilon_{ijtc}\ , \end{aligned} \tag{5.2}$$

where I modeled the redistributive preference of respondents i who belong to cohort j. Respondents were interviewed in survey year t and lived in country c. X represents the individual-level control variables, while C represents country-fixed effects, which account for potential country-specific differences. The most important part of the HAPC model is the random intercept that accounts for socialization effects and can be written as

$$\begin{aligned} \alpha_{0jt} = \gamma_0\ +\ \gamma_1\ Exp_{it}\ + \gamma_2\ Repression_j\ +\ \gamma_3\ Indoctrination_j\ + \\ \gamma_4\ Exp_{it}\ *\ Repression_j\ +\ \gamma_5\ Exp_{it}\ *\ Indoctrination_j\ + \\ \sum_{p=6}^{P} \gamma_p\ \mathbf{V}_{pt} + \mu_{0j0} + \mu_{00t}\ , \end{aligned} \tag{5.3}$$

where γ_0 measures the grand mean, and γ_1 through γ_5 measure the effect of the formative context for each cohort. I measured the formative context variables as 5-year averages covering when respondents were between 15 and 20 years old. To test Hypotheses 2 and 3, I included two interaction terms between exposure to autocracy and state repression and political indoctrination. If Hypotheses 2 and 3 are correct, γ_1 through γ_5 will have significant effects on the redistributive preferences. In addition, the vector V measures the current period effects (country-level variables at the year of the survey).

5.4 Results

This section presents the findings of a global cohort analysis of the impact of autocratic regimes, state repression and political indoctrination during individuals' formative years on redistributive preferences. The global cohort analysis utilizes between-regime differences. These differences refer to the differences in preferences that people who grew up under an autocratic regime have compared with those who did not, both in the same country and across countries. Therefore, the main explanatory variable is the years of exposure under an autocratic regime, as well as the intensity of repression and indoctrination at the age of political socialization (when respondents turned 15) and the interaction effects of intensity during socialization and years of exposure.

Table 5.2 reports the results of the HAPC models. It indicates that the years of exposure under an autocratic regime reduce respondents' redistribution demands. The longer a respondent lived under an autocratic regime, the lower their redistributive preferences are today. With every additional year of exposure to an autocracy, a respondent's redistributive preference decreased by 0.02 on a scale from 100 to 0, with all else being equal. This means that 50 years under authoritarian rule would lead to a decrease of 1 point, a meaningless effect. However, Models 1-3 include interaction effects between years of exposure and repression (Model 1), indoctrination (Model 2), and three-way interaction effects between repression, indoctrination, and years of exposure (Model 3). Therefore, to illuminate the effects of years of exposure conditional on repression and indoctrination on redistribution preferences, I predicted the marginal effects with all control variables held at their means.

Table 5.2: Age-Period-Cohort regression analysis

	Model 1	Model 2	Model 3
Age	0.0325***	0.0348***	0.0329***
	(0.00367)	(0.00314)	(0.00323)
Exposure to Autocracy (in years)	-0.0158**	-0.0241***	(0.188)
	(0.00614)	(0.00582)	-0.0111
Socialization Context (at c)			
Physical Integrity	-0.796**		-0.580
	(0.339)		(0.372)
Exposure to Autocracy * Physical Integrity	-0.0341***		0.0580***
	(0.0129)		(0.0222)
Indoctrination		0.110**	-0.0263
		(0.0501)	(0.0646)
Exposure to Autocracy * Indoctrination		0.0153***	0.00690*
		(0.00234)	(0.00367)
Physical Integrity * Indoctrination			-1.085***
			(0.180)
Exposure to Autocracy * Physical Integrity * Indoctrination			-0.0164

	Model 1	Model 2	Model 3
			(0.0102)
Current Context (at t)			
Electoral Democracy Index	-1.192*	-1.149*	-1.180*
	(0.697)	(0.697)	(0.697)
GDP per capita	3.575***	3.474***	3.551***
	(1.281)	(1.280)	(1.280)
Individual-level controls			
Female	0.891***	0.890***	0.890***
	(0.0363)	(0.0363)	(0.0363)
Education (ref: *primary*)			
secondary	-1.766***	-1.774***	-1.771***
	(0.0491)	(0.0491)	(0.0491)
Post-secondary	-3.676***	-3.682***	-3.679***
	(0.0554)	(0.0554)	(0.0554)
Unemployed	1.512***	1.514***	1.517***
	(0.0644)	(0.0644)	(0.0644)
Country FE	Yes	Yes	Yes
Data FE (ref: *WVS*)			
EVS	-4.798***	-4.798***	-4.800***
	(0.161)	(0.161)	(0.161)
ESS	-14.95***	-14.96***	-14.96***
	(0.168)	(0.168)	(0.168)
ISSP	24.88***	24.88***	24.88***
	(0.189)	(0.189)	(0.189)
Latinobarometer	-15.43***	-15.42***	-15.43***
	(0.188)	(0.188)	(0.188)
Intercept	50.31***	50.43***	50.44***
	(1.358)	(1.355)	(1.354)
Variance Component			
Cohort	1.637***	1.637***	1.637***
	(0.0273)	(0.0272)	(0.0273)
Period	2.947***	2.947***	2.947***
	(0.000665)	(0.000665)	(0.000665)
N (of respondents)	1,131,248	1,131,248	1,131,248
N (of countries)	76	76	76
AIC			

Source: Harmonized survey data from 706 national datasets estimated with multiple imputation for individual missing variables. List of datasets available in Supplementary Appendix. Entries are regression coefficients are their standard errors of an HAPC model. The dependent variable is redistribution preference, from low redistribution demand (0) to high redistribution demand (100). HAPC = hierarchical age-period-cohort; GDP = gross domestic product; FE = fixed effects $^{***}p < 0.01$, $^{*} * p < 0.05$, $^{*}p < 0.1$

Figure 5.6 presents the estimated marginal effects of years of exposure by different repression levels at the time of political socialization. The horizontal lines indicate the predicted levels of redistribution preference, and the vertical lines depict the 95% confidence intervals.[15] Figure 5.6 is based on Model 1 in Table 5.2. The solid line with circles shows the effect of

[15]Figures 5.7 and 5.8 are constructed in the same way.

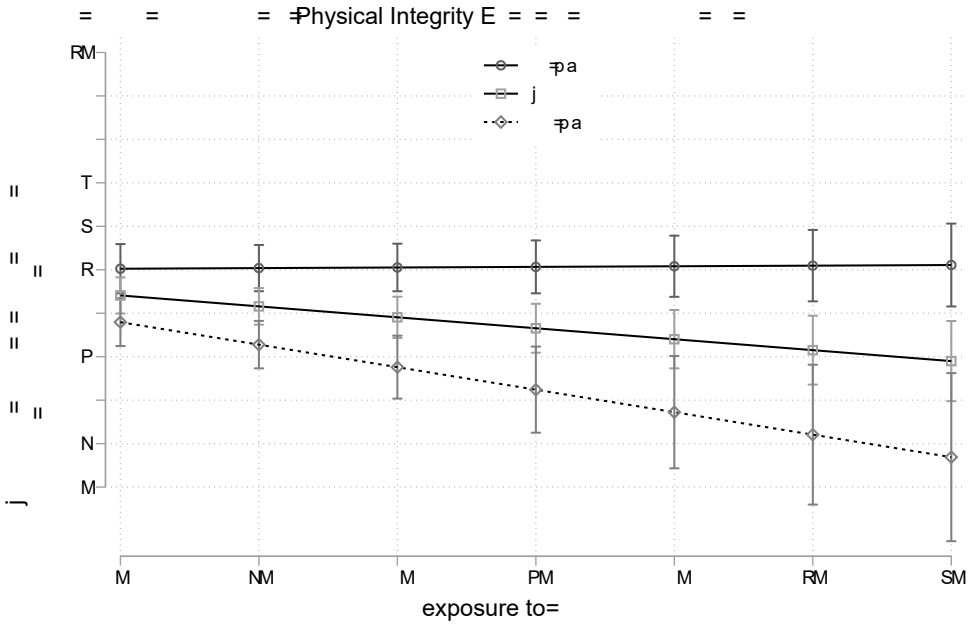

Figure 5.6: Predicted redistribution preferences by regime socialization: time under autocracy and repression at (c)

Notes: The prediction is based on a linear HAPC model. Full results shown in M1 in Table 5.2.

years of exposure to autocracy at a physical integrity level -2 standard deviations below the mean at the age of political socialization. The solid line with squares shows the effect of years of exposure at a mean level of physical integrity during respondents' youth, while the dashed line with diamonds shows the effect of the physical integrity level +2 standard deviations above the mean. Figure 5.6 shows a steep, negative slope for low levels of repression (dashed line), while high levels of repression (i.e., = low levels of physical integrity) did not increase or decrease the effect of years of exposure. Redistribution preference is predicted to be 44 for respondents with no exposure to autocratic regimes. Respondents who grew up under a low-level repressive regime and experienced a long duration of exposure to an autocratic regime (50 years) had a predicted redistribution preference of 41, which is 4 points lower than that of respondents with the same years of exposure who grew up under a high level repressive regime. The more exposure to authoritarian rule and the more repressive the regime is during people's youth, the higher the redistribution preferences are. This finding supports Hypothesis 2b.

Figure 5.7 plots the main results for Model 2, which estimates the interaction effect between political indoctrination during people's youth and the years of exposure on redistribution preferences. As predicted by my theory, those exposed during their formative years to

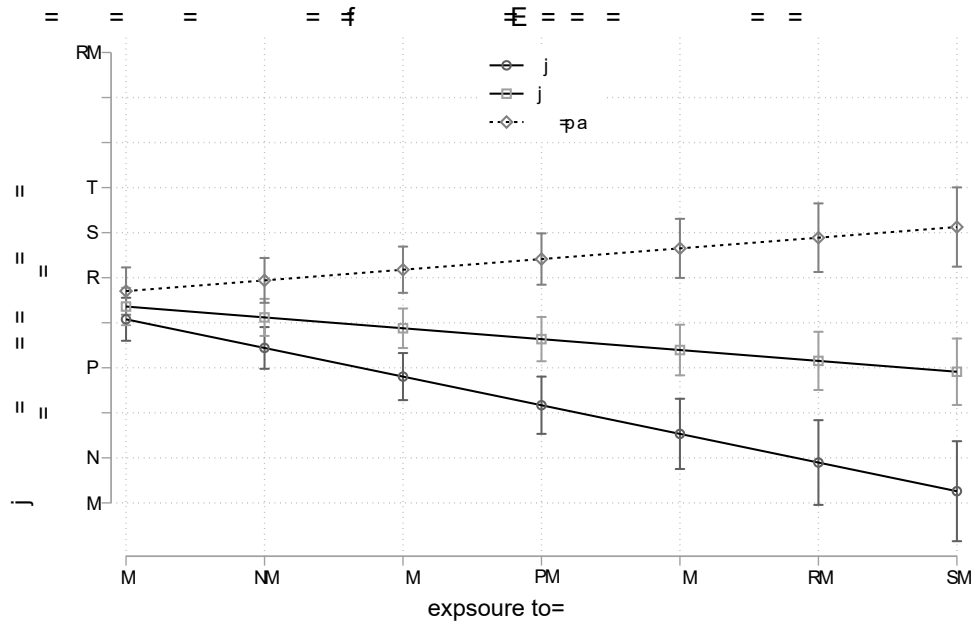

Figure 5.7: Predicted redistribution preferences by regime socialization: time under autocracy and indoctrination at (c)

Notes: The prediction is based on a linear HAPC model. Full results shown in M2 in Table 5.2.

regimes with higher levels of political indoctrination were more supportive of redistribution when the years of exposure to an autocracy were increasing compared to those that grew up under regimes with less indoctrination. I interpret this finding to represent a long-term socialization effect of political ideology in autocracies. Redistribution preference is predicted to be between 44 and 45 points for respondents with no exposure to autocratic regimes and varies depending on the level of political indoctrination during people's youth. If a respondent grew up under a regime using strong political indoctrination and was long exposed to an autocratic regime (50 years), the predicted redistribution preference is 46, which is 5 points higher than that of a respondent with the same years of exposure who grew up under a regime using lesser indoctrination. More exposure to autocratic rule and less indoctrination during individuals' formative years lead to lower redistribution preferences.

Next, I tested whether or not repression and political indoctrination during people's youth reinforce each other. I tested this relationship examining the three-way interaction between the years of exposure to autocracy and the level of repression and political indoctrination respondents experienced when socialized. The results are presented in Model 3 of Table 5.2. Unfortunately, interpreting three-way interaction effects is not straightforward, and

therefore, I focused on the graphical interpretations in Figure 5.8. Figure 5.8 shows the marginal effects of years of exposure on redistribution preferences for different levels of political indoctrination (sub-plots) and for different levels of repression (solid and dashed lines with squares, circles, and diamonds).

As Figure 5.8 demonstrates, the effects of years of exposure to an autocracy vary according to the level of political indoctrination and the level of state repression during respondents' youth. Figure 5.8 clearly indicates that, depending on the level of political indoctrination during respondents' youth, the effect of state repression varies. Figure 5.8a depicts that, under low levels of political indoctrination, respondents who were socialized under low-level repressive regimes and had considerable exposure to authoritarian rule have higher redistribution demands compared to those who experienced high-level repression during their youth and the same amount of time under autocratic rule. Figure 5.8c reveals that the opposite was true when people experienced high levels of indoctrination during their formative years. Under higher levels of political indoctrination, respondents who were socialized under low-level repressive regimes have considerably lower levels of redistribution demand compared to those with high levels of repression during their youth. The gap between these groups does not increase when the years of exposure under autocracy increases. The effects are substantial and in many cases statistically significant at the 5% level.

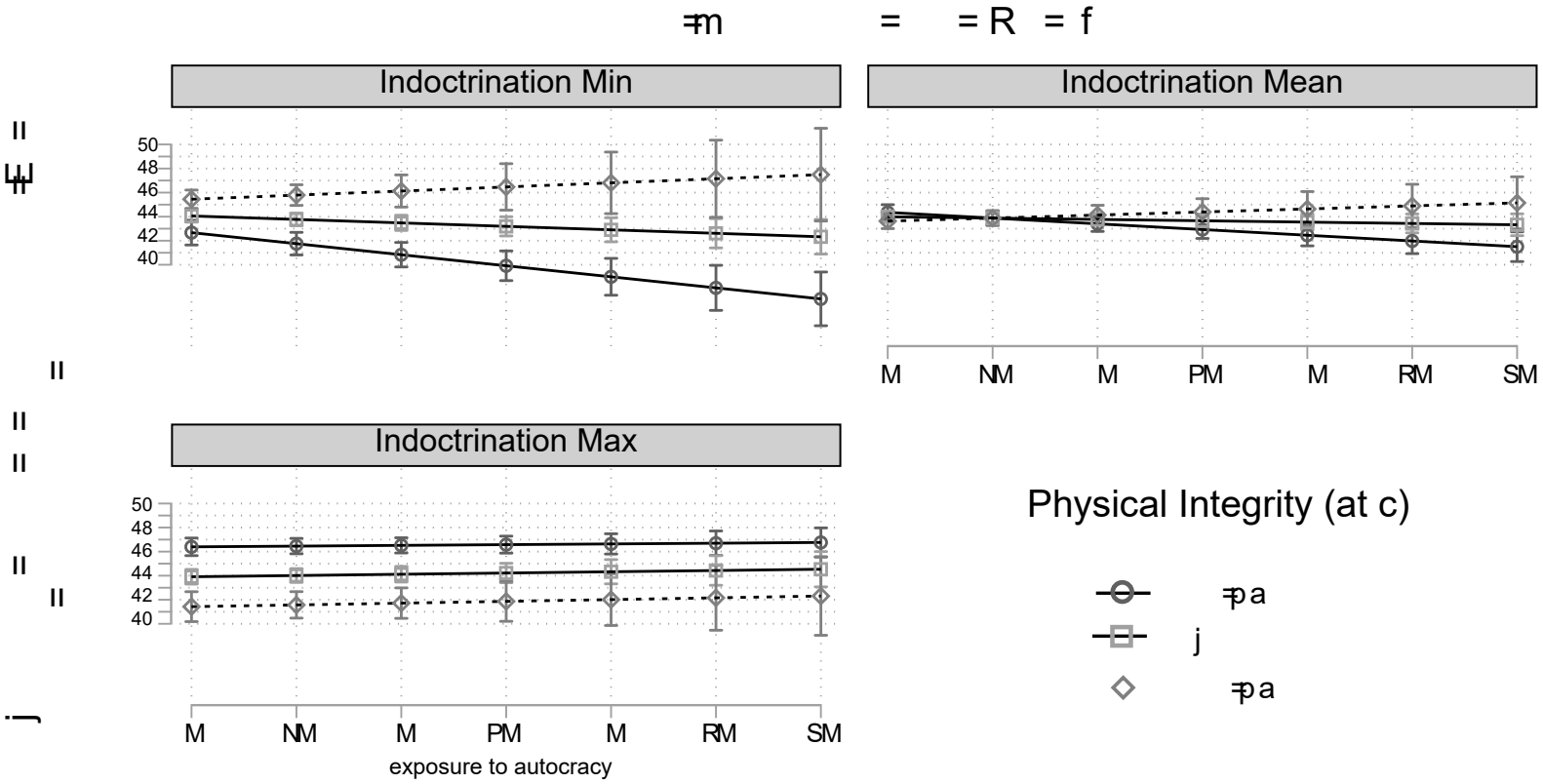

Figure 5.8: Marginal effects of time under autocracy on redistribution preferences by repression at (c) and indoctrination at (c).

Notes: The prediction is based on a linear HAPC model. Full results shown in M3 in Table 5.2.

5.5 Examining further implications

First, I re-estimated the effect of repression during respondents' youth as interacts with exposure to autocracy and the current level of democracy to test the mechanisms that drive the results regarding Hypothesis 2b. This three-level interaction regression tests if the effect of repression during respondents' youth as it interacts with exposure to autocracy is conditional on the current level of democracy in a respondent's country. Thus, Figure 5.9 presents the conditional nature of exposure to autocracy and repression on the current level of democracy. It indicates that, depending on the actual level of democracy, the effect of state repression on redistributive preferences varies. Figure 5.9 depicts that, where levels of electoral democracy were low (e.g., Egypt 2013), the effect of physical integrity during respondents' youth does not vary much, and the effect of additional years under autocracy is marginal and statistically insignificant. Where there were high levels of electoral democracy when the survey was conducted, respondents who were socialized under highly repression regimes (-2SD) and lived a considerable time under autocratic rule (50-60 years) have higher redistributive preferences compared to those socialized under regimes using low levels of repression. This finding supports Hypothesis 2b, which assumes that individuals are more critical about the level of economic inequality in relation to the amount of time they were socialized under an autocracy and level of repression used by the regime during respondents' formative years. Figure 5.9 shows that the current state of democracy matters for the effect regarding Hypothesis 2b.

Second, I examined the mechanisms driving the long-lasting effect of political indoctrination on redistributive preferences by differentiating between various types of political ideologies. After distinguishing between *nationalist*, *communist/socialist*, *conservative/restorative*, *religious*, and *separatist* political indoctrination experienced during respondents' youth (Tannenberg et al., 2020), I tested the proposition that the type of political indoctrination matters for the long-term effects on citizens' beliefs and attitudes. I assumed that *communist/socialist* indoctrination experienced during respondents' youth has a strong positive effect on their current redistributive demands (see Pop-Eleches & Tucker, 2017, pp. 186–214). I also assumed that a *nationalist* ideology experienced by respondents during their youth has a strong negative, and long-lasting effect on redistributive demands. This finding is related to findings from the political economy literature on other-regarding concerns and negative-externalities (see Rueda & Stegmueller, 2019, pp. 36–57). Authoritarian incumbents use nationalist ideologies build an in- and out-group logic that decreases the attractiveness of redistribution policies. As Rueda and Stegmueller (2019, p. 12) argue, population heterogeneity ''would capture the importance of in-group altruism.'' I expect that individuals experienced more nationalist indoctrination during their youth leads to more in-group altruism in subsequent societies.

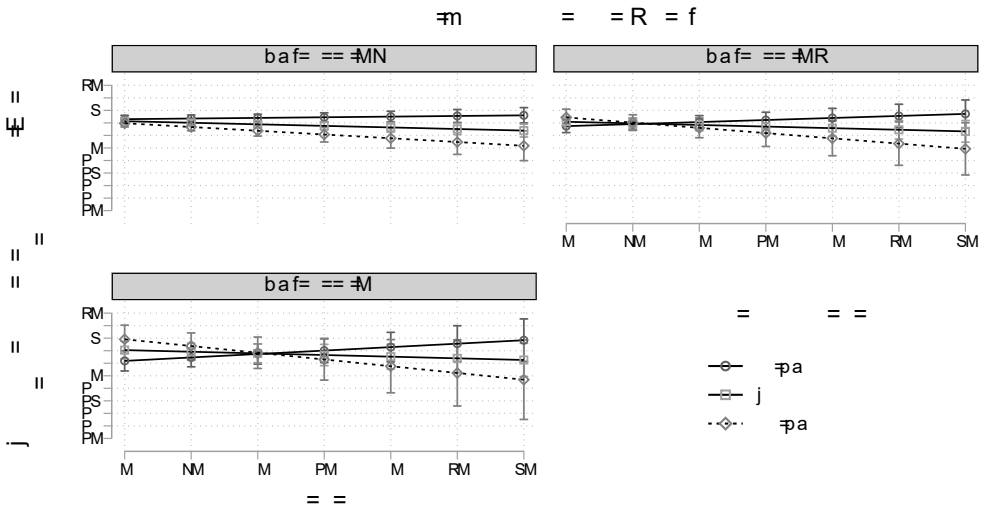

Figure 5.9: Marginal effects of exposure to autocracy on redistribution preferences by repression at (c) and Electoral Democracy at (t).

Notes: The prediction is based on a linear HAPC model. Full results shown in M1 in Table H.7.

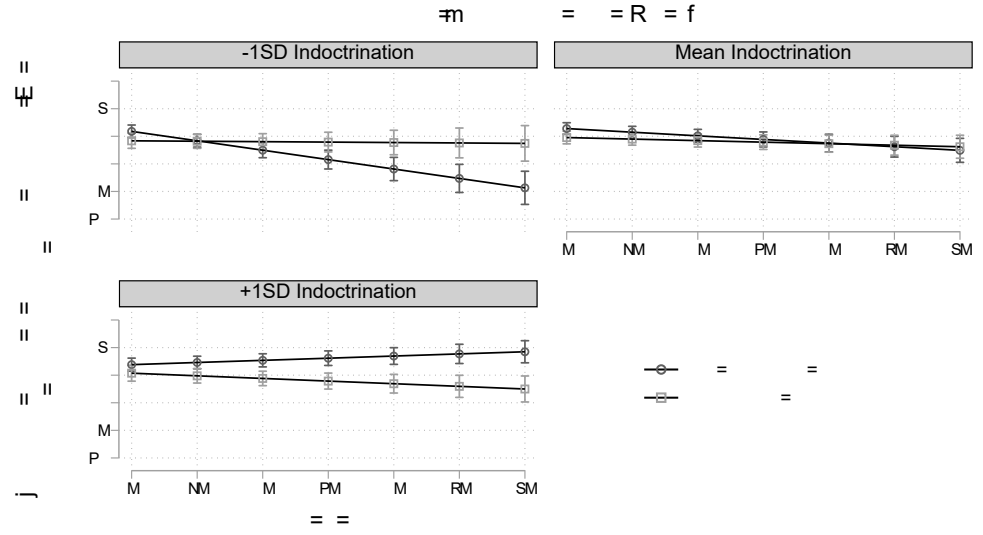

Figure 5.10: Marginal effects of exposure to autocracy on redistribution preferences by nationalist ideology at (c)

Notes: The prediction is based on a linear HAPC model. Full results shown in M2a in Table H.8.

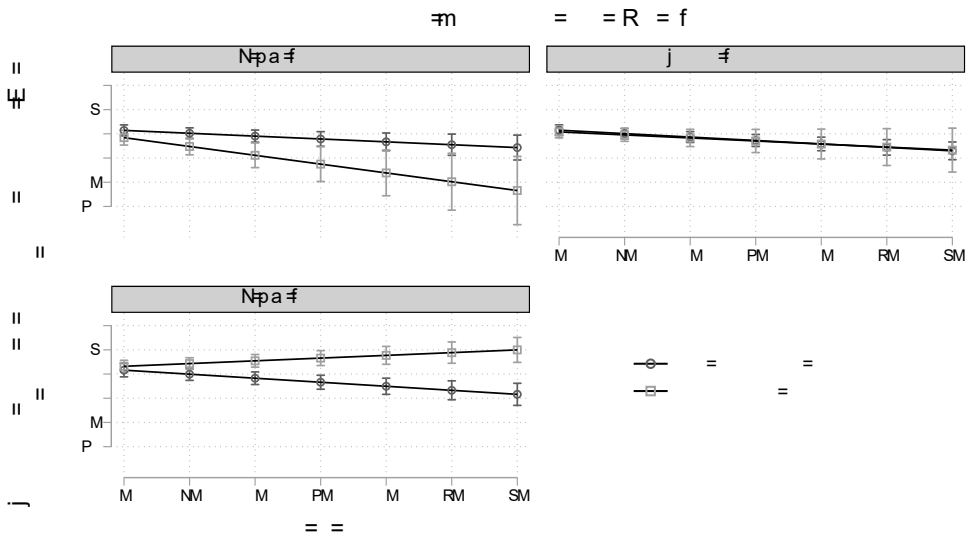

Figure 5.11: Marginal effects of exposure to autocracy on redistribution preferences communist ideology at (c)

Notes: The prediction is based on a linear HAPC model. Full results shown in M2b in Table H.8.

Figure 5.10 shows the marginal effects of respondents who grew up under regimes with a nationalist ideology and those who grew up under non-nationalist regimes. Figure 5.10 clearly indicates that a highly indoctrinating nationalist ideology experienced during respondents' youth and a considerable time under autocratic rule induces a lower redistribution demand among respondents, while the effect is the opposite in cases of low levels of political indoctrination experienced during respondents' youth.

Figure 5.11 indicates that communist ideology during respondents' youth contribute to our understanding of the relationship between exposure to autocracy and the intensity of indoctrination during respondents' youth. Respondents that grew up under the influence of high levels of political indoctrination and under a regime with a communist ideology have greater redistribution demands compared to those that grew up under a non-communist state. However, this relationship is, especially strong when a respondent was long exposed to autocratic rule. This additional evidence shows that the type of political indoctrination respondents experienced during their youth has a long-lasting imprinting effect on citizens' redistribution preferences.

5.6 Robustness tests

I conducted a series of additional robustness tests that, in brief, show that the main findings regarding the long-lasting effects of political indoctrination and repression during respondents' youth are very robust across different model specifications and constructions of the dependent variable.

One possible concern is that the measurement for redistributive preferences includes two different survey questions, one on the distribution of income and the other on preferences for government action. One could argue that these two questions should be analyzed separately to avoid inadvertent conflation. However, a comprehensive variable tends to perform poorly when the different variables are not reflective of a common cause. As shown in Table 5.1, both variables are reflective indicators for the latent trait (redistributive preferences). To address this possible concern, I recalculated the effects of my explanatory variables on both variables separately in Sections D.9.2 and D.9.3. These robustness tests support the main findings and clearly indicate that measuring redistributive preferences with an index variable has no substantial effect on the findings. All results, as shown in Figures D.4 through D.9 and in Tables D.6 and D.7, show very similar estimators compared to those in the main models.

Another concern is that the current macro-level context and the socialization context are not adequately modeled with the main control variables. Section D.9.1 of the Supplementary Appendix presents recalculated main models, which include the following additional controls: electoral democracy at (c), GDP per capita at (c), Gini at (t), and population at (t). As shown in Figures D.1, D.2, and D.3, the main results hold also when including additional macro-level controls.

A final concern may be that the imputed variables, which here regard sex, education, and unemployment, may affect the results. However, this claim is not appropriate, especially when the missings are not completely at random (Honaker & King, 2010; King et al., 2001). However, I also tested whether the results were dependent on the multiple imputation of missings in the individual-level data. As indicated in Section D.9.4, all results hold.

5.7 Conclusion

Repression and political indoctrination in dictatorships has occupied an important role in the study of autocracies and citizens' behavior. This article joins the discussions on these pillars of autocratic regimes (cf. Gerschewski, 2013) and argues that large-scale repression and indoctrinating political ideologies have long-term consequences for the socioeconomic preferences of individuals, even in cases where an autocracy collapsed several decades in

the past.

Table 5.3: Exposure, mechanisms and observable implications —results

Hypothesis	**Predicted mechanism**	**Empirical support?**
H1	each additional year of exposure decreases redistribution demand	Yes
H2a	socialization under repressive dictatorship decreases redistribution demand	No
H2b	socialization under repressive dictatorship increases redistribution demand	Yes
H3	socialization under indoctrinating dictatorship increases redistribution demand	Yes

This paper demonstrates that highly repressive dictatorships and regimes with indoctrinating ideologies, such as communism or nationalism, leave a remarkable imprint on their citizens (see Table 5.3). The statistical analysis finds that political indoctrination via regime ideology matters for the socioeconomic preferences of citizens. Citizens that were socialized under a highly indoctrinating regime during their formative years and lived under an autocratic regime for 50 years have a predicted redistribution preference that is 5 points higher than citizens who lived under a regime with low political indoctrination and the same amount of time under a dictatorship. In addition, citizens that grew up under a highly repressive autocratic regime during their formative years and lived under an autocratic regime for 50 years have a predicted redistribution preference that is 4 points higher than that of citizens who grew up under a regime using significantly less repression. In both cases, the effects of repression and indoctrination only become substantial and significant when citizens lived a considerable time under a dictatorship.

The remarkable temporal persistence of the effects of autocratic exposure on citizens' preference formation is especially relevant in the current situation of democratic regression seen across countries. Authoritarian nostalgia not only influences individuals' economic preferences but also influences assessments of democratic performance and democratic outcome qualities.

This remarkable imprint that autocracies have on their citizens speaks to hitherto distinct literatures. First, previous explanations of the formation of redistributive preferences have often focused on a rational and risk-averse paradigm (Meltzer & Richard, 1981), social insurance and risk (Iversen & Soskice, 2001; Mares, 2003), life-cycle effects and social mobility (Alesina & Giuliano, 2011; Benabou & Ok, 2001), or an integrating framework

(Rueda & Stegmueller, 2019). This article adds to this literature, which states that autocratic legacies matter for individuals' economic preference formation.

Second, this study joins a growing number of studies investigating the legacy effects of growing up in dictatorships as these effects concern political attitudes and political preferences (e.g., Neundorf et al., 2020; Pop-Eleches & Tucker, 2017, 2020). The present findings suggest that researchers should pay greater attention to socialization in dictatorships and the resulting authoritarian nostalgia when investigating socioeconomic preferences. This research adds to, and helps bridge, these two areas in the literature by showing how the legacies of autocratic regimes, in particular highly repressive and indoctrinating regimes, influence individuals' redistributive preferences.

In addition, these findings have important implications for research on the political legacies of authoritarian regimes and the socioeconomic preferences of their citizens in post-authoritarian countries: ''Experience with repression, as well as with indoctrination, survives regime change'' (Neundorf et al., 2017, p. 41). One possible concern with the present study is that my measure of socioeconomic preferences —redistributive preferences —only covers a specific area of citizens' socioeconomic views. Expanding the scope of this study, however, remains a subject for future research.

Supplemental materials

Replication files are available at Harvard Dataverse:

https://doi.org/10.7910/DVN/2DPD79

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Appendix A

Supplementary Appendix for *Inclusionary regimes, party institutionalization and redistribution under authoritarianism*

The Supplementary Appendix in this document contains the following material:

- Appendix A.1 presents a brief summary of the selected countries and country-years and comprehensive tables and figures with descriptive statistics including all key variables of the dataset. In addition, Appendix A.1 includes descriptions of the variables used for the empirical analysis and lists the sources from which the variables are drawn.
- Appendix A.2 presents additional robustness models with a smaller sample of authoritarian regimes based on a more restricted requirement for the calculation of relative redistribution (cf. Solt, 2020).
- Appendix A.3 provides additional information about whether the theoretical arguments hold for democratic and autocratic regimes. I employ models that test the theoretical predictions on the full range of authoritarian and democratic countries.
- Appendix A.4 uses data from Albertus and Menaldo (2014) and reports a wide variety of additional robustness tests which use data on *taxes on income, profits and capital gains in % of GDP*, *social spending in % GDP*, and *welfare and social insurance spending per capita of GDP* as proxies for income redistribution. As Albertus and Menaldo (2014) argued, those proxies capture redistribution and cover a global sample between 1972 and 2008.
- In Appendix A.5, I check the robustness of my findings when using data on the profile of social and infrastructural spending in the national budget of authoritarian regimes. By using the *particularistic or public goods* measure (v2dlencmps in the V-Dem data set, Coppedge et al., 2019b), I test if the main findings hold.

- Appendix A.6 predicts relative redistribution using OLS Fixed Effects estimators (country and year fixed effects) and Pooled OLS estimators that estimate robust standard errors clustered by country.[1] By using this conventional Pooled and FE OLS models, I test for the sensitivity of the main models.

The **replication data** for this article is available at Harvard Dataverse: https://doi.org/10.7910/DVN/W8PXZC

A.1 Description

A.1.1 Illustrative figures

Here, I provide a series of illustrative figures that illuminate the relationship between redistribution, ruling strategies and party institutionalization.

As mentioned in the main paper, I will use different sources of data. Figure A.1 presents the average values for the dependent variable (relative redistribution) and the two main explanatory variables, party institutionalization and political ruling strategies between 2000 and 2018.[2]

Figure A.1 strongly suggests the existence of a relationship between party institutionalization and the relative redistribution of those regimes.[3] By looking at the three worldwide distributions side by side, we can see that the average amount of relative redistribution between 2000 and 2018[4] and the average level of party institutionalization are highly correlated. In addition, Figure A.1 does not clearly indicate an inclusionary-regime effect on redistribution. We can see that, on average, the level of redistribution is higher in those authoritarian regimes that are more inclusive. However, this empirical pattern is not valid for Sub-Saharan Africa, which may indicate the different effect of inclusionary ruling strategies in electoral and closed autocracies. Further, Figure A.1 strongly suggests a robust relationship between relative redistribution and party institutionalization, which confirms my argument that higher party institutionalization in authoritarian regimes produces more incentives to redistribute more income and socioeconomic wealth. Figure A.1 shows the relationship between the explanatory variables and redistribution between countries and cannot depict the within-country variance.

[1] Some models using lagged dependent variables.

[2] Note that some of the countries that are shown here, are not ruled by authoritarian rule in the whole period between 2000 and 2018. In addition, some authoritarian countries have missing observations at country-year levels for some of the variables. I calculated the average indicators based on non-missing observations. Democratic regimes and autocracies without any observations are white-scaled.

[3] The scales of the variables reflect the original interval scales by Solt, 2020 and V-Dem.

[4] The period between 2000 and 2018 was selected for illustrative reasons.

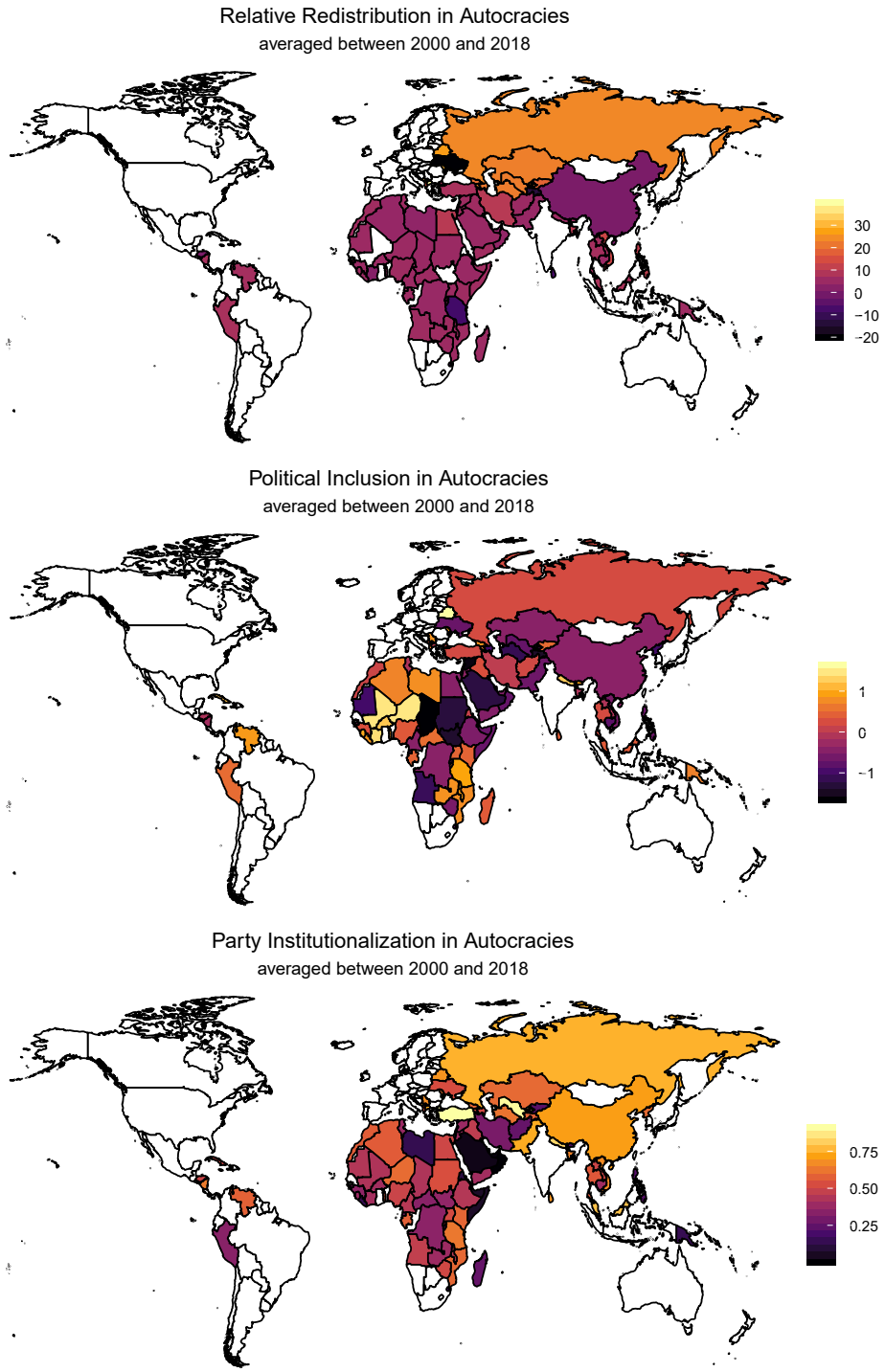


Figure A.1: Relative Redistribution, Ruling Strategies, and Party Institutionalization in Autocracies between 2000 and 2018 (average for autocratic regime spells)

However, Figure A.1 shows a remarkable amount of global variation. The highest average relative redistribution between 2000 and 2018 can be found in some post-communist regimes such as Russia, Kazakhstan, and Uzbekistan. The lowest amount of relative redistribution can be found in Ukraine and Tanzania.

More important for the theoretical argument than some visual outliers, the degree of variation between authoritarian regimes in terms of relative redistribution, party institutionalization and inclusionary and exclusionary ruling strategies in Figure A.1 is remarkable. Moreover, it obscures the temporal variation within authoritarian regimes. To further analyze the redistributive effects of inclusionary regimes and party institutionalization, I explore these patterns in a more systematic way by analyzing the within and between variance of the explanatory variables.

A.1.2 Variables and sources

Variable	**Definition / Description**	**Source**
Relative Redistribution	The Standardized World Income Inequality Database	Solt (2020, 2019)
Universalism Index	The Social Policy around the World (SPaW) Database	Rasmussen (2016)
Political Inclusiveness	(Power distributed by socioeconomic position + Power distributed by social group)/2	V-Dem (Coppedge et al. 2019)
Power distributed by socioeconomic position	Is political power distributed according to socioeconomic position?	V-Dem (Coppedge et al. 2019)
Power distributed by social group	Is political power distributed according to social groups?	V-Dem (Coppedge et al. 2019)
Party institutionalization index	To what extent are political parties institutionalized? v2psorgs + v2psprbrch + v2psprlnks + v2psplats + v2pscohesv The index was then converted to its CDF in order to range from 0 to 1.	V-Dem (Coppedge et al. 2019)
Party organizations *v2psorgs*	How many political parties for national-level office have permanent organizations?	V-Dem (Coppedge et al. 2019)
Party branches *v2psprbrch*	How many parties have permanent local party branches?	V-Dem (Coppedge et al. 2019)

Party linkages *v2psprlnks*	Among the major parties, what is the main or most common form of linkage to their constituents?	V-Dem (Coppedge et al. 2019)
Distinct party platforms *v2psplats*	How many political parties with representation in the national legislature or presidency have publicly available party platforms (manifestos) that are publicized and relatively distinct from one another?	V-Dem (Coppedge et al. 2019)
Legislative party cohesion *v2pscohesv*	Is it normal for members of the legislature to vote with other members of their party on important bills?	V-Dem (Coppedge et al. 2019)

Authoritarian Regime Types based on *own calculation*	How can the authoritarian regime overall be classified considering the competitiveness of elections and party competition?
	v2elmulpar_ord >= 2 AND v2elfrfair_ord >= 2 AND v2elsuffrage > 25 = Competitive Multiparty Autocracy;
	v2elmulpar_ord >= 2 AND v2elfrfair_ord < 2 OR v2elsuffrage <= 25 = Hegemonic Multiparty Autocracy;
	v2elmulpar_ord < 2 = Closed Autocracy
	Responses: Closed Autocracy (0), Hegemonic Multiparty Autocracy (1), Competitive Multiparty Autocracy (2)
		V-Dem (Coppedge et al. 2019)

GDP per capita logged, base 10 *e_migdppcln*	What is the GDP per capita, transformed by the natural logarithm?	V-Dem (Coppedge et al. 2019) and the Maddison Project Database (2018)
Population logged, base 10 based on *e_wb_pop*	What is the total population?	V-Dem (Coppedge et al. 2019) and World Bank Development Indicators (2019)
Communist Ideology based on *v2exl_legitideolcr*	How would you characterize the ideology/ideologies identified in the previous question? 1: Socialist or communist. (0=No, 1=Yes)	V-Dem (Coppedge et al. 2019)

Urban Percentage	Percentage of population living in urban areas with population greater than 100,000; missing values are interpolated see R-Code	Correlates of War National Material Capabilities Data
Manufacturing Sector in % of GDP	Manufacturing, value added (% of GDP) *ID: NV.IND.MANF.ZS*, missing values are interpolated see R-Code	World Bank Data

A.1.3 Discussion of SWIID

For measuring income redistribution, this article uses the Standardized World Income Inequality Database (SWIID), which measures redistribution as the difference between pre-tax/pre-transfer and post-tax/post-transfer income inequality (Solt, 2019, 2020). The SWIID generates extensive temporal and spatial coverage for the sample of authoritarian regimes. Nevertheless, different authors have criticized multiple imputation techniques of such latent macro-level phenomena as income inequality (Arel-Bundock & Pelc, 2018; Jenkins, 2015; Pepinsky, 2018; Wittenberg, 2015). However, I argue that the benefits of a wide spatial and temporal coverage countervail the disadvantages of higher measurement uncertainty. The SWIID uses multiple imputation after the data generation and merging process of various data sources. Moreover, the SWIID uses the Luxembourg Income Study as a reference point to standardize the different sources and make them comparable (Luebker, 2014; Luxembourg Income Study, 2019). The disadvantage of other sources on income inequality is that those datasets did not standardize the different sources, thus generating even more pronounced measurement uncertainty.

A.1.4 Construction authoritarian regime types

The empirical framework classifies authoritarian regime types based on the three criteria: (a) de facto inclusion of different political parties, (b) minimal competitiveness in practice, and (c) minimal suffrage in practice (Bernhard et al., 2020). Closed autocracies are those regimes in which opposition parties or all parties are excluded.[5] Hegemonic multiparty autocracies have elections that include at least one real opposition party,[6] while this regime type do not allow at least 25 per cent of the adult population to vote[7] and/or show irregularities that affect the outcome of elections.[8] Competitive multiparty regimes allow for substantial electoral competition, freedom of participation of at least 25 per cent of the

[5] v2elmulpar_ord < 2
[6] v2elmulpar_ord >= 2
[7] v2elsuffrage <= 25%
[8] v2elfrfair_ord < 2

population of the adult citizens.[9]

A.1.5 RoW data on regime types

Lührmann et al. (2018) define autocratic regime-years as those years in which competition in multiparty elections is de-facto highly constrained or no multiparty competition takes place. A second necessary condition defines autocratic regime-years as those years in which elections are not free and fair. Third, autocratic regime-years are defined by a score lower than 0.5 on the V-Dem Electoral Democracy Index.

A.1.6 Data description

Table A.2 and A.3 show summary statistics for the data employed in the main models 1 and 2. All variables are mean centered at the group means, or respectively at the grand mean. Missing observations at one variable leads to dropping of this observation. Table A.4 and A.5 show summary statistics for the data employed in the main models 3-6.

Table A.2: Summary Statistics for Redistribution Dataset

Statistic	N	Mean	Median	Min	Max	St. Dev.
Rel. Redistribution	2,020	8.224	5.794	−21.008	47.268	9.435
Pol Inclusion (w)	2,020	0.000	−0.011	−1.301	2.396	0.384
Pol Inclusion (b)	2,020	0.016	−0.122	−1.754	2.043	0.732
Party Institutionalization (w)	2,020	−0.000	0.0001	−0.409	0.470	0.087
Party Institutionalization (b)	2,020	0.507	0.502	0.003	0.903	0.180
Party organizations (w)	2,020	0.000	0.000	−2.838	2.776	0.463
Party organizations	2,020	0.506	0.453	−3.097	2.450	0.950
Party branches (w)	2,020	−0.000	0.000	−2.174	2.287	0.448
Party branches	2,020	0.400	0.468	−3.191	2.270	0.986
Party linkages (w)	2,020	0.000	−0.002	−2.535	1.978	0.495
Party linkages	2,020	−0.194	−0.311	−2.179	1.994	0.900
Distinct party platforms (w)	2,020	−0.000	0.001	−2	4	0.467
Distinct party platforms	2,020	−0.092	−0.264	−3.163	2.407	1.123
Legislative party cohesion (w)	2,020	0.000	0	−2	2	0.437
Legislative party cohesion	2,020	0.649	0.898	−2.659	2.557	1.139

[9] v2elsuffrage > 25%

Table A.3: Summary Statistics for Universalism Dataset

Statistic	N	Mean	Median	Min	Max	St. Dev.
Universalism	3,670	10.035	8	0	44	8.980
Pol Inclusion (w)	3,670	−0.000	−0.006	−2.826	2.821	0.600
Pol Inclusion (b)	3,670	−0.277	−0.241	−2.131	2.329	0.943
Party Institutionalization (w)	3,670	−0.000	−0.001	−0.561	0.597	0.121
Party Institutionalization (b)	3,670	0.430	0.404	0.026	0.897	0.203
Party organizations (w)	3,670	−0.000	0.001	−3.240	2.946	0.691
Party organizations	3,670	0.163	0.175	−2.770	2.307	1.094
Party branches (w)	3,670	−0.000	0.000	−3.090	2.665	0.661
Party branches	3,670	0.158	0.234	−2.849	3.003	1.121
Party linkages (w)	3,670	0.000	−0.019	−1.940	3.623	0.588
Party linkages	3,670	−0.562	−0.725	−2.463	2.401	0.957
Distinct party platforms (w)	3,670	0.000	0.000	−3.348	3.006	0.680
Distinct party platforms	3,670	−0.377	−0.597	−3.103	2.247	1.188
Legislative party cohesion (w)	3,670	−0.000	0.000	−3.143	2.849	0.649
Legislative party cohesion	3,670	0.450	0.592	−3.218	2.106	1.063

Table A.4: Summary Statistics for Redistribution Dataset

Statistic	N	Mean	Median	Min	Max	St. Dev.
Rel. Redistribution	1,871	8.446	5.896	−21.008	47.268	9.432
Pol Inclusion (w)	1,871	0.000	−0.011	−1.211	2.396	0.379
Pol Inclusion (b)	1,871	0.036	−0.067	−1.754	2.043	0.731
Party Institutionalization (w)	1,871	−0.000	0.000	−0.409	0.369	0.084
Party Institutionalization (b)	1,871	0.513	0.502	0.003	0.903	0.176
Electoral Autocracy (w)	1,871	−0.000	0	−1	1	0.269
Electoral Autocracy (b)	1,871	0.723	0.9	0	1	0.358
GDP pc (w)	1,871	0.000	−0.001	−1.286	1.133	0.354
GDP pc (b)	1,871	8.281	8.275	6.397	10.997	0.960
Population log (w)	1,871	−0.000	0.001	−0.474	0.464	0.097
Population log (b)	1,871	7.190	7.201	4.940	9.075	0.631
Communist Ideology (w)	1,871	0.000	0	−1	1	0.138
Communist Ideology (b)	1,871	0.259	0.2	0	1	0.301
Urban Percentage (w)	1,871	0.000	−0.0004	−0.218	0.294	0.046
Urban Percentage (b)	1,871	0.263	0.216	0.000	1.000	0.211
Manufacturing % of GDP (w)	1,871	0.000	−0.001	−0.137	0.235	0.032
Manufacturing % of GDP (b)	1,871	0.147	0.145	0.017	0.377	0.070
Party organizations (w)	1,871	0.000	0.000	−2.838	2.776	0.450
Party organizations	1,871	0.545	0.478	−3.097	2.450	0.911
Party branches (w)	1,871	−0.000	0.000	−2.174	2.287	0.436
Party branches	1,871	0.446	0.484	−3.191	2.243	0.951
Party linkages (w)	1,871	0.000	0.000	−2.535	1.978	0.490
Party linkages	1,871	−0.192	−0.309	−2.179	1.994	0.886
Distinct party platforms (w)	1,871	0.000	0	−2	4	0.455
Distinct party platforms	1,871	−0.073	−0.264	−3.163	2.531	1.124
Legislative party cohesion (w)	1,871	0.000	0	−2	2	0.430
Legislative party cohesion	1,871	0.669	1.006	−2.659	2.552	1.128

Table A.5: Summary Statistics for Universalism Dataset

Statistic	N	Mean	Median	Min	Max	St. Dev.
Universalism	1,954	13.736	14	0	44	8.134
Pol Inclusion (w)	1,954	0.000	−0.012	−1.883	2.421	0.442
Pol Inclusion (b)	1,954	−0.018	−0.034	−1.918	2.191	0.907
Party Institutionalization (w)	1,954	−0.000	−0.0005	−0.420	0.528	0.090
Party Institutionalization (b)	1,954	0.437	0.403	0.029	0.962	0.214
GDP pc (w)	1,954	−0.000	0.024	−1.668	1.414	0.321
GDP pc (b)	1,954	8.062	8.078	6.566	10.844	0.862
Population log (w)	1,954	0.000	0.003	−0.398	0.421	0.116
Population log (b)	1,954	6.984	6.934	5.508	8.976	0.613
Communist Ideology (w)	1,954	−0.000	0.000	−0.968	0.838	0.152
Communist Ideology (b)	1,954	0.292	0.188	0.000	1.000	0.305
Urban Percentage (w)	1,954	0.000	−0.001	−0.413	0.317	0.070
Urban Percentage (b)	1,954	0.211	0.163	0.000	1.001	0.168
Manufacturing of GDP (w)	1,954	−0.000	−0.0002	−0.159	0.171	0.024
Manufacturing % of GDP (b)	1,954	0.136	0.129	0.021	0.339	0.062
Party organizations (w)	1,954	0.000	0.000	−1.921	3.439	0.595
Party organizations	1,954	0.147	0.226	−2.770	3.133	1.186
Party branches (w)	1,954	−0.000	0.000	−2.340	2.150	0.499
Party branches	1,954	0.255	0.291	−2.777	3.467	1.190
Party linkages (w)	1,954	0.000	−0.010	−1.487	3.360	0.462
Party linkages	1,954	−0.610	−0.839	−2.836	2.401	0.920
Distinct party platforms (w)	1,954	0.000	−0.023	−2.093	2.869	0.506
Distinct party platforms	1,954	−0.425	−0.628	−3.103	2.532	1.272
Legislative party cohesion (w)	1,954	−0.000	0.000	−2.571	1.112	0.465
Legislative party cohesion	1,954	0.646	0.969	−3.218	2.381	1.124

Table A.6: Summary Statistics for Redistribution Datasets - Regime Types

Authoritarian Regime Type	Number of Country-Years	Number of Countries
Model 1		
Closed Autocracy	442	44
Hegemonic Multiparty Autocracy	624	57
Competitive Multiparty Autocracy	954	89
Model 3, 5		
Closed Autocracy	387	39
Hegemonic Multiparty Autocracy	589	53
Competitive Multiparty Autocracy	895	81

Table A.7: Summary Statistics for Universalism Datasets - Regime Types

Authoritarian Regime Type	Number of Country-Years	Number of Countries
Model 2		
Closed Autocracy	1300	70
Hegemonic Multiparty Autocracy	1015	69
Competitive Multiparty Autocracy	1354	98
Model 4, 5		
Closed Autocracy	774	51
Hegemonic Multiparty Autocracy	482	47
Competitive Multiparty Autocracy	698	76

Figure A.2 shows the distribution of authoritarian regime-years based on the measure of political inclusiveness and party institutionalization by authoritarian regime type (Redistribution Dataset). The regime-years in the bottom left are regimes that exclude citizens based on social and socioeconomic group membership, and whose party institutionalization is low. In contrast, regime-years in the upper right corners are regimes whose ruling strategy is more inclusive and whose party institutionalization is high. We observe that the variation in all three regime types is great and that the correlation between both variables seems to be greater in closed autocracies. However, as mentioned earlier, both factors are distinct theoretical and empirical concepts and therefore can be used in the empirical models.

Figure A.3 and A.4 show the distribution of the dependent variable. Figure A.5 and A.6 show the distribution of the two main variables. Figure A.7 shows scatter plots for the relationship between relative redistribution, party institutionalization and political inclusionary ruling strategies. The main variables are group-mean and grand-mean centered.

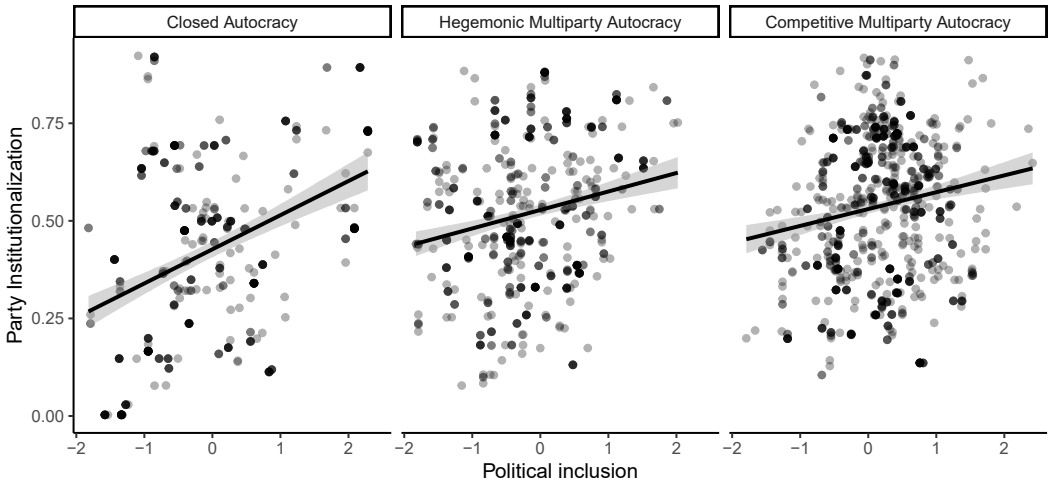


Figure A.2: Party Institutionalization and Political Inclusion by Regime Type

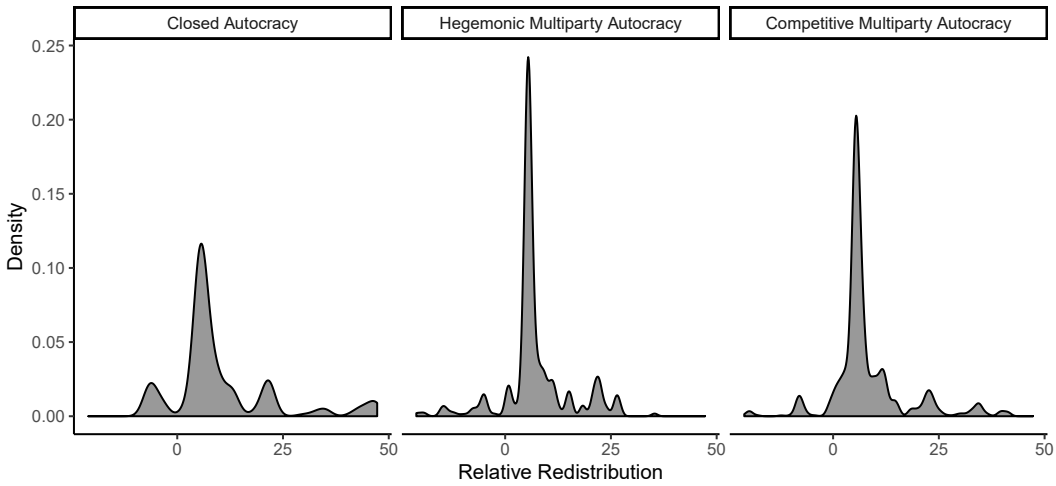


Figure A.3: Density of Relative Redistribution across Regime Types

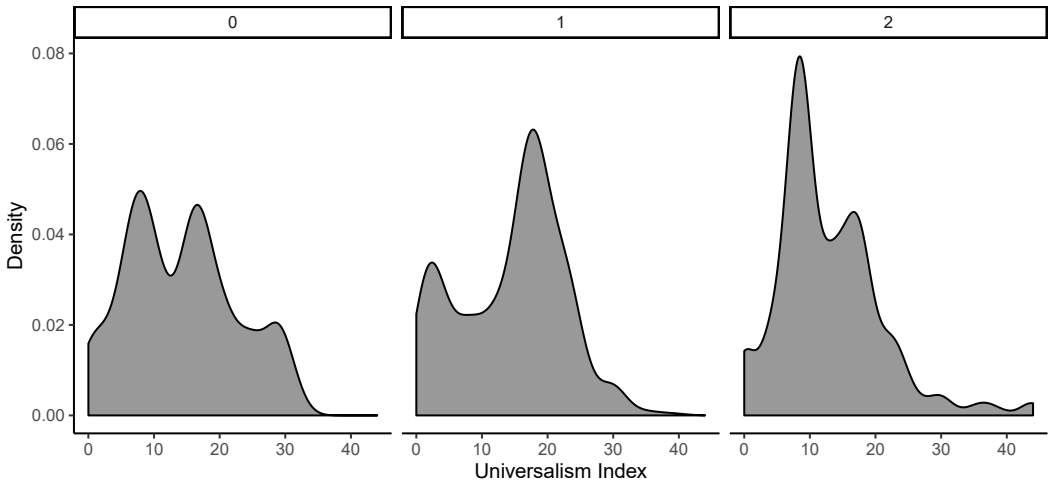


Figure A.4: Density of Universalism Index across Regime Types

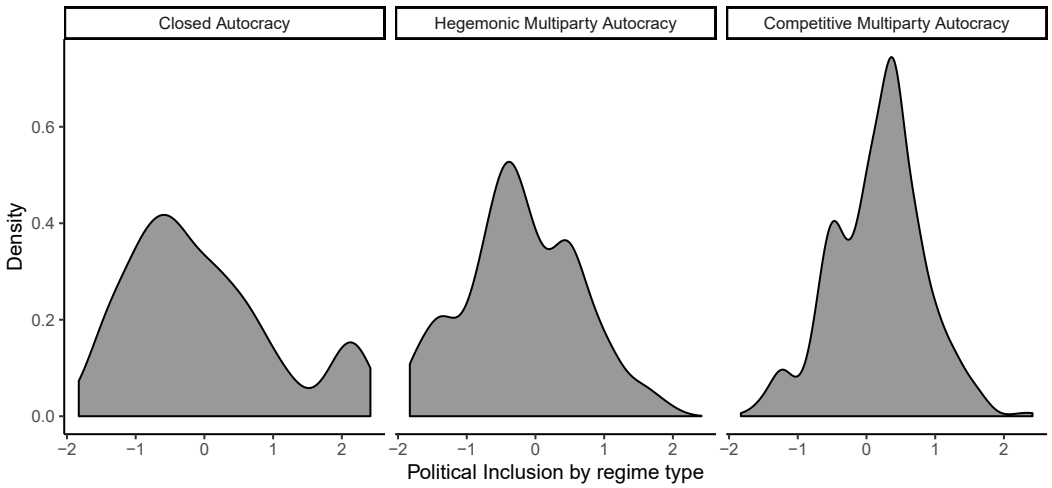


Figure A.5: Density of Inclusionary Ruling Strategies across Regime Types

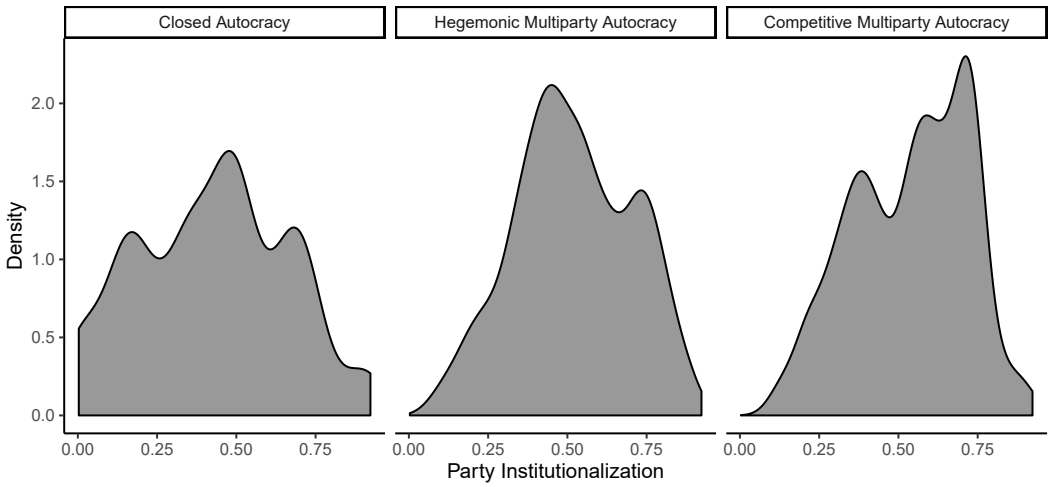


Figure A.6: Density of Party Institutionalization across Regime Types

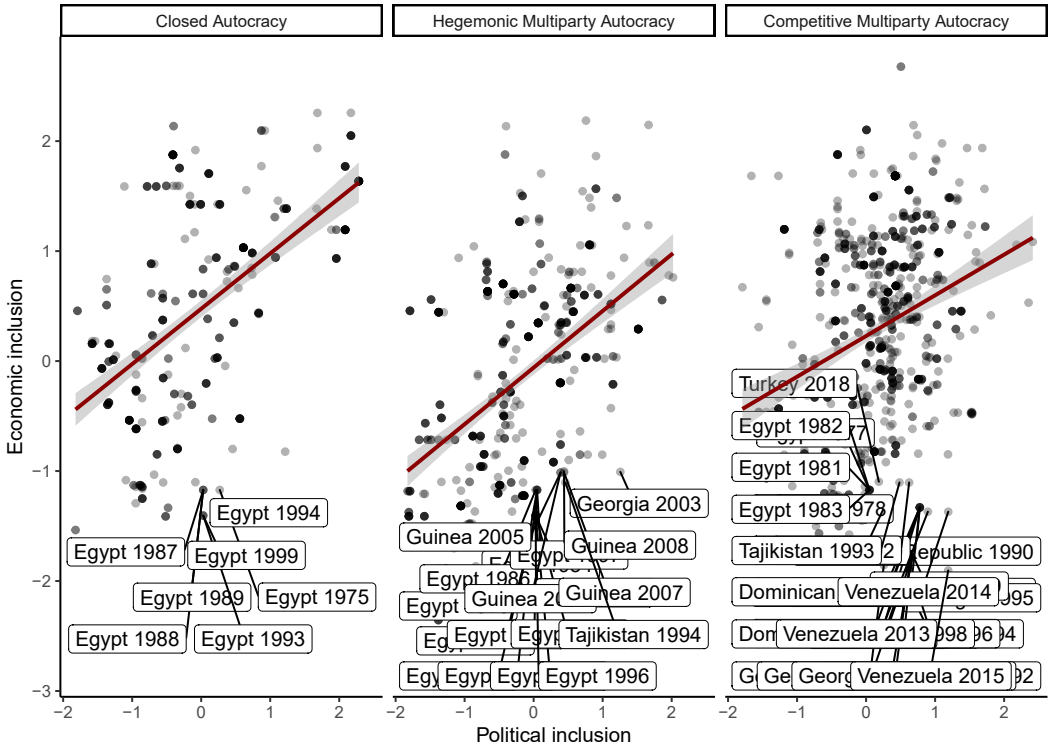


Figure A.7: Relationship between Political Inclusion and Public Good Spending

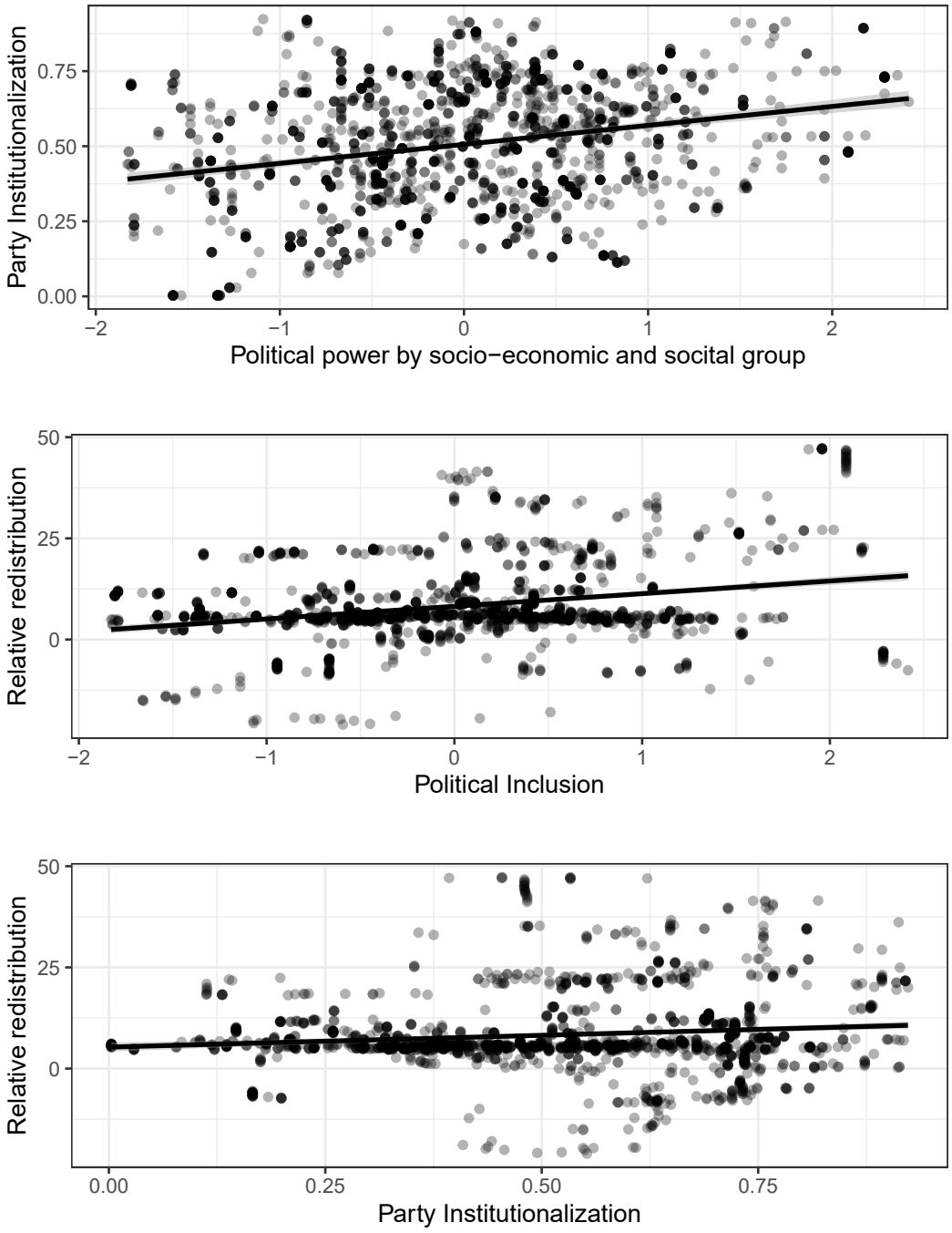


Figure A.8: Inclusionary Ruling Strategies, Party Institutionalization and Relative Redistribution

A.1.7 Sample

Table A.8 presents the sample of the Redistribution dataset (Models 3 and 5) depicted by countries with the first year of observation and the last year of observations and the number of country-years in the sample of the dataset. Table A.9 presents the sample of the Universalism Index (Models 4 and 6).

Table A.8: Sample of Countries and Years Redistribution Dataset

	Country	First Year	Last Year	No. Years
1	Afghanistan	2007	2012	6
2	Albania	1996	2003	8
3	Algeria	1988	2011	23
4	Angola	2000	2009	10
5	Argentina	1962	1983	6
6	Armenia	1995	2016	22
7	Azerbaijan	1990	2008	19
8	Bangladesh	1972	2016	20
9	Belarus	1990	2016	21
10	Brazil	1960	1986	27
11	Burkina Faso	1999	2005	4
12	Burma/Myanmar	2011	2015	5
13	Burundi	1993	2013	21
14	Cambodia	1997	2012	16
15	Cameroon	1996	2014	19
16	Central African Republic	1992	2008	17
17	Chad	2003	2011	9
18	Chile	1973	1973	1
19	China	1978	2015	38
20	Colombia	1970	1990	18
21	Croatia	1991	1999	8
22	Democratic Republic of the Congo	2004	2012	9
23	Djibouti	1996	2016	21
24	Dominican Republic	1990	1995	6
25	Egypt	1975	2012	38
26	El Salvador	1991	1998	6
27	Ethiopia	1995	2015	21
28	Gabon	2005	2016	12

Continued on next page

Table A.8 -- continued from previous page

	Country	First Year	Last Year	No. Years
29	Georgia	1990	2003	14
30	Ghana	1993	1996	4
31	Guatemala	1981	1996	13
32	Guinea	1991	2008	18
33	Guinea-Bissau	1993	2010	15
34	Haiti	2001	2012	11
35	Honduras	1988	2016	11
36	Hong Kong	1964	2016	53
37	Hungary	1962	1989	28
38	Indonesia	1965	1999	35
39	Iran	1969	2016	48
40	Iraq	2006	2014	6
41	Ivory Coast	1985	2015	28
42	Jordan	1986	2014	26
43	Kazakhstan	1991	2016	26
44	Kenya	1976	2015	40
45	Kyrgyzstan	1990	2016	25
46	Laos	1992	2013	22
47	Lebanon	1995	2010	15
48	Lesotho	1990	2002	13
49	Macedonia	1994	2016	11
50	Madagascar	1962	2012	40
51	Malawi	1969	2008	31
52	Malaysia	1972	2016	45
53	Mauritania	1992	2014	22
54	Mexico	1963	1994	32
55	Moldova	1990	2008	5
56	Montenegro	2006	2014	8
57	Morocco	1984	2014	31
58	Mozambique	1996	2015	20
59	Nepal	1977	2008	29
60	Nicaragua	2007	2014	8
61	Niger	1992	2009	6
62	Nigeria	1992	2010	11
63	Pakistan	1964	2015	38

Continued on next page

Table A.8 -- continued from previous page

	Country	First Year	Last Year	No. Years
64	Panama	1972	1990	19
65	Peru	1980	2000	10
66	Philippines	1961	2008	27
67	Poland	1983	1989	7
68	Portugal	1968	1974	7
69	Qatar	1988	2013	26
70	Republic of the Congo	2005	2011	7
71	Russia	1980	2016	36
72	Rwanda	1984	2016	32
73	Saudi Arabia	2007	2013	7
74	Seychelles	2006	2012	7
75	Sierra Leone	1971	2002	25
76	Singapore	1973	2016	44
77	South Africa	1975	1994	20
78	South Korea	1965	1987	23
79	Sri Lanka	2005	2014	10
80	Swaziland	1985	2009	25
81	Syria	1997	2007	11
82	Tajikistan	1990	2015	26
83	Tanzania	1969	2009	34
84	Thailand	1969	2016	40
85	The Gambia	1992	2015	22
86	Togo	2005	2013	7
87	Tunisia	1985	2011	27
88	Turkey	1987	2016	5
89	Turkmenistan	1991	2005	15
90	Uganda	1989	2016	28
91	Ukraine	1990	2016	17
92	Uzbekistan	1990	2003	14
93	Venezuela	1962	2015	11
94	Vietnam	1992	2016	25
95	Yemen	1992	2014	23
96	Zambia	1976	2015	23
97	Zimbabwe	1995	2011	17

Table A.9: Sample of Countries and Years Redistribution Dataset

	Country	First Year	Last Year	No. Years
1	Afghanistan	1960	1992	29
2	Albania	1998	1999	2
3	Algeria	1977	1998	21
4	Armenia	1995	2000	6
5	Bahrain	1992	1999	8
6	Bangladesh	1982	1991	7
7	Benin	1962	1991	23
8	Bolivia	1960	1984	14
9	Brazil	1960	1984	25
10	Bulgaria	1960	1990	31
11	Burkina Faso	1960	1999	15
12	Burma/Myanmar	1960	1988	18
13	Burundi	1961	1999	19
14	Cambodia	1964	2001	36
15	Cameroon	1961	1999	39
16	Cape Verde	1983	1990	8
17	Chad	1960	1999	32
18	Chile	1973	1973	1
19	China	1960	1999	40
20	Colombia	1967	1990	21
21	Cuba	1976	1999	24
22	Cyprus	1960	1969	3
23	Democratic Republic of the Congo	1961	1983	23
24	Dominican Republic	1960	1995	27
25	Ecuador	1960	1979	8
26	Egypt	1964	2000	37
27	El Salvador	1960	1994	26
28	Equatorial Guinea	1990	2007	18
29	Estonia	1992	1992	1
30	Ethiopia	1960	2007	36
31	Gabon	1960	1998	39
32	Georgia	1991	2003	13
33	Ghana	1960	1996	17

Continued on next page

Table A.9 -- continued from previous page

	Country	First Year	Last Year	No. Years
34	Greece	1960	1974	9
35	Guatemala	1960	1996	32
36	Haiti	1960	1998	37
37	Honduras	1971	1990	12
38	Hungary	1960	1980	21
39	Indonesia	1972	1999	14
40	Iran	1960	1999	26
41	Iraq	1980	1999	20
42	Ivory Coast	1960	1999	26
43	Jordan	1960	1999	31
44	Kazakhstan	1991	2000	10
45	Kenya	1974	1999	26
46	Kuwait	1974	1999	12
47	Lebanon	1963	1999	35
48	Lesotho	1966	1999	12
49	Liberia	1961	1999	36
50	Libya	1960	1998	31
51	Madagascar	1963	1993	28
52	Malawi	1964	1994	19
53	Malaysia	1960	1999	24
54	Mali	1962	1983	12
55	Mauritania	1963	1998	23
56	Mauritius	1960	1967	8
57	Mexico	1960	1994	35
58	Morocco	1963	1999	30
59	Nepal	1963	2000	38
60	Nicaragua	1960	1989	25
61	Niger	1962	1998	20
62	Nigeria	1960	1999	15
63	Panama	1960	1984	22
64	Paraguay	1961	1992	32
65	Peru	1960	1999	18
66	Philippines	1960	1987	23
67	Poland	1960	1989	30
68	Republic of the Congo	1960	2000	30

Continued on next page

Table A.9 -- continued from previous page

	Country	First Year	Last Year	No. Years
69	Romania	1960	1990	31
70	Russia	1963	1999	36
71	Rwanda	1962	1999	30
72	Saudi Arabia	1960	1998	39
73	Senegal	1961	1983	22
74	Singapore	1968	1999	32
75	South Korea	1960	1987	28
76	Spain	1961	1977	17
77	Syria	1961	2007	43
78	Tanzania	1961	1994	34
79	Thailand	1969	2007	10
80	The Gambia	1990	1999	8
81	Togo	1964	1999	24
82	Trinidad and Tobago	1960	1961	2
83	Tunisia	1960	1999	40
84	Turkey	1960	1984	10
85	Turkmenistan	1991	1999	9
86	Uganda	1962	2000	31
87	Ukraine	1991	1999	5
88	Uruguay	1972	1973	2
89	Uzbekistan	1991	1999	9
90	Venezuela	1960	1962	3

Continued on next page

A.1.8 Additional main models: sub-components of party institutionalization

Table A.10 shows that within countries strong party organizations and party linkages have positive and significant effects, while local party branches and distinct party platforms have negative and significant effects on redistribution. These results indicate that only some of the disaggregated variables are consistent with the theoretical assumptions of the aforementioned bottom-up mechanisms, while the top-down mechanisms of strong party organizations affect redistribution positively. Between authoritarian regimes, the subcomponents of party institutionalization do not have significant effects on redistribution, except for the effect of legislative party cohesion indicating that in those countries with more cohesive legislative parties the redistribution is higher on average. The effects of the control variables are robust in all models.

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
(Intercept)	34.60^{***}	-417.15^{***}	75.54^{***}	-351.04^{***}	77.99^{***}	-296.06^{***}
	(6.03)	(6.71)	(22.71)	(29.79)	(22.58)	(28.34)
Year	-0.01^{***}	0.22^{***}	-0.04^{***}	0.17^{***}	-0.04^{***}	0.14^{***}
	(0.00)	(0.00)	(0.01)	(0.01)	(0.01)	(0.01)
Pol Inclusiveness	-0.22	1.46^{***}	-0.27	-0.94^{***}	0.25	-0.34
	(0.15)	(0.18)	(0.17)	(0.24)	(0.18)	(0.25)
Pol Inclusiveness (b)	3.01^{*}	1.88^{*}	$2.69^{\dagger}$	2.14^{*}	$2.69^{\dagger}$	2.27^{*}
	(1.33)	(0.81)	(1.40)	(1.02)	(1.40)	(1.02)
Party organizations	0.36^{*}	-1.07^{***}	0.56^{**}	-0.09	0.18	-0.21
	(0.16)	(0.32)	(0.17)	(0.34)	(0.17)	(0.32)
Party organizations (b)	-1.72	-1.75	-1.16	$-2.56^{\dagger}$	-1.21	$-2.48^{\dagger}$
	(2.24)	(1.28)	(2.39)	(1.36)	(2.39)	(1.36)
Party Branches	$-0.30^{\dagger}$	1.57^{***}	-0.45^{**}	0.32	$-0.28^{\dagger}$	-0.05
	(0.16)	(0.29)	(0.16)	(0.41)	(0.16)	(0.39)
Party Branches (b)	1.87	2.85^{*}	1.45	1.99	1.42	$2.05^{\dagger}$
	(1.98)	(1.19)	(2.07)	(1.23)	(2.07)	(1.23)
Party Linkages	0.30^{*}	-1.44^{***}	0.20	-0.49	$0.29^{\dagger}$	-0.92^{**}
	(0.13)	(0.20)	(0.13)	(0.35)	(0.16)	(0.35)
Party Linkages (b)	-0.83	-0.52	-0.05	-1.59^{*}	-0.04	$-1.54^{\dagger}$
	(1.14)	(0.70)	(1.26)	(0.79)	(1.26)	(0.79)
Distinct Party Platforms	0.36^{*}	-0.35	0.35^{*}	-0.33	0.21	0.06
	(0.16)	(0.30)	(0.16)	(0.41)	(0.15)	(0.39)
Distinct Party Platforms (b)	0.03	1.14	-0.35	1.93^{*}	-0.35	1.74^{*}
	(1.10)	(0.73)	(1.11)	(0.84)	(1.11)	(0.84)

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
Legislative Party Cohesion	−0.15	−0.93***	−0.18	−1.43***	−0.03	−0.96**
	(0.13)	(0.22)	(0.14)	(0.34)	(0.14)	(0.33)
Legislative Party Cohesion (b)	2.15*	0.13	1.56	1.06	1.60	0.91
	(0.95)	(0.68)	(1.05)	(0.73)	(1.05)	(0.73)
Ref. Category: Closed Autocracy						
Hegemonic Multiparty Autocracy	−0.03	−0.33†	0.24*	0.29	0.36**	0.50**
	(0.12)	(0.19)	(0.12)	(0.20)	(0.12)	(0.19)
Competitive Multiparty Autocracy	−0.33**	−0.94***	−0.10	−0.20	−0.00	−0.07
	(0.12)	(0.20)	(0.12)	(0.21)	(0.12)	(0.20)
HM Autocracy * Inclusiveness	1.53***	−0.12	1.98***	1.97***	1.65***	2.01***
	(0.22)	(0.30)	(0.24)	(0.49)	(0.24)	(0.52)
CM Autocracy * Inclusiveness	1.85***	−1.13***	1.76***	0.75*	1.07***	−0.60
	(0.20)	(0.26)	(0.20)	(0.34)	(0.22)	(0.37)
HM Autocracy * Party organizations	0.11	0.58	0.10	0.68	0.28	0.52
	(0.24)	(0.44)	(0.25)	(0.49)	(0.25)	(0.46)
CM Autocracy * Party organizations	0.33	−0.83†	0.27	−0.04	0.40†	0.91*
	(0.23)	(0.45)	(0.24)	(0.46)	(0.23)	(0.45)
HM Autocracy * Party Branches	−0.02	−2.56***	0.06	−0.32	0.38	0.30
	(0.24)	(0.43)	(0.25)	(0.62)	(0.27)	(0.59)
CM Autocracy * Party Branches	−0.01	−0.29	0.20	−0.61	0.16	−0.88†
	(0.23)	(0.44)	(0.23)	(0.53)	(0.23)	(0.51)
HM Autocracy * Party Linkages	0.09	0.36	−0.02	0.44	−0.05	0.87†
	(0.17)	(0.30)	(0.18)	(0.48)	(0.20)	(0.45)
CM Autocracy * Party Linkages	−0.12	2.01***	−0.17	0.93*	−0.27	−0.31
	(0.17)	(0.26)	(0.17)	(0.42)	(0.19)	(0.43)
HM Autocracy * Distinct Party Platforms	−1.04***	1.38***	−1.23***	−0.97	−1.50***	−0.44
	(0.21)	(0.40)	(0.22)	(0.65)	(0.22)	(0.60)
CM Autocracy * Distinct Party Platforms	−0.78***	1.63***	−0.76***	1.11*	−0.47*	0.38
	(0.21)	(0.41)	(0.21)	(0.50)	(0.19)	(0.49)
HM Autocracy * Legislative Party Cohesion	0.18	1.15***	0.01	2.06***	0.01	1.30**
	(0.18)	(0.30)	(0.20)	(0.43)	(0.20)	(0.42)
CM Autocracy * Legislative Party Cohesion	0.16	1.55***	0.09	0.82†	0.11	0.17
	(0.18)	(0.29)	(0.19)	(0.44)	(0.19)	(0.42)
GDP pc log			0.90***	0.16	0.67***	−0.04
			(0.10)	(0.18)	(0.10)	(0.17)
GDP pc log (b)			4.07**	3.26**	4.08**	3.23**
			(1.39)	(1.12)	(1.39)	(1.12)
Population log			−0.09	−6.59***	1.06†	−3.67***
			(0.54)	(1.16)	(0.55)	(1.10)
Population log (b)			−2.17	−0.38	−2.19	−0.37
			(1.85)	(1.35)	(1.85)	(1.35)
Communist Ideology			−0.33	0.59	−0.27	−0.13

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
			(0.21)	(0.39)	(0.20)	(0.37)
Communist Ideology (b)			1.90	−0.37	1.87	−0.58
			(3.52)	(3.10)	(3.53)	(3.10)
Urban Pop %			0.57	3.66***	−0.25	2.73**
			(0.57)	(1.01)	(0.53)	(0.94)
Urban Pop % (b)			−7.99	−1.83	−8.04	−1.36
			(7.08)	(5.83)	(7.09)	(5.83)
Manufacturing Sector %			3.13***	−2.16	1.90*	0.16
			(0.78)	(2.21)	(0.74)	(2.03)
Manufacturing Sector % (b)			−9.30	19.03	−9.08	16.24
			(17.72)	(14.69)	(17.73)	(14.69)
Inclusiveness * Party organizations					2.27***	−0.08
					(0.32)	(0.61)
Inclusiveness * Party Branches					−1.18***	−1.28†
					(0.29)	(0.70)
Inclusiveness * Party Linkages					−1.66***	−1.08
					(0.26)	(0.66)
Inclusiveness * Distinct Party Platforms					1.41**	2.11*
					(0.48)	(0.84)
Inclusiveness * Legislative Party Cohesion					−0.50*	−1.03*
					(0.23)	(0.50)
Inclusiveness * Party organizations * HM Autocracy					−6.47***	0.58
					(0.62)	(1.11)
Inclusiveness * Party organizations * CM Autocracy					−1.16**	−1.52*
					(0.41)	(0.77)
Inclusiveness * Party Branches * HM Autocracy					3.84***	3.62**
					(0.61)	(1.21)
Inclusiveness * Party Branches * CM Autocracy					0.55	2.23**
					(0.41)	(0.80)
Inclusiveness * Party Linkages * HM Autocracy					3.01***	−0.36
					(0.40)	(0.78)
Inclusiveness * Party Linkages * CM Autocracy					2.33***	3.40***
					(0.31)	(0.65)
Inclusiveness * Distinct Party Platforms * HM Autocracy					−0.93†	−2.05†
					(0.51)	(1.18)
Inclusiveness * Distinct Party Platforms * CM Autocracy					−2.66***	−0.64
					(0.51)	(0.96)
Inclusiveness * Legislative Party Cohesion * HM Autocracy					1.18***	−6.69***
					(0.35)	(0.81)
Inclusiveness * Legislative Party Cohesion * CM Autocracy					−0.14	1.72**
					(0.29)	(0.53)
Random effects						

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
τ_{00}	96.91	45.13	90.21	46.53	90.30	46.59
σ^2	1.09	10.32	1.07	4.79	0.89	3.90
AIC	6744.02	19557.53	6183.30	9100.29	5904.94	8733.30
BIC	6912.35	19743.76	6404.67	9323.40	6209.33	9040.07
Log Likelihood	-3342.01	-9748.76	-3051.65	-4510.15	-2897.47	-4311.65
Num. obs.	2020	3669	1871	1954	1871	1954
Num. countries	105	110	96	90	96	90

$^{***}p < 0.001$, $^{**}p < 0.01$, $^{*}p < 0.05$, $^{\dagger}p < 0.1$

Table A.10: Linear Within-Between Model predicting Redistribution / Universalism

A.1.9 Replication with control variables: Table 2 main paper

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
(Intercept)	29.36***	−434.52***	54.92*	−351.08***	62.08**	−304.78***
	(6.60)	(6.86)	(21.84)	(29.85)	(22.02)	(29.26)
Year	−0.01***	0.23***	−0.03***	0.17***	−0.03***	0.15***
	(0.00)	(0.00)	(0.01)	(0.01)	(0.01)	(0.01)
Pol Inclusiveness	−0.05	1.57***	−0.08	−0.75***	−0.15	−0.50*
	(0.13)	(0.17)	(0.15)	(0.23)	(0.15)	(0.23)
Pol Inclusiveness (b)	2.83*	1.94*	2.48†	2.38*	2.50†	2.40*
	(1.31)	(0.82)	(1.36)	(1.05)	(1.36)	(1.03)
Party Institutionalization	2.98***	−7.36***	2.82***	−2.48	2.73***	−1.91
	(0.69)	(0.92)	(0.74)	(1.62)	(0.81)	(1.58)
Party Institutionalization (b)	8.69	9.25*	5.29	4.21	5.28	4.02
	(5.41)	(3.60)	(6.05)	(4.24)	(6.05)	(4.18)
Ref. Category: Closed Autocracy						
Hegemonic Multiparty Autocracy	−0.07	−0.26	0.22†	0.45*	0.29*	0.56**
	(0.11)	(0.18)	(0.12)	(0.20)	(0.12)	(0.20)
Competitive Multiparty Autocracy	−0.24*	−0.85***	0.04	0.32†	0.06	0.16
	(0.11)	(0.17)	(0.12)	(0.19)	(0.12)	(0.18)
HM Autocracy * Inclusiveness	1.26***	−0.47†	1.59***	2.13***	1.67***	2.26***
	(0.20)	(0.27)	(0.21)	(0.43)	(0.22)	(0.46)
CM Autocracy * Inclusiveness	1.56***	−1.53***	1.52***	1.00**	1.61***	0.41
	(0.18)	(0.25)	(0.19)	(0.32)	(0.19)	(0.33)
HM Autocracy * PI	−3.01**	4.81***	−3.86***	0.48	−4.13***	1.44
	(0.92)	(1.29)	(1.01)	(2.02)	(1.08)	(1.99)
CM Autocracy * PI	−2.19*	12.98***	−2.11*	3.08	−1.89†	−3.99*
	(0.93)	(1.36)	(0.99)	(1.99)	(1.09)	(2.02)
GDP pc log			0.78***	0.22	0.75***	0.13
			(0.10)	(0.17)	(0.10)	(0.17)
GDP pc log (b)			4.03**	2.87*	4.04**	2.77*
			(1.41)	(1.17)	(1.41)	(1.15)
Population log			−0.77	−7.33***	−0.40	−5.16***
			(0.53)	(1.15)	(0.55)	(1.13)
Population log (b)			−2.37	−0.48	−2.35	−0.55
			(1.78)	(1.43)	(1.78)	(1.42)
Communist Ideology			−0.27	0.05	−0.21	−0.18
			(0.20)	(0.36)	(0.20)	(0.35)
Communist Ideology (b)			3.04	−0.23	3.06	−0.37
			(3.41)	(3.15)	(3.40)	(3.10)
Urban Pop %			0.75	4.85***	0.74	4.70***
			(0.59)	(0.98)	(0.59)	(0.95)
Urban Pop % (b)			−8.25	1.05	−8.27	1.24
			(7.05)	(6.02)	(7.05)	(5.94)
Manufacturing Sector %			3.95***	−2.86	3.75***	−2.76
			(0.79)	(2.20)	(0.79)	(2.12)
Manufacturing Sector % (b)			−16.07	12.22	−16.58	12.31
			(16.25)	(14.60)	(16.24)	(14.40)
PI * Inclusiveness					−2.94**	1.20
					(1.10)	(2.72)
HM Autocracy * PI * Inclusiveness					−3.01†	−8.53**
					(1.71)	(3.30)
CM Autocracy * PI * Inclusiveness					1.56	15.31***
					(1.42)	(2.94)
Random effects						
τ_{00}	97.36	47.29	89.20	52.71	89.07	51.30
σ^2	1.15	10.90	1.14	4.95	1.13	4.58
AIC	6802.85	19716.13	6258.93	9139.93	6240.82	8989.03
BIC	6881.40	19803.03	6391.76	9273.80	6390.24	9139.62
Log Likelihood	-3387.42	-9844.06	-3105.47	-4545.97	-3093.41	-4467.51
Num. obs.	2020	3669	1871	1954	1871	1954

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
Num. countries	105	110	96	90	96	90

$^{***}p < 0.001$, $^{**}p < 0.01$, $^{*}p < 0.05$, $^{\dagger}p < 0.1$

Table A.11: Linear Within-Between Model predicting Redistribution

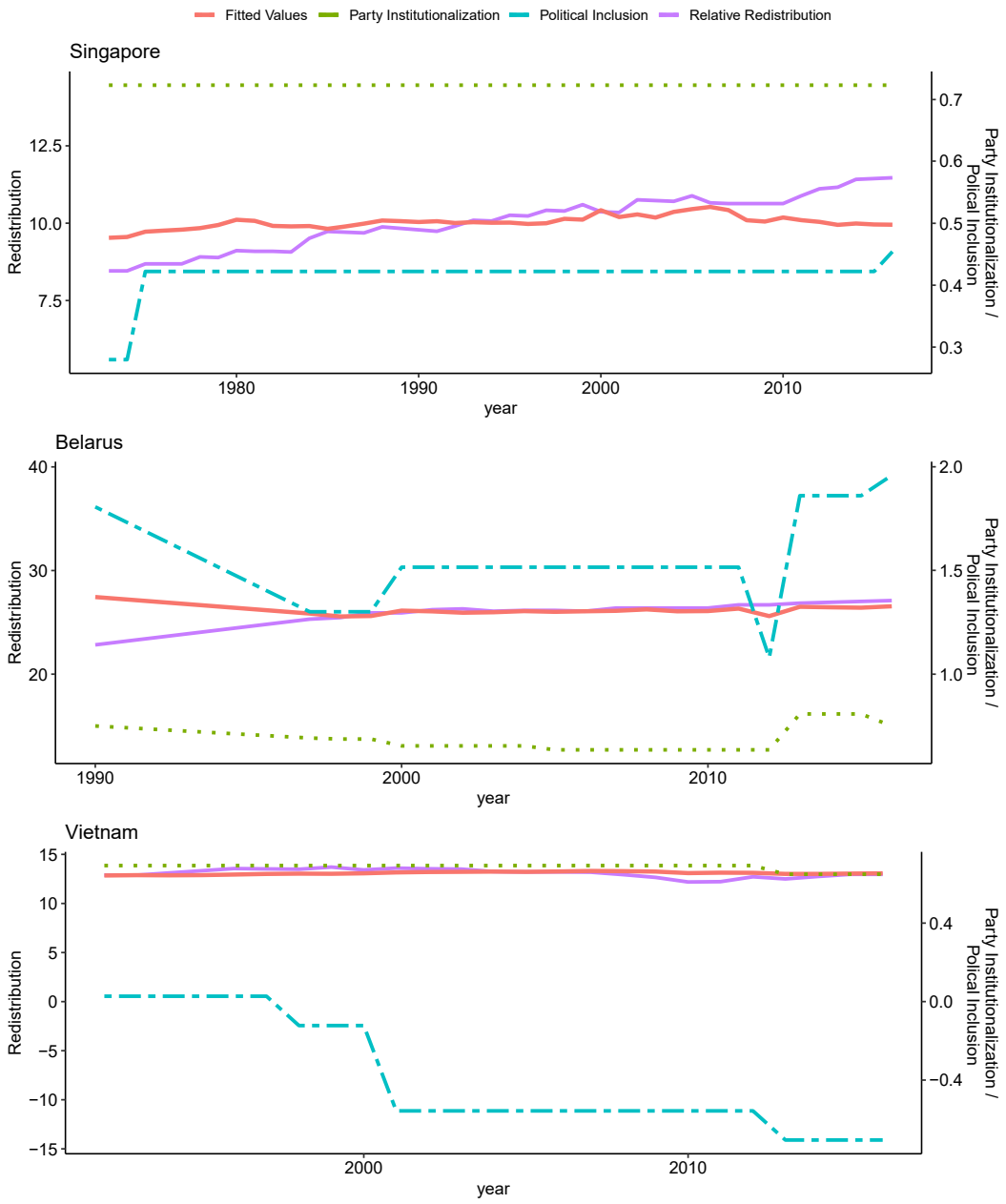


Figure A.9: Model fit of illustrative cases Singapore, Belarus, and Vietnam

A.1.10 Interpreting Interaction Models: Universalism Index

Figure A.10a compares the predicted effects of ruling strategies on relative redistribution across regime types. In a closed autocracy, a change in the inclusionary or exclusionary ruling strategy dimension within the country should not result in an increase of universalism of welfare state policies. Moreover, it results in more particularistic welfare spending. In a hegemonic multiparty autocracy, a change in the level of political inclusiveness should result in a sharp increase in the universalism of welfare state policies. In competitive multiparty autocracies, the effect of political inclusionary ruling strategies is marginal. However, these graphical patterns partially support hypothesis H1b and suggest that hegemonic and competitive multiparty regimes with more inclusionary ruling strategies are more likely to have more universalistic welfare state policies, while more inclusionary ruling strategies have a negative effect in closed autocracies.

Figure A.10b compares the effect of party institutionalization across regime types. It clearly shows that in closed autocracies and hegemonic multiparty autocracies party institutionalization has a strongly negative and significant effect on relative redistribution, while the effect of party institutionalization in competitive multiparty autocracies is positive.

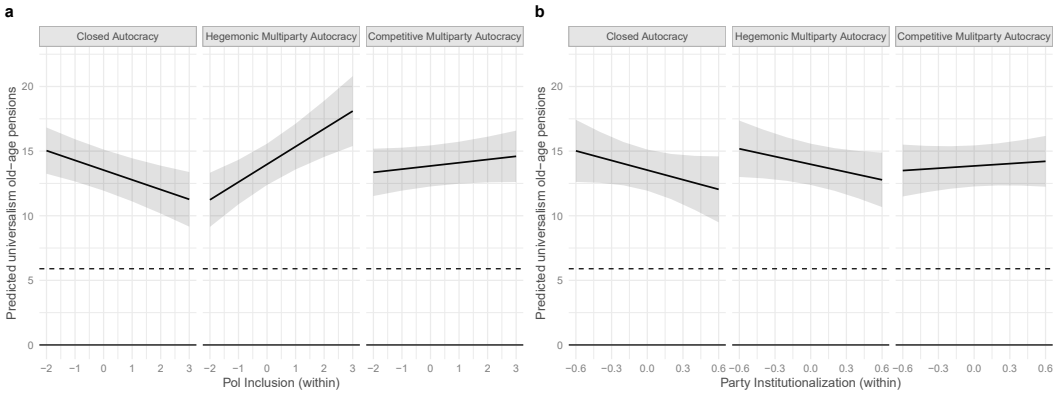


Figure A.10: Marginal Effects of Inclusion (a), and Party Institutionalization (b) (based on Model 4)

Notes: The solid lines indicate the estimated coefficient. Shaded regions show adjusted 95% confidence intervals. The coefficient estimate is significant at a $p < 0.05$ where the confidence intervals do not include zero.

In Figure A.11, we can clearly see that party institutionalization has a negative effect on the universalism of welfare state policies in closed autocracies, whether they rely on more inclusionary or more exclusionary ruling strategies. In contrast, in competitive multiparty regimes the effect of party institutionalization differs substantively between inclusionary regimes and exclusionary regimes. In more exclusionary regimes, greater party institutionalization has a negative effect on the universalism dimension of welfare policies,

while having a positive effect in more inclusionary regimes. In hegemonic multiparty regimes, this effect is reverse.

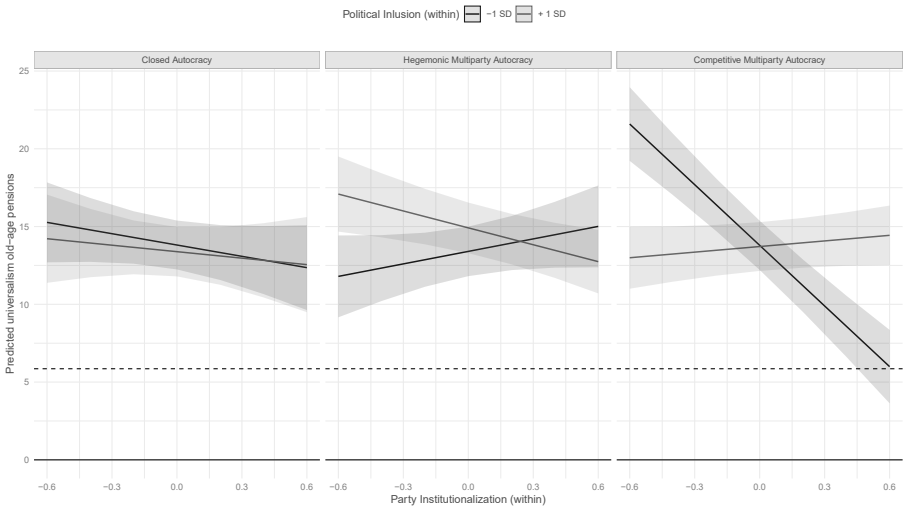


Figure A.11: Marginal Effects of Inclusion, and Party Institutionalization on Universalism of Welfare Spending by Regime Types (based on Model 6)

Notes: The solid lines indicate the estimated coefficient. Shaded regions show adjusted 95% confidence intervals. The coefficient estimate is significant at a $p < 0.05$ where the confidence intervals do not include zero.

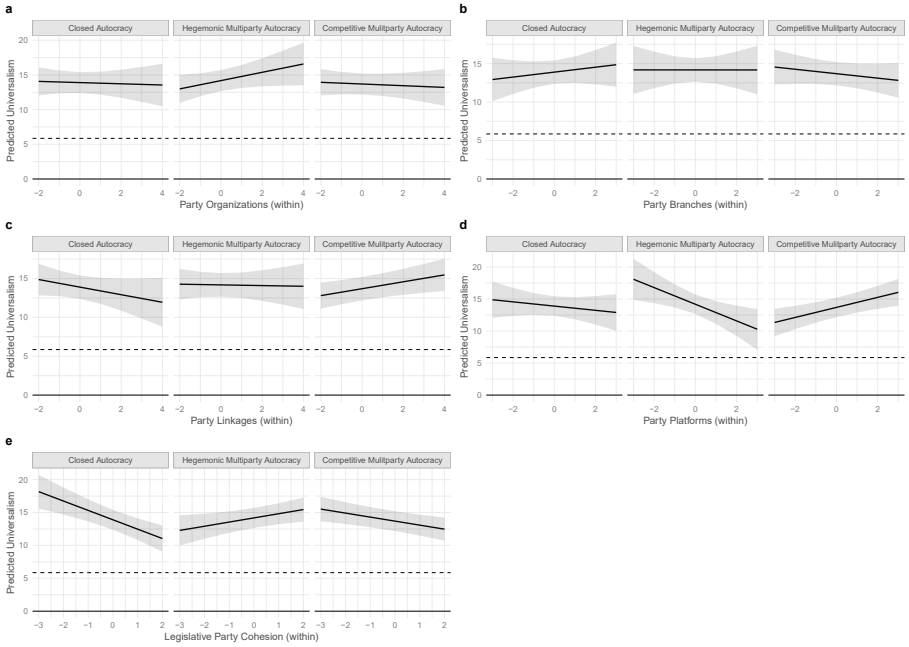


Figure A.12: Marginal Effects of (a) Party Organizations, (b) Party Branches, (c) Party Linkages, (d) Party Platforms, and (e) Legislative Party Cohesion on Redistribution by Regime Types (based on Model 4.1)

Notes: The solid lines indicate the estimated coefficient. Shaded regions show adjusted 95% confidence intervals. The coefficient estimate is significant at a $p < 0.05$ where the confidence intervals do not include zero.

A.2 Additional models predicting relative redistribution, small sample

Table A.12 and A.13 provide information on a more restrictive redistribution dataset. In this dataset, the including criteria for the dependent variable *relative redistribution* (Solt, 2020) is more strictly and the dataset incorporates only countries with at least some observations on the original source data for market-income inequality and disposable-income inequality (Solt, 2019, p. 14). In the main models, I incorporate all countries that have information on the market-income and disposable-income inequality variables and estimate the relative redistribution by those variables. Solt (2020) uses the more strict criteria for generating the redistribution variables.

Table A.14 provides the within-between random effects regression results and shows that the main variables have the theoretical expected positive effects. Between country differences in party institutionalization and political ruling strategies have positive effects on relative redistribution. Figure A.13 shows the marginal effects conditional on the regime types, while Figure A.14 shows the marginal effects of the three-way interaction of political inclusionary ruling strategies party institutionalization and authoritarian regimes types.

Table A.12: Summary Statistics for Redistribution Dataset

Statistic	N	Mean	Median	Min	Max	St. Dev.
Rel. Redistribution	367	8.075	8.700	−21.000	24.900	8.746
Pol Inclusion (w)	367	−0.000	0.003	−0.945	2.058	0.332
Pol Inclusion (b)	367	0.151	0.235	−1.359	1.017	0.567
Party Institutionalization (w)	367	0.000	0.0004	−0.313	0.307	0.063
Party Institutionalization (b)	367	0.575	0.541	0.292	0.903	0.157
Electoral Autocracy (w)	367	0.000	0	−1	1	0.089
Electoral Autocracy (b)	367	0.766	1	0	1	0.415
Party organizations (w)	367	−0.000	0.000	−1.885	1.772	0.365
Party organizations	367	0.719	0.637	−1.120	2.070	0.816
Party branches (w)	367	0.000	−0.003	−1.903	1.746	0.401
Party branches	367	0.627	0.469	−1.074	2.270	0.797
Party linkages (w)	367	−0.000	0.000	−1.288	1.978	0.337
Party linkages	367	0.177	0.404	−1.708	1.328	0.817
Distinct party platforms (w)	367	−0.000	0.014	−1.416	1.365	0.251
Distinct party platforms	367	0.400	0.290	−1.736	2.470	1.029
Legislative party cohesion (w)	367	−0.000	0.00003	−1.577	1.943	0.402
Legislative party cohesion	367	0.674	0.847	−2.087	2.021	1.096

Table A.13: Summary Statistics for Redistribution Dataset

Statistic	N	Mean	Median	Min	Max	St. Dev.
Rel. Redistribution	351	8.147	8.800	−21.000	24.900	8.879
Pol Inclusion (w)	351	−0.000	−0.001	−0.945	2.058	0.333
Pol Inclusion (b)	351	0.133	0.135	−1.359	1.017	0.570
Party Institutionalization (w)	351	0.000	0.0004	−0.313	0.307	0.064
Party Institutionalization (b)	351	0.570	0.541	0.292	0.903	0.156
GDP pc (w)	351	0.000	−0.002	−1.008	0.938	0.361
GDP pc (b)	351	9.004	8.728	7.809	10.509	0.820
Population log (w)	351	−0.000	0.003	−0.195	0.168	0.058
Population log (b)	351	7.406	7.387	6.370	9.093	0.746
Communist Ideology (w)	351	0.000	0	−1	0	0.097
Communist Ideology (b)	351	0.208	0.03	0	1	0.327
Urban Percentage (w)	313	−0.000	−0.001	−0.112	0.222	0.037
Urban Percentage (b)	351	0.443	0.371	0.107	1.001	0.273
Manufacturing % of GDP (w)	351	0.000	−0.240	−5.893	12.545	1.918
Manufacturing % of GDP (b)	351	16.061	14.881	1.798	30.051	6.857
Party organizations (w)	351	−0.000	0.009	−1.885	1.772	0.364
Party organizations	351	0.711	0.637	−1.120	2.070	0.831
Party branches (w)	351	0.000	0.000	−1.903	1.746	0.407
Party branches	351	0.593	0.469	−1.074	2.243	0.788
Party linkages (w)	351	−0.000	0.000	−1.288	1.978	0.338
Party linkages	351	0.195	0.433	−1.708	1.328	0.825
Distinct party platforms (w)	351	−0.000	0.002	−1.416	1.365	0.234
Distinct party platforms	351	0.358	0.290	−1.736	2.531	1.025
Legislative party cohesion (w)	351	−0.000	0.000	−1.577	1.943	0.401
Legislative party cohesion	351	0.650	0.659	−2.087	2.021	1.112

	Model 1	Model 2	Model 3
(Intercept)	−2.02	148.38*	138.98*
	(15.48)	(61.93)	(61.92)
Year	0.00	−0.07***	−0.06**
	(0.01)	(0.02)	(0.02)
Pol Inclusiveness	−1.39**	−0.58	−0.49
	(0.43)	(0.42)	(0.42)
Pol Inclusiveness (b)	4.32	3.49	3.44
	(2.82)	(3.69)	(3.68)
Party Institutionalization	5.70***	5.23***	1.39
	(1.48)	(1.51)	(3.31)
Party Institutionalization (b)	1.89	5.83	5.85
	(10.99)	(15.37)	(15.32)
Ref. Category: Closed Autocracy			
Hegemonic Multiparty Autocracy	0.14	0.29	0.38
	(0.26)	(0.25)	(0.25)
Competitive Multiparty Autocracy	−0.04	0.04	0.03
	(0.29)	(0.29)	(0.29)
HM Autocracy * Inclusiveness	1.10*	0.18	0.31
	(0.52)	(0.50)	(0.51)
CM Autocracy * Inclusiveness	2.27***	1.28**	1.00*
	(0.49)	(0.47)	(0.48)
HM Autocracy * PI	−2.82	−1.41	4.25
	(2.43)	(2.30)	(3.85)
CM Autocracy * PI	−3.52†	−2.68	1.67
	(2.01)	(2.11)	(3.63)
GDP pc log		0.83**	0.60*
		(0.27)	(0.27)
GDP pc log (b)		0.35	0.39
		(6.43)	(6.40)
Population log		3.69†	4.39*
		(2.12)	(2.13)

	Model 1	Model 2	Model 3
Population log (b)		−0.56	−0.61
		(3.91)	(3.90)
Communist Ideology		−1.51**	−1.84***
		(0.53)	(0.53)
Communist Ideology (b)		−1.76	−1.80
		(7.44)	(7.42)
Urban Pop %		−1.67	−2.00
		(1.28)	(1.28)
Urban Pop % (b)		0.86	0.86
		(19.60)	(19.53)
Manufacturing Sector %		0.05†	0.03
		(0.03)	(0.03)
Manufacturing Sector % (b)		−0.47	−0.47
		(0.49)	(0.49)
PI * Inclusiveness			−7.83
			(5.36)
HM Autocracy * PI * Inclusiveness			−0.05
			(6.37)
CM Autocracy * PI * Inclusiveness			−1.60
			(6.20)
τ_{00}	74.37	90.18	89.55
σ^2	0.77	0.62	0.60
AIC	1117.44	896.94	875.59
BIC	1172.12	986.85	976.74
Log Likelihood	-544.72	-424.47	-410.80
Num. obs.	367	313	313
Num. countries	23	22	22

$^{***}p < 0.001$, $^{**}p < 0.01$, $^{*}p < 0.05$, $^{\dagger}p < 0.1$

Table A.14: Linear Within-Between Model predicting Relative Redistribution

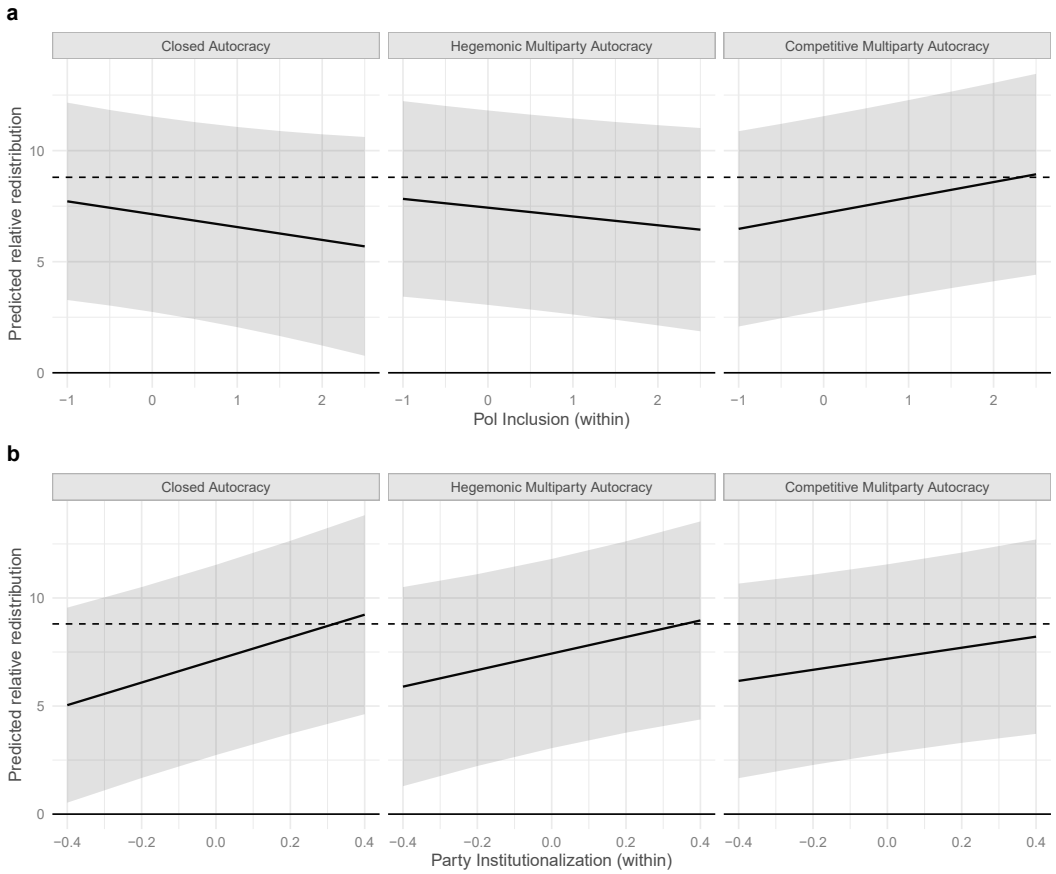


Figure A.13: Marginal Effects of Inclusion (a), and Party Institutionalization (b) on Redistribution by Regime Types (based on Model 2)

Notes: The solid lines indicate the estimated coefficient. Shaded regions show adjusted 95% confidence intervals. The coefficient estimate is significant at a $p < 0.05$ where the confidence intervals do not include zero.

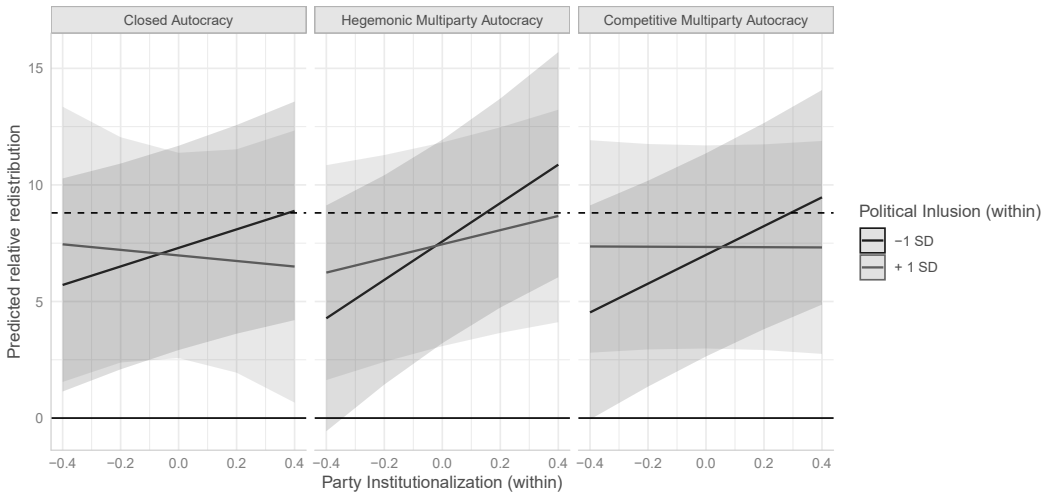


Figure A.14: Marginal Effects of Inclusion, and Party Institutionalization on Redistribution by Regime Types (based on Model 3)

Notes: The solid lines indicate the estimated coefficient. Shaded regions show adjusted 95% confidence intervals. The coefficient estimate is significant at a $p < 0.05$ where the confidence intervals do not include zero.

A.3 Additional models for democracies and autocracies

This section shows models predicting within-between random effects models for the sample of political regimes (democracies and autocracies) and thus testing if the theoretical arguments hold also for democratic regimes. Table A.15 to A.18 provide descriptive information on the sample. While in Model 1, 4,868 regimes are incorporated in the dataset, Model 3 and 5 incorporate 4,553 democracies and autocracies. Table A.19 redoes the analysis made in Table 1, but incorporates all regimes (democratic and autocratic regime years) and controls for regime type effects. Figures A.15 and A.16 show that the patterns in my main models hold. The figures show that political inclusionary ruling strategies have greater effects in hegemonic and competitive multiparty autocracies compared to closed autocracies and democracy.

Table A.15: Summary Statistics for Redistribution Dataset

Statistic	N	Mean	Median	Min	Max	St. Dev.
Rel. Redistribution	4,868	15.891	7.487	−21.008	52.192	15.424
Pol Inclusion (w)	4,868	0.000	0.001	−1.846	2.386	0.373
Pol Inclusion (b)	4,868	0.769	0.769	−1.754	3.012	0.946
Party Institutionalization (w)	4,868	0.000	0.002	−0.573	0.310	0.077
Party Institutionalization (b)	4,868	0.668	0.691	0.003	0.998	0.223
Electoral Autocracy (w)	4,868	−0.000	0	−3	2	0.490
Electoral Autocracy (b)	4,868	1.761	1.7	0	3	0.897
Party organizations (w)	4,868	0.000	0.000	−4.203	2.145	0.415
Party organizations	4,868	1.182	1.243	−3.097	3.193	0.982
Party branches (w)	4,868	−0.000	0.007	−2.689	2.384	0.409
Party branches	4,868	1.066	1.186	−3.191	2.976	1.014
Party linkages (w)	4,868	0.000	0.000	−2.663	2.091	0.486
Party linkages	4,868	0.543	0.581	−2.179	3.458	1.244
Distinct party platforms (w)	4,868	−0.000	0.02	−3	3	0.519
Distinct party platforms	4,868	0.991	1.188	−3.163	3.284	1.338
Legislative party cohesion (w)	4,868	0.000	0	−2	2	0.411
Legislative party cohesion	4,868	0.785	1.030	−2.659	2.557	1.005

Table A.16: Summary Statistics for Universalism Dataset

Statistic	N	Mean	Median	Min	Max	St. Dev.
Universalism	5,241	12.929	12	0	45	10.526
Pol Inclusion (w)	5,241	0.000	0.0004	−2.822	2.615	0.638
Pol Inclusion (b)	5,241	0.190	0.160	−1.924	2.662	1.074
Party Institutionalization (w)	5,241	−0.000	0.001	−0.567	0.597	0.127
Party Institutionalization (b)	5,241	0.534	0.511	0.026	0.959	0.238
Electoral Autocracy (w)	5,241	−0.000	0.000	−2.875	2.646	0.620
Electoral Autocracy (b)	5,241	1.070	0.875	0.000	3.000	0.835
Party organizations (w)	5,241	0.000	0.000	−3.278	2.566	0.703
Party organizations	5,241	0.588	0.593	−2.770	2.773	1.125
Party branches (w)	5,241	−0.000	0.000	−3.106	2.665	0.655
Party branches	5,241	0.583	0.608	−2.849	3.003	1.177
Party linkages (w)	5,241	0.000	−0.027	−1.940	3.359	0.630
Party linkages	5,241	−0.066	−0.233	−2.315	3.135	1.215
Distinct party platforms (w)	5,241	0.000	0.000	−3.670	3.989	0.711
Distinct party platforms	5,241	0.243	0.318	−3.103	3.108	1.398
Legislative party cohesion (w)	5,241	−0.000	0.000	−3.234	2.849	0.635
Legislative party cohesion	5,241	0.515	0.683	−3.218	2.021	0.985

Table A.17: Summary Statistics for Redistribution Dataset

Statistic	N	Mean	Median	Min	Max	St. Dev.
Rel. Redistribution	4,553	16.341	7.952	−21.008	52.192	15.503
Pol Inclusion (w)	4,553	0.000	0.003	−1.855	2.386	0.366
Pol Inclusion (b)	4,553	0.794	0.785	−1.754	3.027	0.951
Party Institutionalization (w)	4,553	−0.000	0.002	−0.572	0.314	0.075
Party Institutionalization (b)	4,553	0.675	0.704	0.003	0.998	0.221
Electoral Autocracy (w)	4,553	0.000	0	−3	2	0.468
Electoral Autocracy (b)	4,553	1.785	1.8	0	3	0.902
GDP pc (w)	4,553	−0.000	−0.010	−1.868	1.196	0.370
GDP pc (b)	4,553	8.927	9.075	6.397	10.997	1.085
Population log (w)	4,553	−0.000	0.001	−0.333	0.464	0.086
Population log (b)	4,553	7.101	7.031	4.942	9.075	0.677
Communist Ideology (w)	4,553	0.000	0	−1	1	0.166
Communist Ideology (b)	4,553	0.242	0.2	0	1	0.260
Urban Percentage (w)	4,553	0.000	−0.001	−0.344	1.232	0.071
Urban Percentage (b)	4,553	0.271	0.239	0.000	1.000	0.181
Manufacturing % of GDP (w)	4,553	−0.000	−0.002	−0.137	0.236	0.031
Manufacturing % of GDP (b)	4,553	0.148	0.154	0.017	0.377	0.057
Party organizations (w)	4,553	−0.000	0.004	−4.201	2.145	0.400
Party organizations	4,553	1.218	1.272	−3.097	3.195	0.961
Party branches (w)	4,553	0.000	0.005	−2.680	2.367	0.402
Party branches	4,553	1.115	1.256	−3.191	2.971	0.980
Party linkages (w)	4,553	0.000	0.000	−2.662	2.074	0.475
Party linkages	4,553	0.572	0.584	−2.179	3.457	1.253
Distinct party platforms (w)	4,553	0.000	0.02	−3	3	0.513
Distinct party platforms	4,553	1.018	1.195	−3.163	3.297	1.340
Legislative party cohesion (w)	4,553	0.000	0	−2	2	0.401
Legislative party cohesion	4,553	0.803	1.054	−2.659	2.552	0.997

Table A.18: Summary Statistics for Universalism Dataset

Statistic	N	Mean	Median	Min	Max	St. Dev.
Universalism	2,977	16.544	16	0	45	9.991
Pol Inclusion (w)	2,977	−0.000	0.0004	−1.883	2.016	0.433
Pol Inclusion (b)	2,977	0.411	0.338	−1.918	2.628	1.021
Party Institutionalization (w)	2,977	−0.000	0.000	−0.414	0.455	0.093
Party Institutionalization (b)	2,977	0.550	0.524	0.029	0.995	0.248
Electoral Autocracy (w)	2,977	−0.000	0.000	−2.200	2.739	0.521
Electoral Autocracy (b)	2,977	1.165	1.000	0.000	3.000	0.918
GDP pc (w)	2,977	0.000	0.022	−1.668	1.414	0.341
GDP pc (b)	2,977	8.390	8.423	6.566	10.865	0.971
Population log (w)	2,977	−0.000	0.003	−0.398	0.421	0.110
Population log (b)	2,977	6.968	6.932	5.303	8.976	0.680
Communist Ideology (w)	2,977	0.000	0.000	−0.942	0.857	0.166
Communist Ideology (b)	2,977	0.281	0.188	0.000	1.000	0.277
Urban Percentage (w)	2,977	0.000	0.000	−0.413	0.317	0.068
Urban Percentage (b)	2,977	0.214	0.179	0.000	1.001	0.157
Manufacturing % of GDP (w)	2,977	0.000	−0.0003	−0.159	0.171	0.024
Manufacturing % of GDP (b)	2,977	0.145	0.145	0.021	0.339	0.057
Party organizations (w)	2,977	−0.000	0.000	−2.670	2.800	0.602
Party organizations	2,977	0.646	0.750	−2.770	3.192	1.213
Party branches (w)	2,977	−0.000	0.000	−1.865	1.746	0.503
Party branches	2,977	0.696	0.944	−2.777	3.020	1.197
Party linkages (w)	2,977	0.000	0.000	−1.883	2.771	0.523
Party linkages	2,977	−0.079	−0.246	−2.477	3.451	1.218
Distinct party platforms (w)	2,977	−0.000	0.000	−2.093	4.583	0.532
Distinct party platforms	2,977	0.288	0.278	−3.103	3.349	1.503
Legislative party cohesion (w)	2,977	−0.000	0.000	−2.571	1.398	0.435
Legislative party cohesion	2,977	0.667	0.892	−3.218	2.381	1.049

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
(Intercept)	−80.93***	−475.36***	−192.88***	−446.82***	−193.34***	−451.25***
	(5.37)	(6.75)	(16.95)	(25.05)	(17.02)	(25.04)
Year	0.04***	0.24***	0.07***	0.22***	0.07***	0.22***
	(0.00)	(0.00)	(0.01)	(0.01)	(0.01)	(0.01)
Pol Inclusiveness	0.53**	1.15***	0.58**	−0.35	0.65**	−0.30
	(0.16)	(0.19)	(0.19)	(0.26)	(0.21)	(0.29)
Pol Inclusiveness (b)	5.63***	2.18**	4.93***	2.95**	4.93***	2.99**
	(1.14)	(0.84)	(1.11)	(1.02)	(1.11)	(1.01)
Party Institutionalization	3.20***	−8.37***	2.88**	−0.30	3.30***	−0.84
	(0.79)	(1.01)	(0.88)	(1.62)	(1.00)	(1.85)
Party Institutionalization (b)	24.94***	13.63***	8.68	6.45	8.67	6.54
	(4.74)	(3.79)	(5.60)	(4.07)	(5.60)	(4.05)
Ref. Category: Closed Autocracy						
Hegemonic Multiparty Autocracy	−0.76***	0.06	−0.53**	0.45†	−0.52**	0.81***
	(0.16)	(0.20)	(0.17)	(0.24)	(0.17)	(0.24)
Competitive Multiparty Autocracy	−0.96***	−0.75***	−0.71***	0.27	−0.71***	0.12
	(0.15)	(0.19)	(0.16)	(0.22)	(0.16)	(0.22)
Democracy	−1.57***	−0.42	−1.30***	0.84**	−1.30***	0.75**
	(0.16)	(0.29)	(0.18)	(0.29)	(0.18)	(0.28)
HM Autocracy * Inclusiveness	0.39	−0.22	0.48†	2.33***	0.40	2.91***
	(0.25)	(0.29)	(0.28)	(0.49)	(0.29)	(0.51)
CM Autocracy * Inclusiveness	0.81***	−0.98***	0.87***	0.16	0.80**	0.24
	(0.23)	(0.27)	(0.25)	(0.37)	(0.27)	(0.40)
Democracy * Inclusiveness	−0.56*	−0.81*	−0.43†	0.02	−0.49†	−0.06
	(0.22)	(0.33)	(0.24)	(0.42)	(0.25)	(0.43)
HM Autocracy * PI	−4.40***	4.97***	−4.51***	−2.12	−5.54***	−0.35
	(1.15)	(1.40)	(1.27)	(2.13)	(1.51)	(2.33)
CM Autocracy * PI	−4.46***	13.17***	−4.13***	−1.62	−4.63***	−1.74
	(1.15)	(1.48)	(1.24)	(2.03)	(1.34)	(2.25)
Democracy * PI	−3.29**	17.32***	−4.28***	4.81*	−4.83***	2.53
	(1.16)	(1.78)	(1.23)	(2.39)	(1.41)	(2.64)
GDP pc log			0.08	0.44*	0.08	0.57**
			(0.12)	(0.18)	(0.12)	(0.18)
GDP pc log (b)			6.74***	3.53***	6.74***	3.48***
			(1.15)	(0.95)	(1.15)	(0.95)
Population log			−5.17***	−9.51***	−5.20***	−10.03***
			(0.48)	(1.05)	(0.49)	(1.05)
Population log (b)			1.29	−1.51	1.29	−1.52
			(1.39)	(1.22)	(1.39)	(1.22)
Communist Ideology			0.30†	−0.67*	0.31†	−0.71*
			(0.16)	(0.33)	(0.16)	(0.33)
Communist Ideology (b)			0.11	0.70	0.11	0.60

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
			(3.24)	(2.99)	(3.24)	(2.97)
Urban Pop %			−0.21	4.88***	−0.19	5.12***
			(0.37)	(0.96)	(0.37)	(0.96)
Urban Pop % (b)			−11.24*	0.58	−11.24*	0.47
			(5.66)	(5.12)	(5.66)	(5.09)
Manufacturing Sector %			4.71***	−4.64*	4.71***	−4.72*
			(0.83)	(2.16)	(0.84)	(2.14)
Manufacturing Sector % (b)			−24.65	12.10	−24.66	12.32
			(15.26)	(12.76)	(15.26)	(12.70)
PI * Inclusiveness					0.56	−1.22
					(0.91)	(2.44)
HM Autocracy * PI * Inclusiveness					−2.51	−12.52***
					(1.98)	(3.06)
CM Autocracy * PI * Inclusiveness					−0.53	5.75*
					(1.65)	(2.73)
Democracy * PI * Inclusiveness					−0.43	7.79*
					(1.84)	(3.20)
Random effects						
τ_{00}	112.41	57.70	92.52	55.37	92.55	54.86
σ^2	2.75	14.22	2.77	7.29	2.77	7.14
AIC	19908.92	29421.31	18601.35	14952.66	18597.68	14884.15
BIC	20019.26	29532.90	18774.78	15114.63	18796.81	15070.11
Log Likelihood	-9937.46	-14693.65	-9273.67	-7449.33	-9267.84	-7411.08
Num. obs.	4868	5240	4553	2977	4553	2977
Num. countries	162	124	149	115	149	115

$^{***}p < 0.001$, $^{**}p < 0.01$, $^{*}p < 0.05$, $^{\dagger}p < 0.1$

Table A.19: Linear Within-Between Model predicting Relative Redistribution

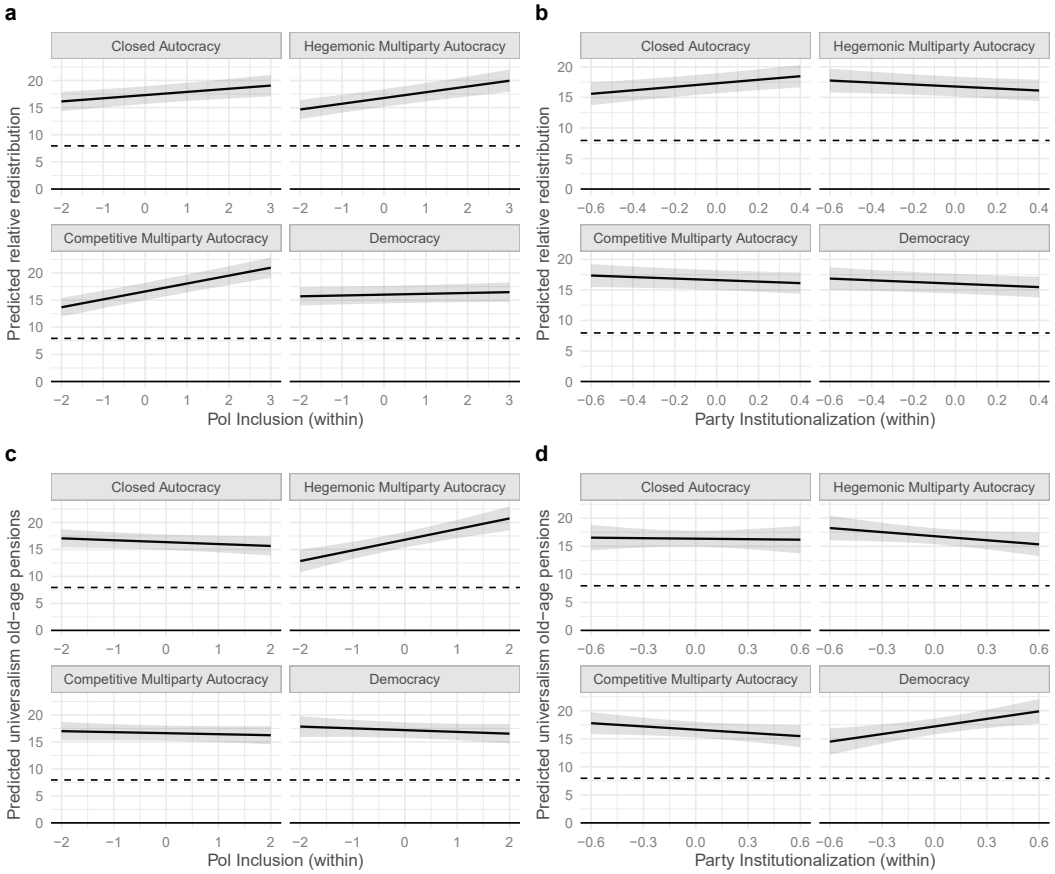


Figure A.15: Marginal Effects of Inclusion (a, b), and Party Institutionalization (c, d) on Redistribution by Regime Types (based on Model 3 and 4)

Notes: The solid lines indicate the estimated coefficient. Shaded regions show adjusted 95% confidence intervals. The coefficient estimate is significant at a $p < 0.05$ where the confidence intervals do not include zero.

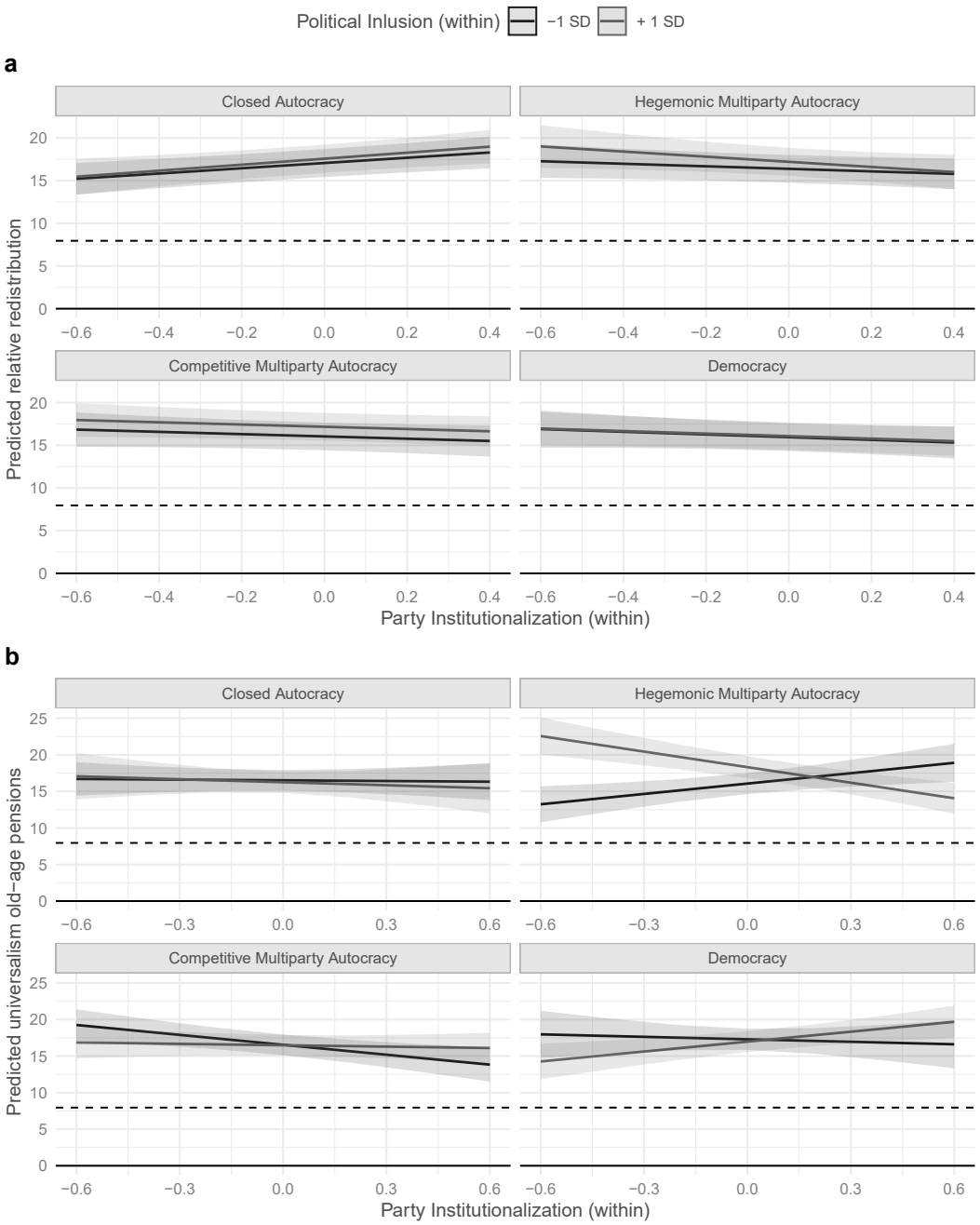


Figure A.16: Marginal Effects of Inclusion, and Party Institutionalization on Redistribution by Regime Types (based on Model 5 and 6)

Notes: The solid lines indicate the estimated coefficient. Shaded regions show adjusted 95% confidence intervals. The coefficient estimate is significant at a $p < 0.05$ where the confidence intervals do not include zero.

A.4 Models using Albertus and Menaldo data (2014)

Here, I use data on *taxes on income, profits and capital gains in % of GDP*, *social spending in % GDP*, and *welfare and social insurance spending per capita of GDP* as proxies for income redistribution. As Albertus and Menaldo (2014) and McCarty and Pontusson (2009, p. 666) argued, those proxies conceptualize as policies that have redistributive effects or are direct measures of redistribution.

Section D1 uses *taxes on income, profits and capital gains in % of GDP* as the dependent variable and tests if the theoretical arguments hold for a sample of 94 authoritarian regimes[10] between 1972 and 2008. Results of these tests are shown in Table A.22 and A.23. They show that political inclusionary regimes have no consistent statistically significant positive or negative effect on taxes on income, profits and capital gains. However, the variance of party institutionalization within countries has a positive and significant effect on income taxation, as shown in Model 1-3, while between countries party institutionalization does not influence income taxation statistically significantly.

Section D2 uses *social spending in % GDP* as the dependent variable and tests if the theoretical arguments hold for explaining social spending as a proxies for government redistribution policies. Table A.24 and A.25 show descriptive summaries of the dataset, while Table A.26 and A.27 show the results of the Within-Between Random Effects models. For a sample of 76 countries[11], Table A.26 shows that the variance within countries of the party institutionalization variable has a positive effect on social spending. In contrast to these findings, the between variance in the party institutionalization variable has a negative effect on social spending, contrary to the theoretical expectation. Figure A.19 shows the marginal effects, while Figure A.20 shows the conditional marginal effects of party institutionalization and political inclusiveness by regime types.

Section D3 shows the results for the *welfare and social insurance spending per capita of GDP* dependent variable. Table A.28 and A.29 show descriptive summaries of the dataset. Table A.30 and A.31 show evidence for the claims that variance between countries of political inclusionary ruling strategies is positively associated with welfare and social spending, while the variance within countries of party institutionalization is negatively associated with the dependent variable. Furthermore, Table A.30 shows that competitive multiparty autocracy has a positive and significant effect on welfare and social spending. Figure A.21 and A.22 shows the marginal effects of Model 3 and Model 5. Figure A.21 indicates that political inclusionary ruling strategies have greater effects in hegemonic multiparty autocracies compared to closed autocracies, while the effects of party institutionalization

[10] Model 2-3 cover 90 authoritarian regimes.
[11] 73 countries for Model 3-6.

are all regime types negative and significant.

A.4.1 Taxes on income, profits, and capital gains in % of GDP

Table A.20: Summary Statistics for Taxes on Income, Profits, and Capital Gains in % of GDP Dataset

Statistic	N	Mean	Median	Min	Max	St. Dev.
Income GDP ratio	1,406	5.010	3.832	0.000	34.620	4.497
Pol Inclusion (w)	1,406	−0.000	0.000	−1.656	2.318	0.382
Pol Inclusion (b)	1,406	−0.090	−0.199	−1.613	2.240	0.767
Party Institutionalization (w)	1,406	0.000	−0.0001	−0.247	0.468	0.086
Party Institutionalization (b)	1,406	0.442	0.426	0.004	0.883	0.209
Electoral Autocracy (w)	1,406	−0.000	0.000	−0.968	0.929	0.283
Electoral Autocracy (b)	1,406	0.622	0.771	0.000	1.000	0.394
Party organizations (w)	1,406	−0.000	0.000	−2.342	3.045	0.581
Party organizations	1,406	0.183	0.334	−2.884	2.450	1.112
Party branches (w)	1,406	−0.000	0.000	−1.814	2.252	0.456
Party branches	1,406	0.185	0.261	−3.096	2.851	1.137
Party linkages (w)	1,406	0.000	0.000	−1.516	2.742	0.456
Party linkages	1,406	−0.515	−0.685	−2.642	2.325	0.980
Distinct party platforms (w)	1,406	−0.000	0.000	−2.142	3.467	0.457
Distinct party platforms	1,406	−0.378	−0.503	−2.890	2.266	1.231
Legislative party cohesion (w)	1,406	0.000	0.000	−1.758	1.602	0.412
Legislative party cohesion	1,406	0.536	0.820	−3.684	2.345	1.225

Table A.21: Summary Statistics for Taxes on Income, Profits, and Capital Gains in % of GDP Dataset

Statistic	N	Mean	Median	Min	Max	St. Dev.
Income GDP ratio	1,328	4.966	3.823	0.000	34.620	4.361
Pol Inclusion (w)	1,328	−0.000	0.000	−1.656	2.318	0.374
Pol Inclusion (b)	1,328	−0.088	−0.199	−1.613	2.240	0.769
Party Institutionalization (w)	1,328	0.000	−0.0002	−0.247	0.468	0.088
Party Institutionalization (b)	1,328	0.457	0.439	0.004	0.883	0.198
Electoral Autocracy (w)	1,328	−0.000	0.000	−0.968	0.929	0.291
Electoral Autocracy (b)	1,328	0.639	0.771	0.000	1.000	0.382
GDP pc (w)	1,328	−0.000	−0.003	−1.023	1.307	0.234
GDP pc (b)	1,328	8.207	8.250	6.504	11.397	0.870
Population log (w)	1,328	0.000	0.001	−0.299	0.242	0.086
Population log (b)	1,328	7.056	7.079	5.545	9.091	0.638
Communist Ideology (w)	1,328	−0.000	0.000	−0.929	0.667	0.142
Communist Ideology (b)	1,328	0.254	0.190	0.000	1.000	0.271
Urban Percentage (w)	1,328	0.000	−0.0005	−0.352	0.349	0.052
Urban Percentage (b)	1,328	0.233	0.188	0.000	1.000	0.185
Manufacturing % of GDP (w)	1,303	0.000	−0.0003	−0.470	0.997	0.061
Manufacturing % of GDP (b)	1,303	0.160	0.151	0.024	0.923	0.099
Party organizations (w)	1,328	−0.000	0.000	−2.342	3.045	0.597
Party organizations	1,328	0.258	0.343	−2.884	2.450	1.055
Party branches (w)	1,328	−0.000	0.000	−1.814	2.252	0.468
Party branches	1,328	0.267	0.298	−3.096	2.851	1.088
Party linkages (w)	1,328	0.000	0.000	−1.516	2.742	0.470
Party linkages	1,328	−0.460	−0.546	−2.642	2.325	0.973
Distinct party platforms (w)	1,328	−0.000	0.000	−2.142	3.467	0.466
Distinct party platforms	1,328	−0.317	−0.479	−2.890	2.266	1.193
Legislative party cohesion (w)	1,328	0.000	0.000	−1.758	1.602	0.422
Legislative party cohesion	1,328	0.612	0.844	−3.684	2.345	1.170

	Model 1	Model 2	Model 3
(Intercept)	−23.74	−60.88	−58.80
	(21.35)	(64.60)	(64.78)
Year	0.01	0.03	0.03
	(0.01)	(0.03)	(0.03)
Pol Inclusiveness	−0.38	−0.69†	−0.71
	(0.33)	(0.37)	(0.43)
Pol Inclusiveness (b)	0.02	−0.44	−0.44
	(0.49)	(0.53)	(0.53)
Party Institutionalization	7.27**	7.94***	8.27***
	(2.43)	(2.27)	(2.49)
Party Institutionalization (b)	0.42	0.55	0.52
	(1.92)	(2.26)	(2.26)
Hegemonic Multiparty Autocracy	0.11	0.41	0.43
	(0.31)	(0.30)	(0.30)
Competitive Multiparty Autocracy	0.04	0.56†	0.57†
	(0.32)	(0.31)	(0.32)
HM Autocracy * Inclusiveness	0.22	0.40	0.48
	(0.58)	(0.57)	(0.64)
CM Autocracy * Inclusiveness	0.85	0.95	1.17†
	(0.57)	(0.59)	(0.67)
HM Autocracy * PI	−9.77**	−11.50***	−11.63***
	(3.00)	(2.79)	(2.94)
CM Autocracy * PI	−1.26	−2.12	−1.46
	(3.01)	(2.86)	(3.13)
GDP pc log		2.58***	2.56***
		(0.36)	(0.36)
GDP pc log (b)		0.65	0.65
		(0.61)	(0.60)
Population log		−3.78	−3.92
		(2.78)	(2.79)
Population log (b)		−0.15	−0.15
		(0.72)	(0.72)
Communist Ideology		1.24*	1.25*
		(0.55)	(0.55)
Communist Ideology (b)		2.71†	2.71†
		(1.52)	(1.52)
Urban Pop %		2.16	2.20
		(1.44)	(1.45)
Urban Pop % (b)		−2.43	−2.42
		(3.12)	(3.11)
Manufacturing Sector %		−3.81***	−3.78**
		(1.15)	(1.15)
Manufacturing Sector % (b)		1.71	1.66
		(4.07)	(4.07)
PI * Inclusiveness			−0.83
			(4.48)
HM Autocracy * PI * Inclusiveness			−0.46
			(5.02)
CM Autocracy * PI * Inclusiveness			−2.69
			(5.16)
τ_{00}	13.15	12.87	12.82
σ^2	7.20	6.10	6.11
AIC	7072.73	6342.49	6333.76
BIC	7146.21	6466.63	6473.41
Log Likelihood	-3522.37	-3147.24	-3139.88
Num. obs.	1406	1303	1303
Num. countries	94	88	88

$^{***}p < 0.001$, $^{**}p < 0.01$, $^{*}p < 0.05$, $^{\dagger}p < 0.1$

Table A.22: Linear Within-Between Model predicting Income Taxation in % GDP

	Model 1	Model 2	Model 3
(Intercept)	−28.46	−26.71	−24.03
	(21.90)	(66.53)	(67.56)
Year	0.02	0.01	0.01
	(0.01)	(0.03)	(0.03)
Pol Inclusiveness	−0.29	−0.75†	−1.43*
	(0.34)	(0.39)	(0.59)
Pol Inclusiveness (b)	0.12	−0.28	−0.26
	(0.51)	(0.56)	(0.56)
Party organizations	0.09	0.56	0.71
	(0.49)	(0.46)	(0.47)
Party organizations (b)	0.54	0.01	−0.04
	(0.73)	(0.77)	(0.78)
Party Branches	1.64**	1.59**	1.24*
	(0.53)	(0.51)	(0.55)
Party Branches (b)	−0.97	−0.39	−0.36
	(0.67)	(0.74)	(0.74)
Party Linkages	−0.96*	−0.67	−0.82
	(0.48)	(0.45)	(0.53)
Party Linkages (b)	0.09	−0.23	−0.29
	(0.42)	(0.46)	(0.46)
Distinct Party Platforms	0.65	0.15	−0.21
	(0.46)	(0.46)	(0.48)
Distinct Party Platforms (b)	−0.05	−0.00	−0.01
	(0.42)	(0.45)	(0.45)
Legislative Party Cohesion	−1.02*	−1.74***	−2.38***
	(0.45)	(0.43)	(0.59)
Legislative Party Cohesion (b)	0.68†	0.95*	0.98*
	(0.38)	(0.43)	(0.43)
Hegemonic Multiparty Autocracy	0.04	0.21	0.27
	(0.32)	(0.30)	(0.32)
Competitive Multiparty Autocracy	−0.31	−0.01	0.19
	(0.35)	(0.33)	(0.34)
HM Autocracy * Inclusiveness	0.50	0.80	0.63
	(0.58)	(0.59)	(0.87)
CM Autocracy * Inclusiveness	0.20	0.38	2.01*
	(0.60)	(0.62)	(0.84)
HM Autocracy * Party organizations	−3.26***	−3.39***	−3.25***
	(0.74)	(0.71)	(0.73)
CM Autocracy * Party organizations	0.11	−0.63	−0.59
	(0.72)	(0.68)	(0.71)
HM Autocracy * Party Branches	0.44	−0.08	−0.00
	(0.88)	(0.84)	(0.93)
CM Autocracy * Party Branches	−2.49**	−1.88**	−1.75*
	(0.76)	(0.72)	(0.79)
HM Autocracy * Party Linkages	0.89	0.48	0.13
	(0.59)	(0.55)	(0.65)
CM Autocracy * Party Linkages	2.20***	1.62**	1.51*
	(0.64)	(0.61)	(0.69)
HM Autocracy * Distinct Party Platforms	0.89	1.58*	2.46**
	(0.79)	(0.75)	(0.80)
CM Autocracy * Distinct Party Platforms	0.38	0.98	1.45*
	(0.65)	(0.63)	(0.66)
HM Autocracy * Legislative Party Cohesion	1.50*	1.70**	2.65***
	(0.68)	(0.64)	(0.78)
CM Autocracy * Legislative Party Cohesion	1.47*	1.90**	2.14**
	(0.62)	(0.58)	(0.74)
GDP pc log		2.86***	2.89***
		(0.36)	(0.37)
GDP pc log (b)		0.92	0.99
		(0.63)	(0.63)

	Model 1	Model 2	Model 3
Population log		−2.69	−2.04
		(2.84)	(2.95)
Population log (b)		0.12	0.19
		(0.77)	(0.76)
Communist Ideology		1.43*	1.91**
		(0.57)	(0.63)
Communist Ideology (b)		1.85	1.80
		(1.66)	(1.66)
Urban Pop %		2.88*	3.39*
		(1.43)	(1.45)
Urban Pop % (b)		−3.54	−3.73
		(3.26)	(3.26)
Manufacturing Sector %		−3.46**	−3.04**
		(1.12)	(1.11)
Manufacturing Sector % (b)		4.17	4.17
		(4.31)	(4.31)
Inclusiveness * Party organizations			1.81
			(1.21)
Inclusiveness * Party Branches			−0.81
			(1.20)
Inclusiveness * Party Linkages			−1.02
			(0.86)
Inclusiveness * Distinct Party Platforms			−2.48†
			(1.41)
Inclusiveness * Legislative Party Cohesion			−0.99
			(1.32)
Inclusiveness * Party organizations * HM Autocracy			4.93*
			(2.18)
Inclusiveness * Party organizations * CM Autocracy			−3.22*
			(1.56)
Inclusiveness * Party Branches * HM Autocracy			−3.25
			(2.00)
Inclusiveness * Party Branches * CM Autocracy			3.46†
			(1.77)
Inclusiveness * Party Linkages * HM Autocracy			−1.06
			(0.97)
Inclusiveness * Party Linkages * CM Autocracy			1.06
			(0.81)
Inclusiveness * Distinct Party Platforms * HM Autocracy			−0.44
			(2.14)
Inclusiveness * Distinct Party Platforms * CM Autocracy			1.02
			(1.64)
Inclusiveness * Legislative Party Cohesion * HM Autocracy			2.54
			(1.58)
Inclusiveness * Legislative Party Cohesion * CM Autocracy			2.80†
			(1.46)
τ_{00}	14.18	13.48	13.46
σ^2	6.85	5.75	5.62
AIC	7041.04	6301.53	6265.41
BIC	7198.50	6508.42	6549.89
Log Likelihood	-3490.52	-3110.76	-3077.70
Num. obs.	1406	1303	1303
Num. countries	94	88	88

$^{***}p < 0.001$, $^{**}p < 0.01$, $^{*}p < 0.05$, $^{\dagger}p < 0.1$

Table A.23: Linear Within-Between Model predicting Income Taxation in % GDP

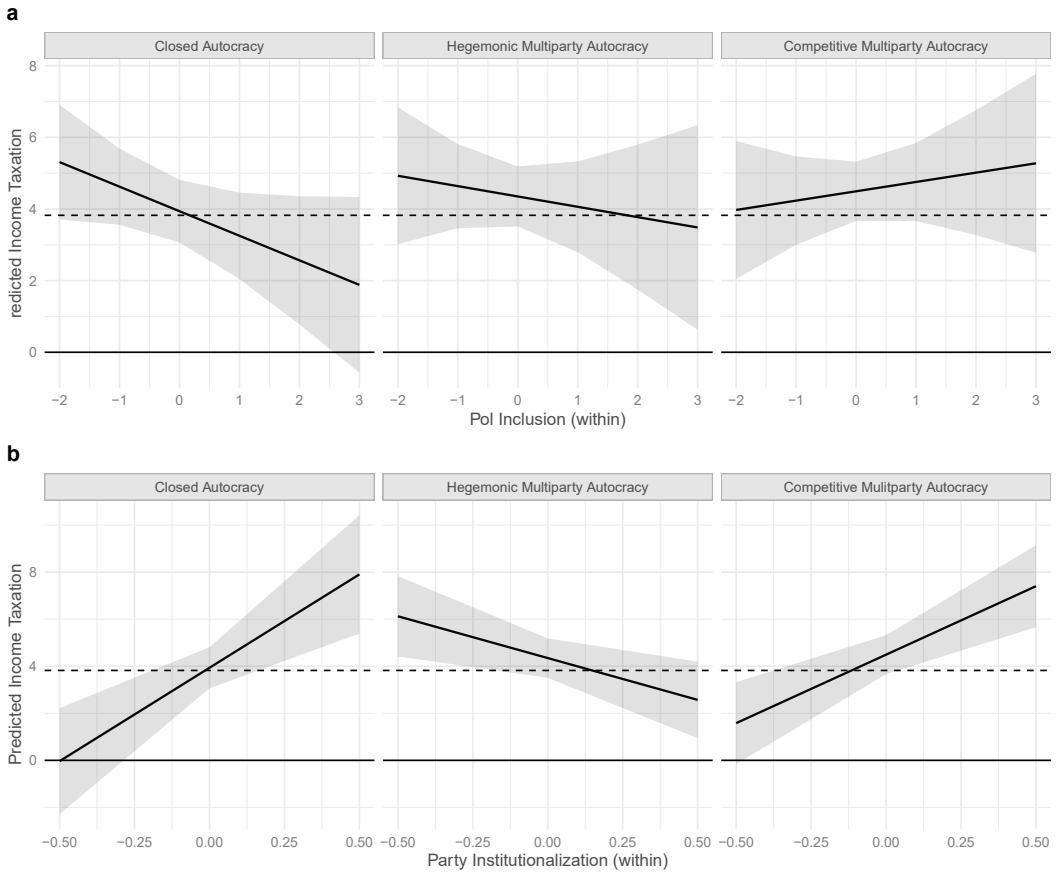


Figure A.17: Marginal Effects of Inclusion (a), and Party Institutionalization (b) on Income Taxation in % GDP by Regime Types (based on Model 2)

Notes: The solid lines indicate the estimated coefficient. Shaded regions show adjusted 95% confidence intervals. The coefficient estimate is significant at a $p < 0.05$ where the confidence intervals do not include zero.

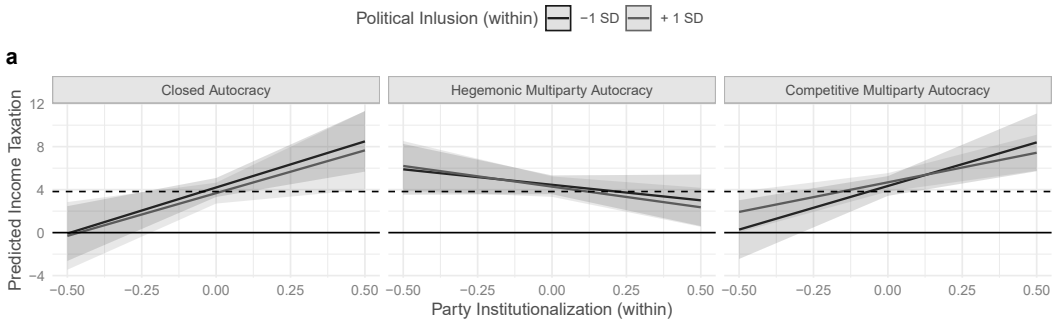


Figure A.18: Marginal Effects of Inclusion, and Party Institutionalization on Income Taxation in % GDP by Regime Types (based on Model 3)

Notes: The solid lines indicate the estimated coefficient. Shaded regions show adjusted 95% confidence intervals. The coefficient estimate is significant at a $p < 0.05$ where the confidence intervals do not include zero.

A.4.2 Social spending in % GDP

Table A.24: Summary Statistics for Social Spending Dataset

Statistic	N	Mean	Median	Min	Max	St. Dev.
Social Spending % GDP	1,098	5.566	5.207	0.000	18.987	3.145
Pol Inclusion (w)	1,098	0.000	0.000	−1.656	1.989	0.351
Pol Inclusion (b)	1,098	−0.114	−0.174	−2.056	2.009	0.719
Party Institutionalization (w)	1,098	0.000	0	−0	1	0.086
Party Institutionalization (b)	1,098	0.445	0.415	0.004	0.883	0.213
Electoral Autocracy (w)	1,098	−0.000	0	−1	1	0.276
Electoral Autocracy (b)	1,098	0.633	0.8	0	1	0.395
Party organizations (w)	1,098	0.000	0	−2	3	0.551
Party organizations	1,098	0.216	0.371	−2.884	2.450	1.170
Party branches (w)	1,098	0.000	0	−2	2	0.441
Party branches	1,098	0.165	0.228	−3.096	2.851	1.190
Party linkages (w)	1,098	−0.000	0	−1	2	0.438
Party linkages	1,098	−0.486	−0.559	−2.895	2.238	1.012
Distinct party platforms (w)	1,098	0.000	0	−2	3	0.451
Distinct party platforms	1,098	−0.406	−0.563	−2.890	2.266	1.203
Legislative party cohesion (w)	1,098	0.000	0	−2	1	0.394
Legislative party cohesion	1,098	0.533	0.902	−3.684	2.345	1.286

Table A.25: Summary Statistics for Social Spending Dataset

Statistic	N	Mean	Median	Min	Max	St. Dev.
Social Spending % GDP	1,017	5.379	4.945	0.000	18.987	3.040
Pol Inclusion (w)	1,017	0.000	0.000	−1.656	1.989	0.337
Pol Inclusion (b)	1,017	−0.094	−0.174	−2.056	2.009	0.716
Party Institutionalization (w)	1,017	0.000	0	−0	0	0.085
Party Institutionalization (b)	1,017	0.464	0.457	0.004	0.883	0.202
Electoral Autocracy (w)	1,017	−0.000	0	−1	1	0.285
Electoral Autocracy (b)	1,017	0.669	0.8	0	1	0.375
GDP pc (w)	1,017	0.000	−0.009	−1.092	1.305	0.267
GDP pc (b)	1,017	8.289	8.390	6.504	11.397	0.937
Population log (w)	1,017	−0.000	0.0003	−0.317	0.245	0.089
Population log (b)	1,017	7.129	7.031	5.812	9.094	0.628
Communist Ideology (w)	1,017	−0.000	0	−1	1	0.136
Communist Ideology (b)	1,017	0.232	0.1	0	1	0.274
Urban Percentage (w)	1,017	0.000	−0.0004	−0.214	0.316	0.054
Urban Percentage (b)	1,017	0.246	0.194	0.000	1.000	0.198
Manufacturing of GDP (w)	1,017	−0.000	−0.0002	−0.470	0.997	0.068
Manufacturing % of GDP (b)	1,017	0.165	0.150	0.024	0.923	0.103
Party organizations (w)	1,017	0.000	0	−2	3	0.549
Party organizations	1,017	0.340	0.373	−2.884	2.450	1.076
Party branches (w)	1,017	0.000	0	−2	2	0.444
Party branches	1,017	0.291	0.324	−3.096	2.851	1.109
Party linkages (w)	1,017	−0.000	0	−1	2	0.447
Party linkages	1,017	−0.461	−0.502	−2.895	2.238	0.983
Distinct party platforms (w)	1,017	0.000	0	−2	3	0.432
Distinct party platforms	1,017	−0.329	−0.491	−2.890	2.266	1.161
Legislative party cohesion (w)	1,017	0.000	0	−2	1	0.401
Legislative party cohesion	1,017	0.614	0.984	−3.684	2.345	1.255

	Model 1	Model 2	Model 3
(Intercept)	−36.39**	20.36	20.88
	(11.45)	(40.62)	(40.73)
Year	0.02***	−0.00	−0.00
	(0.01)	(0.02)	(0.02)
Pol Inclusiveness	0.12	−0.20	−0.16
	(0.18)	(0.22)	(0.27)
Pol Inclusiveness (b)	0.25	0.05	0.05
	(0.42)	(0.43)	(0.43)
Party Institutionalization	2.90*	1.89	2.24
	(1.28)	(1.35)	(1.54)
Party Institutionalization (b)	−3.39*	−1.05	−1.06
	(1.65)	(1.76)	(1.76)
Hegemonic Multiparty Autocracy	−0.73***	−0.58**	−0.57**
	(0.17)	(0.18)	(0.18)
Competitive Multiparty Autocracy	−0.90***	−0.68***	−0.68***
	(0.18)	(0.19)	(0.19)
HM Autocracy * Inclusiveness	1.19***	1.31***	1.32***
	(0.33)	(0.36)	(0.39)
CM Autocracy * Inclusiveness	0.29	0.31	0.27
	(0.33)	(0.36)	(0.40)
HM Autocracy * PI	−3.84*	−3.12†	−3.44†
	(1.56)	(1.62)	(1.76)
CM Autocracy * PI	−0.69	0.63	0.16
	(1.60)	(1.75)	(1.96)
GDP pc log		0.23	0.24
		(0.22)	(0.22)
GDP pc log (b)		0.21	0.20
		(0.50)	(0.50)
Population log		2.68	2.66
		(1.67)	(1.69)
Population log (b)		−1.81**	−1.81**
		(0.59)	(0.59)
Communist Ideology		1.09**	1.09**
		(0.35)	(0.35)
Communist Ideology (b)		0.33	0.33
		(1.30)	(1.30)
Urban Pop %		−1.76*	−1.78*
		(0.85)	(0.85)
Urban Pop % (b)		−2.32	−2.33
		(2.56)	(2.56)
Manufacturing Sector %		−0.57	−0.59
		(0.62)	(0.62)
Manufacturing Sector % (b)		4.36	4.34
		(3.07)	(3.07)
PI * Inclusiveness			0.28
			(2.49)
HM Autocracy * PI * Inclusiveness			−1.44
			(2.82)
CM Autocracy * PI * Inclusiveness			−0.07
			(2.99)
τ_{00}	8.11	6.77	6.76
σ^2	1.75	1.70	1.71
AIC	4053.97	3721.56	3717.10
BIC	4123.98	3839.75	3850.06
Log Likelihood	-2012.98	-1836.78	-1831.55
Num. obs.	1098	1017	1017
Num. countries	76	72	72

$^{***}p < 0.001$, $^{**}p < 0.01$, $^{*}p < 0.05$, $^{\dagger}p < 0.1$

Table A.26: Linear Within-Between Model predicting Social Spending per Capita in % GDP

	Model 1	Model 2	Model 3
(Intercept)	-44.57^{***}	22.21	11.37
	(12.03)	(43.56)	(43.88)
Year	0.03^{***}	-0.00	0.00
	(0.01)	(0.02)	(0.02)
Pol Inclusiveness	0.09	-0.26	-0.09
	(0.19)	(0.24)	(0.44)
Pol Inclusiveness (b)	0.26	-0.03	-0.05
	(0.42)	(0.44)	(0.44)
Party organizations	$0.56^{\dagger}$	0.76^{*}	1.15^{***}
	(0.29)	(0.30)	(0.35)
Party organizations (b)	$1.13^{\dagger}$	$1.15^{\dagger}$	$1.13^{\dagger}$
	(0.61)	(0.60)	(0.59)
Party Branches	-0.28	-0.28	$-0.70^{\dagger}$
	(0.32)	(0.34)	(0.41)
Party Branches (b)	-1.58^{**}	$-1.05^{\dagger}$	$-1.02^{\dagger}$
	(0.58)	(0.59)	(0.58)
Party Linkages	0.10	0.16	0.43
	(0.27)	(0.28)	(0.33)
Party Linkages (b)	-0.29	-0.22	-0.23
	(0.34)	(0.35)	(0.35)
Distinct Party Platforms	0.10	-0.31	-0.38
	(0.25)	(0.28)	(0.29)
Distinct Party Platforms (b)	-0.07	0.05	0.06
	(0.35)	(0.36)	(0.36)
Legislative Party Cohesion	0.06	-0.29	-0.16
	(0.31)	(0.32)	(0.39)
Legislative Party Cohesion (b)	-0.12	-0.18	-0.19
	(0.30)	(0.32)	(0.32)
Hegemonic Multiparty Autocracy	-0.71^{***}	-0.63^{***}	-0.66^{***}
	(0.18)	(0.18)	(0.19)
Competitive Multiparty Autocracy	-0.80^{***}	-0.73^{***}	-0.81^{***}
	(0.20)	(0.20)	(0.21)
HM Autocracy * Inclusiveness	1.43^{***}	1.63^{***}	1.27^{*}
	(0.36)	(0.40)	(0.57)
CM Autocracy * Inclusiveness	0.42	0.40	0.41
	(0.35)	(0.39)	(0.56)
HM Autocracy * Party organizations	-1.10^{**}	-1.17^{**}	-1.65^{***}
	(0.42)	(0.44)	(0.47)
CM Autocracy * Party organizations	-0.07	-0.17	-0.94^{*}
	(0.42)	(0.43)	(0.48)
HM Autocracy * Party Branches	0.58	0.49	1.34^{*}
	(0.45)	(0.46)	(0.55)
CM Autocracy * Party Branches	0.30	0.11	$1.02^{\dagger}$
	(0.45)	(0.47)	(0.56)
HM Autocracy * Party Linkages	-0.35	-0.37	-0.39
	(0.33)	(0.34)	(0.40)
CM Autocracy * Party Linkages	0.34	0.35	0.29
	(0.35)	(0.37)	(0.42)
HM Autocracy * Distinct Party Platforms	-0.08	0.23	0.03
	(0.46)	(0.48)	(0.50)
CM Autocracy * Distinct Party Platforms	-0.75^{*}	-0.18	0.01
	(0.36)	(0.40)	(0.42)
HM Autocracy * Legislative Party Cohesion	0.62	$0.78^{\dagger}$	0.45
	(0.40)	(0.41)	(0.47)
CM Autocracy * Legislative Party Cohesion	0.27	0.45	0.16
	(0.38)	(0.39)	(0.47)
GDP pc log		0.18	0.17
		(0.23)	(0.23)
GDP pc log (b)		0.23	0.20
		(0.52)	(0.52)

	Model 1	Model 2	Model 3
Population log		2.91	1.74
		(1.79)	(1.83)
Population log (b)		−1.92**	−1.93**
		(0.62)	(0.61)
Communist Ideology		0.91*	0.75†
		(0.38)	(0.40)
Communist Ideology (b)		0.82	0.83
		(1.40)	(1.40)
Urban Pop %		−1.70*	−1.56†
		(0.86)	(0.87)
Urban Pop % (b)		−2.49	−2.49
		(2.69)	(2.68)
Manufacturing Sector %		−0.53	−0.58
		(0.61)	(0.61)
Manufacturing Sector % (b)		3.11	3.04
		(3.26)	(3.24)
Inclusiveness * Party organizations			−2.01*
			(0.94)
Inclusiveness * Party Branches			0.05
			(0.70)
Inclusiveness * Party Linkages			0.63
			(0.62)
Inclusiveness * Distinct Party Platforms			1.82*
			(0.91)
Inclusiveness * Legislative Party Cohesion			0.67
			(0.72)
Inclusiveness * Party organizations * HM Autocracy			−0.02
			(1.63)
Inclusiveness * Party organizations * CM Autocracy			4.09***
			(1.19)
Inclusiveness * Party Branches * HM Autocracy			2.41*
			(1.18)
Inclusiveness * Party Branches * CM Autocracy			−2.18†
			(1.21)
Inclusiveness * Party Linkages * HM Autocracy			−0.10
			(0.74)
Inclusiveness * Party Linkages * CM Autocracy			−1.18
			(0.77)
Inclusiveness * Distinct Party Platforms * HM Autocracy			−2.36†
			(1.39)
Inclusiveness * Distinct Party Platforms * CM Autocracy			−2.32*
			(1.15)
Inclusiveness * Legislative Party Cohesion * HM Autocracy			−1.78†
			(0.93)
Inclusiveness * Legislative Party Cohesion * CM Autocracy			−0.27
			(0.83)
τ_{00}	8.02	6.89	6.82
σ^2	1.70	1.68	1.65
AIC	4069.26	3749.52	3737.04
BIC	4219.30	3946.51	4007.89
Log Likelihood	-2004.63	-1834.76	-1813.52
Num. obs.	1098	1017	1017
Num. countries	76	72	72

$^{***}p < 0.001$, $^{**}p < 0.01$, $^{*}p < 0.05$, $^{\dagger}p < 0.1$

Table A.27: Linear Within-Between Model predicting Social Spending per Capita in % GDP

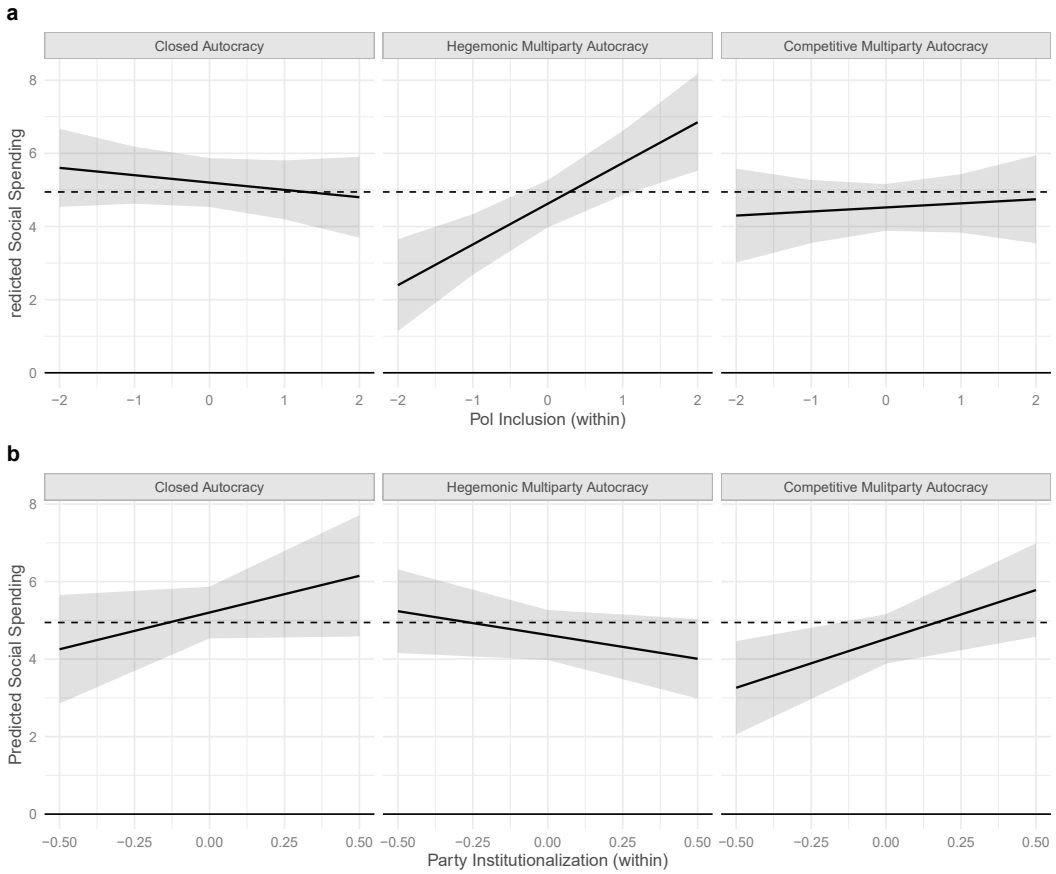


Figure A.19: Marginal Effects of Inclusion (a), and Party Institutionalization (b) on Social Spending per Capita in % GDP (based on Model 3)

Notes: The solid lines indicate the estimated coefficient. Shaded regions show adjusted 95% confidence intervals. The coefficient estimate is significant at a $p < 0.05$ where the confidence intervals do not include zero.

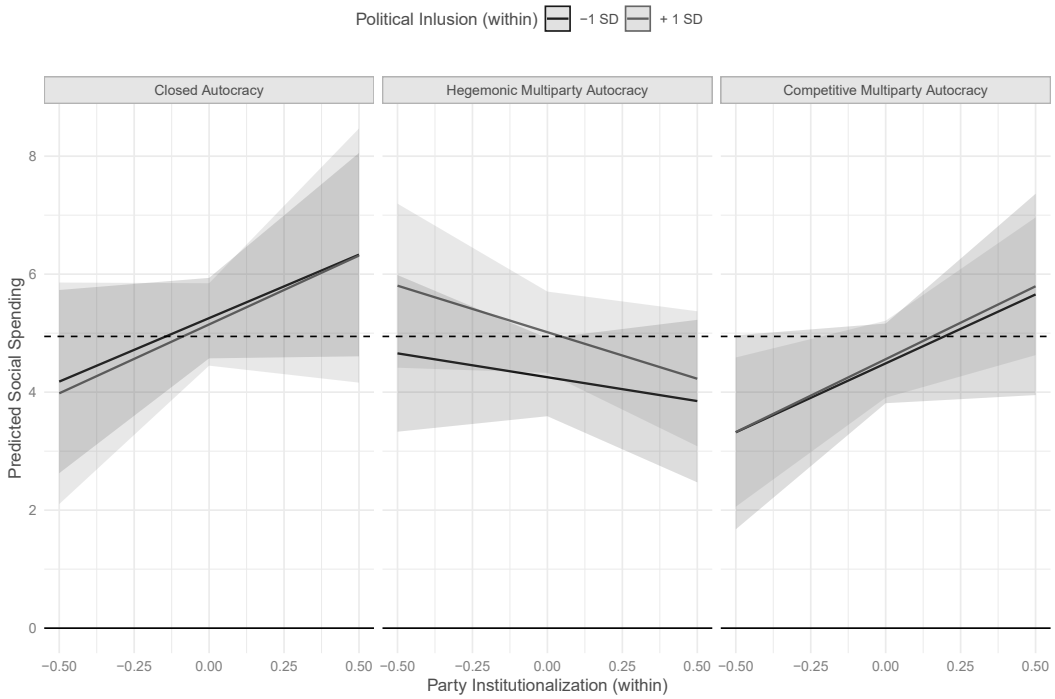


Figure A.20: Marginal Effects of Inclusion, and Party Institutionalization on Social Spending per Capita in % GDP by Regime Types (based on Model 5)

Notes: The solid lines indicate the estimated coefficient. Shaded regions show adjusted 95% confidence intervals. The coefficient estimate is significant at a $p < 0.05$ where the confidence intervals do not include zero.

A.4.3 Welfare and social insurance spending per capita of GDP

Table A.28: Summary Statistics for Social Protection Dataset

Statistic	N	Mean	Median	Min	Max	St. Dev.
Social Spending % GDP	1,083	1.922	0.924	0.000	15.817	2.429
Pol Inclusion (w)	1,083	0.000	0.000	−1.656	1.989	0.346
Pol Inclusion (b)	1,083	−0.122	−0.174	−2.056	2.017	0.723
Party Institutionalization (w)	1,083	0.000	0	−0	1	0.082
Party Institutionalization (b)	1,083	0.443	0.415	0.004	0.883	0.214
Electoral Autocracy (w)	1,083	−0.000	0	−1	1	0.273
Electoral Autocracy (b)	1,083	0.631	0.8	0	1	0.398
Party organizations (w)	1,083	0.000	0	−2	3	0.540
Party organizations	1,083	0.213	0.371	−2.884	2.450	1.178
Party branches (w)	1,083	0.000	0	−2	2	0.435
Party branches	1,083	0.161	0.228	−3.096	2.851	1.197
Party linkages (w)	1,083	−0.000	0	−1	2	0.423
Party linkages	1,083	−0.491	−0.695	−2.895	2.238	1.020
Distinct party platforms (w)	1,083	0.000	0	−2	3	0.444
Distinct party platforms	1,083	−0.422	−0.563	−2.890	2.266	1.205
Legislative party cohesion (w)	1,083	0.000	0	−2	1	0.393
Legislative party cohesion	1,083	0.521	0.831	−3.684	2.345	1.294

Table A.29: Summary Statistics for Social Protection Dataset

Statistic	N	Mean	Median	Min	Max	St. Dev.
Social Spending % GDP	1,002	1.999	0.990	0.000	15.817	2.436
Pol Inclusion (w)	1,002	0.000	0.000	−1.656	1.989	0.332
Pol Inclusion (b)	1,002	−0.102	−0.174	−2.056	2.017	0.721
Party Institutionalization (w)	1,002	0.000	0	−0	0	0.081
Party Institutionalization (b)	1,002	0.462	0.457	0.004	0.883	0.203
Electoral Autocracy (w)	1,002	−0.000	0	−1	1	0.281
Electoral Autocracy (b)	1,002	0.667	0.8	0	1	0.379
GDP pc (w)	1,002	−0.000	−0.010	−1.092	1.305	0.267
GDP pc (b)	1,002	8.306	8.408	6.504	11.397	0.934
Population log (w)	1,002	−0.000	0.0003	−0.317	0.245	0.089
Population log (b)	1,002	7.128	7.031	5.812	9.094	0.631
Communist Ideology (w)	1,002	−0.000	0	−1	1	0.135
Communist Ideology (b)	1,002	0.230	0.1	0	1	0.277
Urban Percentage (w)	1,002	0.000	−0.0004	−0.214	0.316	0.055
Urban Percentage (b)	1,002	0.249	0.196	0.000	1.000	0.198
Manufacturing % of GDP (w)	1,002	−0.000	−0.0002	−0.470	0.997	0.069
Manufacturing % of GDP (b)	1,002	0.166	0.154	0.024	0.923	0.103
Party organizations (w)	1,002	0.000	0	−2	3	0.536
Party organizations	1,002	0.338	0.373	−2.884	2.450	1.084
Party branches (w)	1,002	0.000	0	−2	2	0.437
Party branches	1,002	0.289	0.228	−3.096	2.851	1.117
Party linkages (w)	1,002	−0.000	0	−1	2	0.431
Party linkages	1,002	−0.466	−0.492	−2.895	2.238	0.991
Distinct party platforms (w)	1,002	0.000	0	−2	3	0.424
Distinct party platforms	1,002	−0.345	−0.491	−2.890	2.266	1.163
Legislative party cohesion (w)	1,002	0.000	0	−2	1	0.400
Legislative party cohesion	1,002	0.603	0.888	−3.684	2.345	1.265

	Model 1	Model 2	Model 3
(Intercept)	−75.35***	−166.83***	−162.95***
	(10.19)	(36.47)	(36.47)
Year	0.04***	0.08***	0.08***
	(0.01)	(0.02)	(0.02)
Pol Inclusiveness	−0.13	0.04	0.10
	(0.16)	(0.19)	(0.23)
Pol Inclusiveness (b)	0.82*	0.58	0.57
	(0.37)	(0.43)	(0.43)
Party Institutionalization	−2.41†	−1.97	−2.77†
	(1.28)	(1.36)	(1.46)
Party Institutionalization (b)	0.49	1.15	1.19
	(1.43)	(1.76)	(1.75)
Hegemonic Multiparty Autocracy	0.30†	0.32*	0.28†
	(0.15)	(0.15)	(0.15)
Competitive Multiparty Autocracy	0.54***	0.61***	0.58***
	(0.16)	(0.16)	(0.16)
HM Autocracy * Inclusiveness	0.59*	0.34	0.08
	(0.30)	(0.31)	(0.35)
CM Autocracy * Inclusiveness	0.17	−0.05	−0.20
	(0.29)	(0.31)	(0.34)
HM Autocracy * PI	−1.71	−2.35	−2.17
	(1.52)	(1.58)	(1.61)
CM Autocracy * PI	0.80	−0.56	−0.38
	(1.54)	(1.68)	(1.79)
GDP pc log		0.20	0.20
		(0.19)	(0.19)
GDP pc log (b)		0.98*	0.99*
		(0.50)	(0.50)
Population log		−3.87**	−3.44*
		(1.49)	(1.50)
Population log (b)		−0.44	−0.45
		(0.59)	(0.59)
Communist Ideology		0.56†	0.57†
		(0.30)	(0.30)
Communist Ideology (b)		0.65	0.68
		(1.29)	(1.29)
Urban Pop %		−2.01**	−2.08**
		(0.73)	(0.73)
Urban Pop % (b)		−0.91	−0.87
		(2.58)	(2.56)
Manufacturing Sector %		0.70	0.69
		(0.53)	(0.53)
Manufacturing Sector % (b)		−1.42	−1.34
		(3.09)	(3.07)
PI * Inclusiveness			2.28
			(2.25)
HM Autocracy * PI * Inclusiveness			1.91
			(2.74)
CM Autocracy * PI * Inclusiveness			0.26
			(2.64)
τ_{00}	6.11	6.88	6.81
σ^2	1.34	1.27	1.26
AIC	3719.60	3398.47	3388.98
BIC	3789.43	3516.30	3521.54
Log Likelihood	-1845.80	-1675.24	-1667.49
Num. obs.	1083	1002	1002
Num. countries	76	72	72

$^{***}p < 0.001$, $^{**}p < 0.01$, $^{*}p < 0.05$, $^{\dagger}p < 0.1$

Table A.30: Linear Within-Between Model predicting Welfare and Social Insurance Spending per Capita of % GDP

	Model 1	Model 2	Model 3
(Intercept)	−70.06***	−128.57***	−117.52**
	(10.70)	(38.60)	(38.90)
Year	0.04***	0.06**	0.06**
	(0.01)	(0.02)	(0.02)
Pol Inclusiveness	−0.12	0.05	−0.32
	(0.17)	(0.21)	(0.38)
Pol Inclusiveness (b)	0.80*	0.64	0.66
	(0.38)	(0.42)	(0.43)
Party organizations	0.04	0.10	−0.22
	(0.26)	(0.26)	(0.30)
Party organizations (b)	−0.32	−0.39	−0.37
	(0.54)	(0.57)	(0.57)
Party Branches	−0.55*	−0.60*	−0.32
	(0.28)	(0.29)	(0.35)
Party Branches (b)	0.29	0.45	0.45
	(0.51)	(0.56)	(0.56)
Party Linkages	−0.01	−0.11	−0.28
	(0.25)	(0.26)	(0.29)
Party Linkages (b)	−0.24	−0.41	−0.42
	(0.30)	(0.34)	(0.34)
Distinct Party Platforms	−0.01	0.04	0.12
	(0.22)	(0.24)	(0.25)
Distinct Party Platforms (b)	0.12	0.16	0.13
	(0.31)	(0.35)	(0.35)
Legislative Party Cohesion	0.17	0.13	0.12
	(0.28)	(0.29)	(0.33)
Legislative Party Cohesion (b)	0.14	0.37	0.36
	(0.27)	(0.31)	(0.31)
Hegemonic Multiparty Autocracy	0.34*	0.34*	0.42**
	(0.16)	(0.16)	(0.16)
Competitive Multiparty Autocracy	0.71***	0.71***	0.85***
	(0.17)	(0.17)	(0.18)
HM Autocracy * Inclusiveness	0.42	0.12	0.71
	(0.32)	(0.35)	(0.49)
CM Autocracy * Inclusiveness	0.44	0.13	0.70
	(0.31)	(0.34)	(0.48)
HM Autocracy * Party organizations	−0.37	−0.32	−0.09
	(0.37)	(0.38)	(0.40)
CM Autocracy * Party organizations	−0.19	−0.13	0.10
	(0.37)	(0.37)	(0.41)
HM Autocracy * Party Branches	0.20	0.16	−0.03
	(0.39)	(0.40)	(0.47)
CM Autocracy * Party Branches	−0.00	−0.10	−0.33
	(0.40)	(0.41)	(0.48)
HM Autocracy * Party Linkages	0.38	0.48	0.42
	(0.30)	(0.31)	(0.35)
CM Autocracy * Party Linkages	0.36	0.52	0.57
	(0.32)	(0.33)	(0.37)
HM Autocracy * Distinct Party Platforms	−0.40	−0.43	−0.57
	(0.41)	(0.41)	(0.43)
CM Autocracy * Distinct Party Platforms	−0.06	−0.17	−0.19
	(0.32)	(0.34)	(0.36)
HM Autocracy * Legislative Party Cohesion	−0.35	−0.57	−0.68†
	(0.36)	(0.36)	(0.41)
CM Autocracy * Legislative Party Cohesion	0.24	0.08	−0.01
	(0.35)	(0.35)	(0.41)
GDP pc log		0.17	0.17
		(0.20)	(0.20)
GDP pc log (b)		1.32**	1.31**
		(0.50)	(0.50)

	Model 1	Model 2	Model 3
Population log		−2.13	−1.45
		(1.58)	(1.61)
Population log (b)		−0.28	−0.27
		(0.59)	(0.59)
Communist Ideology		0.61†	0.92**
		(0.33)	(0.35)
Communist Ideology (b)		0.59	0.56
		(1.34)	(1.34)
Urban Pop %		−2.41**	−2.29**
		(0.74)	(0.74)
Urban Pop % (b)		−2.31	−2.18
		(2.60)	(2.60)
Manufacturing Sector %		0.42	0.55
		(0.53)	(0.52)
Manufacturing Sector % (b)		−0.16	−0.10
		(3.14)	(3.15)
Inclusiveness * Party organizations			1.22
			(0.80)
Inclusiveness * Party Branches			0.88
			(0.61)
Inclusiveness * Party Linkages			0.77
			(0.57)
Inclusiveness * Distinct Party Platforms			−2.02**
			(0.78)
Inclusiveness * Legislative Party Cohesion			−0.01
			(0.64)
Inclusiveness * Party organizations * HM Autocracy			−5.14***
			(1.41)
Inclusiveness * Party organizations * CM Autocracy			−1.12
			(1.02)
Inclusiveness * Party Branches * HM Autocracy			1.60
			(1.02)
Inclusiveness * Party Branches * CM Autocracy			−0.74
			(1.05)
Inclusiveness * Party Linkages * HM Autocracy			−0.26
			(0.70)
Inclusiveness * Party Linkages * CM Autocracy			−0.56
			(0.69)
Inclusiveness * Distinct Party Platforms * HM Autocracy			5.61***
			(1.20)
Inclusiveness * Distinct Party Platforms * CM Autocracy			1.71†
			(0.98)
Inclusiveness * Legislative Party Cohesion * HM Autocracy			0.64
			(0.84)
Inclusiveness * Legislative Party Cohesion * CM Autocracy			0.52
			(0.73)
τ_{00}	6.39	6.42	6.46
σ^2	1.30	1.23	1.20
AIC	3736.38	3410.70	3393.85
BIC	3886.00	3607.09	3663.89
Log Likelihood	-1838.19	-1665.35	-1641.93
Num. obs.	1083	1002	1002
Num. countries	76	72	72

$^{***}p < 0.001$, $^{**}p < 0.01$, $^{*}p < 0.05$, $^{\dagger}p < 0.1$

Table A.31: Linear Within-Between Model predicting Welfare and Social Insurance Spending per Capita of % GDP

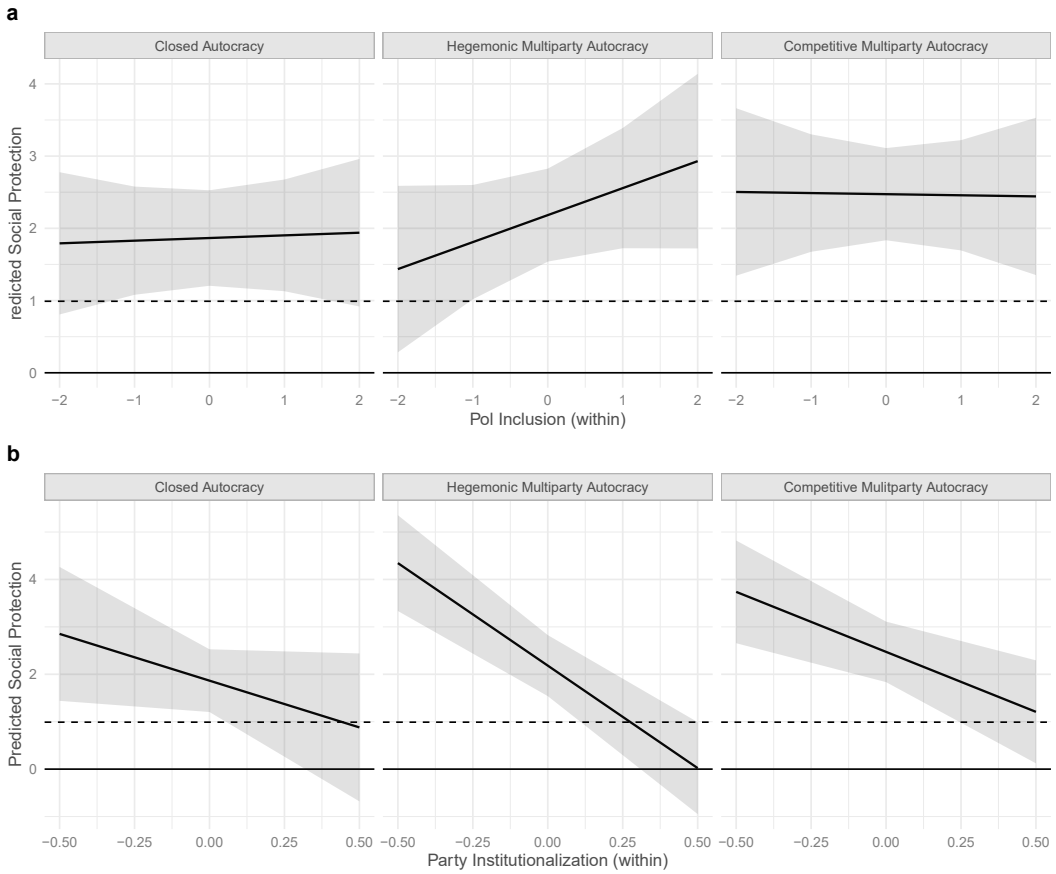


Figure A.21: Marginal Effects of Inclusion (a), and Party Institutionalization (b) on Welfare and Social Insurance Spending per Capita of GDP by Regime Types (based on Model 2)

Notes: The solid lines indicate the estimated coefficient. Shaded regions show adjusted 95% confidence intervals. The coefficient estimate is significant at a $p < 0.05$ where the confidence intervals do not include zero.

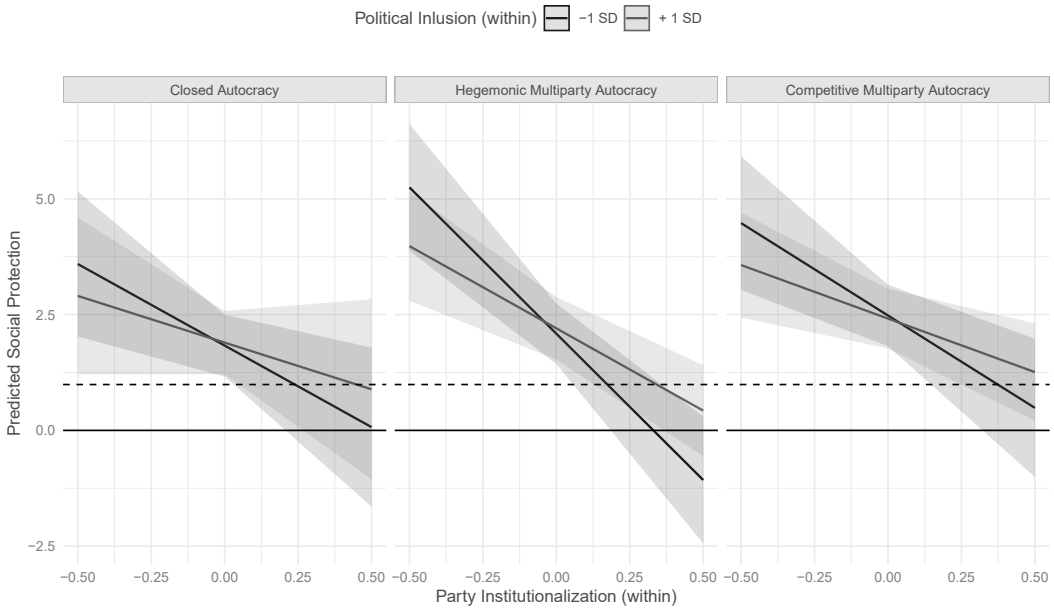


Figure A.22: Marginal Effects of Inclusion, and Party Institutionalization on Welfare and Social Insurance Spending per Capita of GDP by Regime Types (based on Model 3)

Notes: The solid lines indicate the estimated coefficient. Shaded regions show adjusted 95% confidence intervals. The coefficient estimate is significant at a $p < 0.05$ where the confidence intervals do not include zero.

A.5 Models predicting public goods provision (V-Dem data)

In this section, I re-run the main models by using a measure of the type of expenditure on social and infrastructural spending in the national budget. The original variable is a ordinal variable ranging from particularistic spending targeted toward specific actors (0) to public goods provision being indented to benefit all groups (4). This variable[12] captures redistributive government expenditures that ''tend to benefit individuals at the lower end of the income scale than those with higher-than-median incomes'' (Albertus & Menaldo, 2014, p. 584). By the measurement model of the V-Dem project, this variable is transformed in a continuous variable. Smaller values indicate lower rates of public goods provision, or more particularistic spending, while higher values indicate more public goods provision by the government.

Table A.32 and A.32 show descriptive summaries of the dataset. In Model 1 and 1.1, the dataset covers 9,039 authoritarian country-years in 172 countries, while in Model 2-3 and 2.1 -3.1 the dataset covers 4128 authoritarian country-years in 133 autocracies. Table A.34 and A.35 show the results of the re-analysis of the main models using the new dependent variable. Figure A.23 clearly indicates that political inclusionary ruling strategies (both, in the within-country variance, and between countries) have a significant and positive effect on public goods provision in all regime types. The effect of party institutionalization is more pronounced in competitive multiparty regimes compared to closed autocracies and hegemonic multiparty regimes, as expected by the theory. In addition, Figure A.24 shows that the effect of party institutionalization differs between different levels of political inclusion by different regime types.

Table A.32: Summary Statistics for Public Goods Provision Dataset Dataset

Statistic	N	Mean	Median	Min	Max	St. Dev.
Public Goods Provision	9,039	−0.191	−0.138	−3.534	2.921	1.229
Pol Inclusion (w)	9,039	−0.000	−0.034	−2.747	2.656	0.715
Pol Inclusion (b)	9,039	−0.355	−0.389	−1.914	2.329	0.801
Party Institutionalization (w)	9,039	0.000	−0.0001	−0.526	0.647	0.137
Party Institutionalization (b)	9,039	0.415	0.391	0.003	0.976	0.197
Electoral Autocracy (w)	9,039	−0.000	0.000	−0.981	0.988	0.401
Electoral Autocracy (b)	9,039	0.432	0.444	0.000	1.000	0.291
Party organizations (w)	9,039	−0.000	0.000	−3.257	3.340	0.821
Party organizations	9,039	−0.049	−0.065	−3.084	2.370	1.065
Party branches (w)	9,039	0.000	0.000	−3.454	3.507	0.769
Party branches	9,039	−0.021	−0.100	−3.186	3.349	1.118
Party linkages (w)	9,039	−0.000	−0.002	−3.071	3.427	0.649
Party linkages	9,039	−0.382	−0.543	−2.392	3.270	1.011
Distinct party platforms (w)	9,039	−0.000	−0.007	−3.200	3.663	0.790
Distinct party platforms	9,039	−0.504	−0.698	−3.157	2.278	1.079
Legislative party cohesion (w)	9,039	−0.000	0.000	−3.356	2.890	0.756
Legislative party cohesion	9,039	0.364	0.547	−3.684	2.304	1.102

[12] v2dlencmps in the V-Dem dataset

Table A.33: Summary Statistics for Public Goods Provision Dataset Dataset

Statistic	N	Mean	Median	Min	Max	St. Dev.
Public Goods Provision	4,128	0.133	0.216	−3.291	2.855	1.126
Pol Inclusion (w)	4,128	0.000	0.000	−2.692	2.396	0.504
Pol Inclusion (b)	4,128	−0.077	−0.172	−1.677	2.191	0.788
Party Institutionalization (w)	4,128	−0.000	0.000	−0.502	0.530	0.099
Party Institutionalization (b)	4,128	0.451	0.431	0.003	0.962	0.207
Electoral Autocracy (w)	4,128	0.000	0.000	−0.982	0.979	0.359
Electoral Autocracy (b)	4,128	0.550	0.614	0.000	1.000	0.345
GDP pc (w)	4,128	−0.000	0.009	−1.783	2.031	0.427
GDP pc (b)	4,128	8.222	8.106	6.538	11.317	0.988
Population log (w)	4,128	−0.000	0.003	−0.673	0.647	0.163
Population log (b)	4,128	6.910	6.921	4.818	9.020	0.691
Communist Ideology (w)	4,128	0.000	0.000	−0.968	0.786	0.178
Communist Ideology (b)	4,128	0.302	0.250	0.000	1.000	0.304
Urban Percentage (w)	4,128	−0.000	0.000	−0.445	0.420	0.080
Urban Percentage (b)	4,128	0.225	0.173	0.000	1.000	0.186
Manufacturing % of GDP (w)	4,128	−0.000	−0.001	−0.465	1.121	0.049
Manufacturing % of GDP (b)	4,128	0.135	0.128	0.017	0.799	0.082
Party organizations (w)	4,128	−0.000	0.000	−2.433	3.451	0.648
Party organizations	4,128	0.128	0.193	−3.094	3.133	1.118
Party branches (w)	4,128	0.000	0.000	−2.848	2.830	0.569
Party branches	4,128	0.197	0.217	−3.191	3.467	1.158
Party linkages (w)	4,128	0.000	−0.009	−2.357	2.878	0.575
Party linkages	4,128	−0.422	−0.598	−2.836	2.091	0.961
Distinct party platforms (w)	4,128	0.000	0.000	−2.567	3.770	0.583
Distinct party platforms	4,128	−0.432	−0.573	−3.163	2.532	1.167
Legislative party cohesion (w)	4,128	0.000	0.005	−2.302	1.529	0.506
Legislative party cohesion	4,128	0.639	1.007	−3.684	2.470	1.188

	Model 1	Model 2	Model 3
(Intercept)	−0.81	18.00***	16.86***
	(1.22)	(3.09)	(3.12)
Year	0.00	−0.01***	−0.01***
	(0.00)	(0.00)	(0.00)
Pol Inclusiveness	0.62***	0.60***	0.62***
	(0.03)	(0.03)	(0.04)
Pol Inclusiveness (b)	0.68***	0.64***	0.64***
	(0.09)	(0.10)	(0.10)
Party Institutionalization	0.52*	0.26	0.30
	(0.20)	(0.21)	(0.21)
Party Institutionalization (b)	−0.65†	−0.75†	−0.75†
	(0.37)	(0.40)	(0.40)
Hegemonic Multiparty Autocracy	−0.33***	−0.33***	−0.34***
	(0.03)	(0.03)	(0.03)
Competitive Multiparty Autocracy	−0.08**	−0.05†	−0.05†
	(0.03)	(0.03)	(0.03)
HM Autocracy * Inclusiveness	−0.15**	−0.14**	−0.15**
	(0.05)	(0.05)	(0.05)
CM Autocracy * Inclusiveness	−0.25***	−0.24***	−0.26***
	(0.04)	(0.04)	(0.05)
HM Autocracy * PI	0.47†	0.69*	0.66*
	(0.28)	(0.28)	(0.28)
CM Autocracy * PI	0.99***	1.25***	1.27***
	(0.26)	(0.27)	(0.28)
GDP pc log		0.03	0.04†
		(0.02)	(0.02)
GDP pc log (b)		0.10	0.10
		(0.11)	(0.10)
Population log		0.95***	0.91***

	Model 1	Model 2	Model 3
		(0.12)	(0.12)
Population log (b)		−0.02	−0.02
		(0.12)	(0.12)
Communist Ideology		−0.00	0.01
		(0.05)	(0.05)
Communist Ideology (b)		0.23	0.23
		(0.27)	(0.27)
Urban Pop %		−0.17	−0.18†
		(0.11)	(0.11)
Urban Pop % (b)		0.13	0.13
		(0.57)	(0.57)
Manufacturing Sector %		−0.06	−0.07
		(0.15)	(0.15)
Manufacturing Sector % (b)		0.12	0.14
		(0.93)	(0.93)
PI * Inclusiveness			0.35
			(0.26)
HM Autocracy * PI * Inclusiveness			0.47
			(0.35)
CM Autocracy * PI * Inclusiveness			−0.50
			(0.31)
τ_{00}	0.65	0.66	0.66
σ^2	0.23	0.23	0.23
AIC	6317.55	6288.03	6284.49
BIC	6406.11	6439.84	6455.28
Log Likelihood	-3144.78	-3120.01	-3115.24
Num. obs.	4128	4128	4128
Num. countries	128	128	128

$^{***}p < 0.001$, $^{**}p < 0.01$, $^{*}p < 0.05$, $^{\dagger}p < 0.1$

Table A.34: Linear Within-Between Model predicting Public Good Spending

	Model 1	Model 2	Model 3
(Intercept)	−10.20***	16.49***	17.03***
	(0.64)	(3.13)	(3.19)
Year	0.01***	−0.01***	−0.01***
	(0.00)	(0.00)	(0.00)
Pol Inclusiveness	0.61***	0.59***	0.72***
	(0.02)	(0.03)	(0.04)
Pol Inclusiveness (b)	0.65***	0.67***	0.67***
	(0.09)	(0.11)	(0.11)
Party organizations	−0.17***	−0.07†	−0.09*
	(0.03)	(0.04)	(0.04)
Party organizations (b)	−0.06	−0.19	−0.19
	(0.14)	(0.15)	(0.15)
Party Branches	0.30***	−0.01	0.01
	(0.03)	(0.04)	(0.04)
Party Branches (b)	0.01	0.06	0.05
	(0.13)	(0.14)	(0.14)
Party Linkages	0.16***	0.16***	0.12**
	(0.02)	(0.03)	(0.04)
Party Linkages (b)	0.15*	0.13	0.14
	(0.07)	(0.08)	(0.08)
Distinct Party Platforms	−0.13***	−0.01	−0.02
	(0.02)	(0.04)	(0.04)
Distinct Party Platforms (b)	−0.01	−0.11	−0.11

	Model 1	Model 2	Model 3
	(0.08)	(0.09)	(0.09)
Legislative Party Cohesion	−0.09***	−0.07†	−0.06
	(0.02)	(0.04)	(0.04)
Legislative Party Cohesion (b)	−0.05	0.01	0.01
	(0.07)	(0.07)	(0.07)
Hegemonic Multiparty Autocracy	−0.23***	−0.28***	−0.27***
	(0.02)	(0.03)	(0.03)
Competitive Multiparty Autocracy	−0.13***	0.02	0.02
	(0.02)	(0.03)	(0.03)
HM Autocracy * Inclusiveness	−0.06*	−0.08	−0.18**
	(0.03)	(0.05)	(0.06)
CM Autocracy * Inclusiveness	−0.08**	−0.19***	−0.32***
	(0.03)	(0.04)	(0.06)
HM Autocracy * Party organizations	0.08*	0.02	0.03
	(0.04)	(0.06)	(0.06)
CM Autocracy * Party organizations	0.25***	0.19**	0.25***
	(0.04)	(0.06)	(0.06)
HM Autocracy * Party Branches	−0.02	0.21**	0.23***
	(0.04)	(0.07)	(0.07)
CM Autocracy * Party Branches	−0.20***	0.10	0.08
	(0.04)	(0.06)	(0.06)
HM Autocracy * Party Linkages	−0.05*	−0.08†	−0.03
	(0.03)	(0.04)	(0.05)
CM Autocracy * Party Linkages	−0.04	−0.03	−0.00
	(0.03)	(0.04)	(0.05)
HM Autocracy * Distinct Party Platforms	0.02	−0.04	−0.04
	(0.03)	(0.06)	(0.07)
CM Autocracy * Distinct Party Platforms	−0.08*	−0.08	−0.09
	(0.03)	(0.06)	(0.06)
HM Autocracy * Legislative Party Cohesion	0.01	0.17**	0.11†
	(0.03)	(0.05)	(0.06)
CM Autocracy * Legislative Party Cohesion	0.19***	0.25***	0.21***
	(0.03)	(0.05)	(0.06)
GDP pc log		0.02	0.02
		(0.02)	(0.02)
GDP pc log (b)		0.07	0.07
		(0.10)	(0.10)
Population log		0.92***	0.95***
		(0.12)	(0.12)
Population log (b)		−0.01	−0.01
		(0.12)	(0.12)
Communist Ideology		−0.04	−0.02
		(0.05)	(0.05)
Communist Ideology (b)		0.08	0.07
		(0.28)	(0.28)
Urban Pop %		−0.15	−0.19†
		(0.11)	(0.11)
Urban Pop % (b)		0.25	0.25
		(0.57)	(0.57)
Manufacturing Sector %		−0.10	−0.11
		(0.15)	(0.15)
Manufacturing Sector % (b)		0.35	0.36
		(0.96)	(0.96)
Inclusiveness * Party organizations			0.08
			(0.06)
Inclusiveness * Party Branches			0.07
			(0.07)
Inclusiveness * Party Linkages			−0.15**
			(0.05)
Inclusiveness * Distinct Party Platforms			0.16†
			(0.08)
Inclusiveness * Legislative Party Cohesion			−0.11*
			(0.05)

	Model 1	Model 2	Model 3
Inclusiveness * Party organizations * HM Autocracy			-0.23^{*}
			(0.11)
Inclusiveness * Party organizations * CM Autocracy			$-0.15^{\dagger}$
			(0.09)
Inclusiveness * Party Branches * HM Autocracy			0.31^{**}
			(0.12)
Inclusiveness * Party Branches * CM Autocracy			-0.20^{*}
			(0.10)
Inclusiveness * Party Linkages * HM Autocracy			0.27^{***}
			(0.07)
Inclusiveness * Party Linkages * CM Autocracy			0.25^{***}
			(0.06)
Inclusiveness * Distinct Party Platforms * HM Autocracy			-0.27^{**}
			(0.10)
Inclusiveness * Distinct Party Platforms * CM Autocracy			-0.07
			(0.10)
Inclusiveness * Legislative Party Cohesion * HM Autocracy			0.04
			(0.08)
Inclusiveness * Legislative Party Cohesion * CM Autocracy			0.21^{***}
			(0.06)
τ_{00}	0.65	0.66	0.65
σ^2	0.31	0.22	0.22
AIC	15981.14	6299.11	6314.69
BIC	16194.41	6552.14	6662.60
Log Likelihood	-7960.57	-3109.56	-3102.35
Num. obs.	9038	4128	4128
Num. countries	172	128	128

$^{***}p < 0.001$, $^{**}p < 0.01$, $^{*}p < 0.05$, $^{\dagger}p < 0.1$

Table A.35: Linear Within-Between Model predicting Public Good Spending

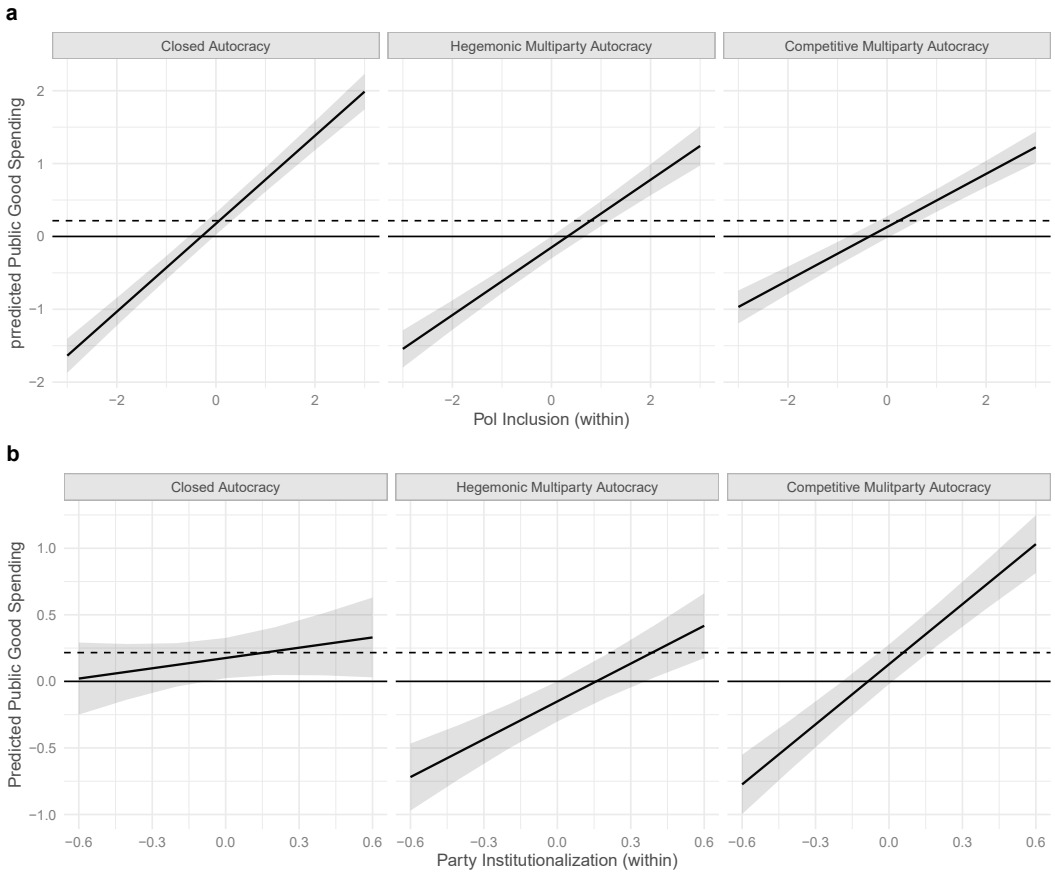


Figure A.23: Marginal Effects of Inclusion (a), and Party Institutionalization (b) on Public Goods Provision by Regime Types (based on Model 2)

Notes: The solid lines indicate the estimated coefficient. Shaded regions show adjusted 95% confidence intervals. The coefficient estimate is significant at a $p < 0.05$ where the confidence intervals do not include zero.

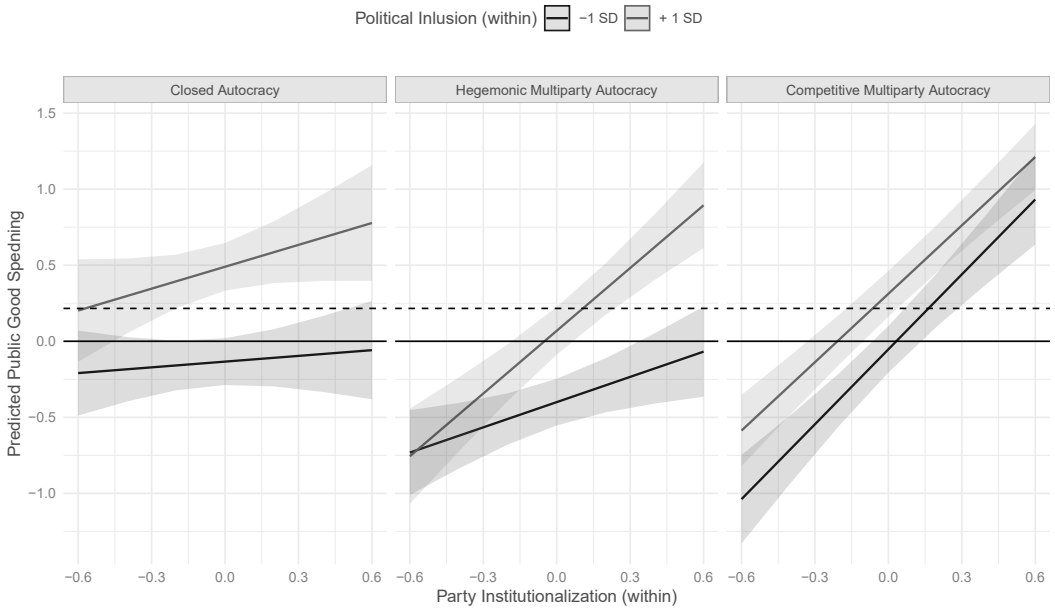


Figure A.24: Marginal Effects of Inclusion, and Party Institutionalization on Public Goods Provision by Regime Types (based on Model 3)

Notes: The solid lines indicate the estimated coefficient. Shaded regions show adjusted 95% confidence intervals. The coefficient estimate is significant at a $p < 0.05$ where the confidence intervals do not include zero.

A.6 Pooled OLS and fixed effects OLS regressions

In Table A.36 and A.37, I run ordinary-least squares regression with country- and year-fixed effects and with Beck-Katz panel-corrected standard errors (Beck & Katz, 1995) to account for unit heterogeneity. Including lagged dependent variables on the right hand side of the equation to account for serial correlation comes with a lot of problems. Plümper et al. showed that including lagged dependent variables on the right hand side of the equation absorbs time variance, but can not explain time-varying processes (Plümper, Troeger, & Manow, 2005; Plümper & Troeger, 2007). In addition, the effects of the lagged dependent variables were systematically overestimated and the effects of the theoretically interesting variables were underestimated by LDV models (e.g., Achen, 2000; Wilkins, 2017). Therefore, I estimate the fixed effects models once with a LDV in the models, and once without a LDV.

In Table A.38 and A.39, I run pooled ordinary-least squares regression with Beck-Katz panel-corrected standard errors (Beck & Katz, 1995) to account for cross-sectional correlation across countries and heteroskedasticity within countries. A second problem is serial correlation due to temporal persistence of relative redistribution. However, the tests in the main models indicate that temporal persistence of relative redistribution is no major problem in the dataset. However, in Table A.39, I include a lagged dependent variables and those appears to have resolved the problem of serial correlation, as indicated by the insignificant Woolridge test.

A.6.1 Fixed effects OLS regression with Beck-Katz SEs

	Model 1	Model 2	Model 3
Pol Inclusiveness	0.50***	0.55***	0.03
	(0.13)	(0.11)	(0.18)
Party Institutionalization	3.12***	2.89***	2.01***
	(0.50)	(0.55)	(0.56)
Hegemonic Multiparty Autocracy	1.31***	1.67***	1.48***
	(0.21)	(0.23)	(0.25)
Competitive Multiparty Autocracy	0.56*	0.92**	0.93***
	(0.25)	(0.29)	(0.27)
Pol Inclusiveness * HM Autocracy	0.59***	0.65***	0.00
	(0.15)	(0.14)	(0.27)
Pol Inclusiveness * CM Autocracy	0.56**	0.64***	−1.65***
	(0.18)	(0.18)	(0.26)
Party Institutionalization * HM Autocracy	−2.93***	−3.22***	−2.99***
	(0.48)	(0.55)	(0.57)
Party Institutionalization * CM Autocracy	−1.72**	−1.98**	−2.16***
	(0.58)	(0.64)	(0.62)
GDP pc log		0.77***	0.71***
		(0.12)	(0.11)
Population log		−1.57*	−2.81***
		(0.68)	(0.60)
Communist Ideology		−0.40†	−0.31

	Model 1	Model 2	Model 3
		(0.21)	(0.19)
Urban Percentage		−1.20	−1.34†
		(0.81)	(0.78)
Manufacturing Sector		3.15**	2.48*
		(1.18)	(1.09)
Party Institutionalization * Inclusiveness			1.19**
			(0.37)
HM Autocracy *Party Institutionalization * Inclusiveness			1.04†
			(0.58)
CM Autocracy * Party Institutionalization * Inclusiveness			4.43***
			(0.57)
R^2	0.14	0.20	0.25
Adj. R^2	0.05	0.12	0.17
Num. obs.	1844	1709	1709

$^{***}p < 0.001$, $^{**}p < 0.01$, $^{*}p < 0.05$, $^{\dagger}p < 0.1$

Table A.36: Linear Fixed Effects Model predicting Relative Redistribution

A.6.2 Fixed effects OLS regression with Beck-Katz SEs and lagged DV

	Model 1	Model 2	Model 3
Lagged DV	0.92***	0.92***	0.93***
	(0.01)	(0.01)	(0.01)
Pol Inclusiveness	0.12*	0.08*	−0.03
	(0.05)	(0.04)	(0.06)
Party Institutionalization	0.38*	0.55**	0.50**
	(0.19)	(0.18)	(0.15)
Hegemonic Multiparty Autocracy	0.16*	0.19**	0.18**
	(0.07)	(0.07)	(0.06)
Competitive Multiparty Autocracy	0.04	0.08	0.05
	(0.09)	(0.08)	(0.07)
Pol Inclusiveness * HM Autocracy	−0.11**	−0.11**	0.08
	(0.04)	(0.04)	(0.08)
Pol Inclusiveness * CM Autocracy	−0.16***	−0.16**	0.05
	(0.05)	(0.05)	(0.12)
Party Institutionalization * HM Autocracy	−0.39†	−0.58**	−0.52***
	(0.20)	(0.19)	(0.15)
Party Institutionalization * CM Autocracy	−0.25	−0.42*	−0.31†
	(0.24)	(0.21)	(0.17)
GDP pc log		−0.02	−0.02
		(0.03)	(0.03)
Population log		0.06	−0.05
		(0.32)	(0.27)
Communist Ideology		0.12†	0.10
		(0.06)	(0.06)
Urban Percentage		−0.54**	−0.52**
		(0.17)	(0.17)
Manufacturing Sector		−0.58**	−0.55**
		(0.19)	(0.19)
Party Institutionalization * Inclusiveness			0.23
			(0.16)
HM Autocracy *Party Institutionalization * Inclusiveness			−0.37*
			(0.18)
CM Autocracy * Party Institutionalization * Inclusiveness			−0.42
			(0.30)

	Model 1	Model 2	Model 3
R^2	0.93	0.94	0.94
Adj. R^2	0.93	0.93	0.93
Num. obs.	1844	1709	1709

$^{***}p < 0.001$, $^{**}p < 0.01$, $^{*}p < 0.05$, $^{\dagger}p < 0.1$

Table A.37: Linear Fixed Effects Model predicting Relative Redistribution

A.6.3 Pooled OLS regression with Beck-Katz SEs

	Model 1	Model 2	Model 3
Intercept	7.56***	−9.74***	−15.23***
	(1.02)	(2.57)	(3.20)
Pol Inclusiveness	3.86***	3.43***	12.55***
	(0.49)	(0.35)	(0.97)
Party Institutionalization	6.48**	12.46***	7.57***
	(2.18)	(2.25)	(1.96)
Hegemonic Multiparty Autocracy	0.88	4.71***	0.86
	(1.24)	(1.08)	(1.36)
Competitive Multiparty Autocracy	−2.44*	3.97***	1.67†
	(0.96)	(0.95)	(1.00)
Pol Inclusiveness * HM Autocracy	−1.49*	−1.09*	−12.40***
	(0.73)	(0.49)	(1.45)
Pol Inclusiveness * CM Autocracy	−1.59*	−1.83**	−13.09***
	(0.62)	(0.65)	(1.95)
Party Institutionalization * HM Autocracy	−8.04**	−16.00***	−10.77***
	(2.54)	(2.43)	(2.79)
Party Institutionalization * CM Autocracy	−2.03	−15.98***	−13.92***
	(1.91)	(1.98)	(1.93)
GDP pc log		3.75***	4.61***
		(0.28)	(0.33)
Population log		−2.03***	−1.63***
		(0.33)	(0.36)
Communist Ideology		0.76	1.79**
		(0.51)	(0.55)
Urban Percentage		−2.97**	−3.32**
		(1.01)	(1.03)
Manufacturing Sector		−4.82	−11.70***
		(3.30)	(3.04)
Party Institutionalization * Inclusiveness			−18.17***
			(1.85)
HM Autocracy *Party Institutionalization * Inclusiveness			22.07***
			(2.42)
CM Autocracy * Party Institutionalization * Inclusiveness			22.69***
			(3.91)
R^2	0.11	0.24	0.29
Adj. R^2	0.10	0.23	0.29
Num. obs.	1844	1709	1709

$^{***}p < 0.001$, $^{**}p < 0.01$, $^{*}p < 0.05$, $^{\dagger}p < 0.1$

Table A.38: Linear Fixed Effects Model predicting Relative Redistribution

A.6.4 Pooled OLS regression with Beck-Katz SEs and lagged DV

	Model 1	Model 2	Model 3
Intercept	−0.05	−0.24	−0.20
	(0.04)	(0.22)	(0.18)
Lagged DV	1.01***	1.00***	1.01***
	(0.00)	(0.00)	(0.00)
Pol Inclusiveness	0.01	0.00	−0.08
	(0.02)	(0.02)	(0.07)
Party Institutionalization	0.09	0.18	0.23
	(0.12)	(0.13)	(0.15)
Hegemonic Multiparty Autocracy	0.02	0.04	0.08
	(0.04)	(0.05)	(0.07)
Competitive Multiparty Autocracy	0.01	0.09	0.11
	(0.04)	(0.07)	(0.08)
Pol Inclusiveness * HM Autocracy	−0.01	−0.01	0.07
	(0.02)	(0.02)	(0.08)
Pol Inclusiveness * CM Autocracy	−0.09**	−0.10**	0.21*
	(0.03)	(0.03)	(0.10)
Party Institutionalization * HM Autocracy	−0.12	−0.18	−0.23
	(0.12)	(0.14)	(0.16)
Party Institutionalization * CM Autocracy	−0.11	−0.28	−0.27
	(0.13)	(0.17)	(0.17)
GDP pc log		0.01	0.01
		(0.01)	(0.01)
Population log		0.01	0.01
		(0.02)	(0.02)
Communist Ideology		0.03	0.01
		(0.03)	(0.02)
Urban Percentage		0.09*	0.10*
		(0.04)	(0.04)
Manufacturing Sector		−0.48***	−0.40**
		(0.12)	(0.12)
Party Institutionalization * Inclusiveness			0.17
			(0.15)
HM Autocracy *Party Institutionalization * Inclusiveness			−0.16
			(0.17)
CM Autocracy * Party Institutionalization * Inclusiveness			−0.64*
			(0.25)
R^2	1.00	1.00	1.00
Adj. R^2	1.00	1.00	1.00
Num. obs.	1844	1709	1709

$^{***}p < 0.001$, $^{**}p < 0.01$, $^{*}p < 0.05$, $^{\dagger}p < 0.1$

Table A.39: Linear Fixed Effects Model predicting Relative Redistribution

Appendix B

Supplementary Appendix for *Party institutionalization, authoritarian regime types and women's political equality*

The **replication data** for this article is available at Harvard Dataverse:

https://doi.org/10.7910/DVN/PW2AMD

B.1 Description

B.1.1 Variables and sources

Table B.1: Variable Description

Variable	**Definition / Description**	**Source**
Exclusion by Gender index	Index of (political) exclusion by gender	V-Dem (Coppedge et al. 2019)
Regime Types	modified Geddes et al. (2014) Regime Types: Monarchies, Personal, Military, Party, Communist Regimes, Communist Regimes based on *v2exl_legitideolcr*	Geddes et al. 2014 V-Dem (Coppedge et al. 2019)
Regime Types with distinction of multiparty competition (MC)	modified Geddes et al. (2014) Regime Types : Monarchies, Monarchies with MC, Personal, Personal with MC, Military, Military with MC, Party, Party with MC, Communist, Communist with MC	Geddes et al. 2014 V-Dem (Coppedge et al. 2019)

Party institutionalization index	To what extent are political parties institutionalized? v2psorgs + v2psprbrch + v2psprlnks + v2psplats + v2pscohesv The index was then converted to its CDF in order to range from 0 to 1.	V-Dem (Coppedge et al. 2019)
Party organizations *v2psorgs*	How many political parties for national-level office have permanent organizations?	V-Dem (Coppedge et al. 2019)
Party branches *v2psprbrch*	How many parties have permanent local party branches?	V-Dem (Coppedge et al. 2019)
Party linkages *v2psprlnks*	Among the major parties, what is the main or most common form of linkage to their constituents?	V-Dem (Coppedge et al. 2019)
Distinct party platforms *v2psplats*	How many political parties with representation in the national legislature or presidency have publicly available party platforms (manifestos) that are publicized and relatively distinct from one another?	V-Dem (Coppedge et al. 2019)
Legislative party cohesion *v2pscohesv*	Is it normal for members of the legislature to vote with other members of their party on important bills?	V-Dem (Coppedge et al. 2019)
GDP per capita logged, base 10 *e_migdppcln*	What is the GDP per capita, transformed by the natural logarithm?	V-Dem (Coppedge et al. 2019) and The Maddison Project Database (2018)
Population logged, base 10 based on *e_wb_pop*	What is the total population?	V-Dem (Coppedge et al. 2019) and World Bank Development Indicators (2019)
Ethnic Excluded Population based on *EPR data*	Percentage of ethnic excluded population in a given year	EPR Wimmer et al. 2009)
Resource Income based on *e_total_resources_income_pc*	What is the real value of a country's petroleum, coal, natural gas, and metals production?	V-Dem (Coppedge et al. 2019) and Haber and Menaldo (2011)

B.1.2 Sample

Table B.2 presents the full sample of the dataset depicted by countries with the first year of observation and the last year of observations and the number of country-years in the sample of the dataset. Table B.3 presents the sample with the control variables of our dataset.

Table B.2: Sample of Countries and Years

	Country	First Year	Last Year	No. Years
1	Afghanistan	1946	2010	53
2	Albania	1946	1991	46
3	Algeria	1963	2010	48
4	Angola	1976	2010	35
5	Armenia	1995	2010	16
6	Azerbaijan	1992	2010	18
7	Bangladesh	1972	2008	20
8	Belarus	1992	2010	18
9	Benin	1961	1990	28
10	Bolivia	1946	1982	36
11	Botswana	1967	2010	44
12	Brazil	1965	1985	21
13	Bulgaria	1946	1990	45
14	Burkina Faso	1961	2010	50
15	Burma/Myanmar	1959	2010	50
16	Burundi	1963	2003	38
17	Cambodia	1954	2010	57
18	Cameroon	1961	2010	50
19	Central African Republic	1961	2010	40
20	Chad	1961	2010	47
21	Chile	1974	1989	16
22	China	1954	1990	3
23	Colombia	1950	1958	9
24	Cuba	1953	2010	58
25	Czech Republic	1949	1989	41
26	DR of the Congo	1961	2010	50
27	Dominican Republic	1946	1978	31
28	Ecuador	1946	1979	14
29	Egypt	1946	2010	65

Table B.2 -- continued from previous page

	Country	First Year	Last Year	No. Years
30	El Salvador	1946	1994	49
31	Eritrea	1994	2010	17
32	Ethiopia	1946	2010	65
33	Gabon	1961	2010	50
34	Georgia	1992	2003	12
35	Ghana	1961	2000	35
36	Guatemala	1955	1995	41
37	Guinea	1959	2010	52
38	Guinea-Bissau	1975	2003	26
39	Honduras	1946	1981	28
40	Hungary	1948	1990	43
41	Indonesia	1950	1999	50
42	Iran	1946	2010	65
43	Ivory Coast	1961	2010	50
44	Jordan	1947	2010	64
45	Kazakhstan	1992	2010	19
46	Kenya	1964	2002	39
47	Kuwait	1962	2010	49
48	Kyrgyzstan	1992	2010	19
49	Lesotho	1971	1993	23
50	Liberia	1946	2003	51
51	Libya	1952	2010	59
52	Madagascar	1961	2010	34
53	Malawi	1965	1994	30
54	Malaysia	1958	2010	53
55	Mali	1961	1991	31
56	Mauritania	1961	2010	49
57	Mexico	1946	2000	55
58	Mongolia	1946	1993	48
59	Morocco	1957	2010	54
60	Mozambique	1976	2010	35
61	Namibia	1991	2010	20
62	Nepal	1946	2006	50
63	Niger	1961	1999	34
64	Nigeria	1967	1999	29
65	North Korea	1949	2010	62

Table B.2 -- continued from previous page

	Country	First Year	Last Year	No. Years
66	Oman	1960	2010	51
67	Pakistan	1948	2008	46
68	Panama	1950	1989	25
69	Paraguay	1946	1993	48
70	Peru	1949	2000	29
71	Philippines	1973	1986	14
72	Poland	1946	1989	44
73	Portugal	1946	1974	29
74	Republic of the Congo	1961	2010	44
75	Romania	1946	1989	44
76	Russia	1946	2010	63
77	Rwanda	1963	2010	48
78	Saudi Arabia	1946	2010	65
79	Senegal	1961	2000	40
80	Serbia	1946	2000	54
81	Sierra Leone	1968	1998	30
82	Singapore	1966	2010	45
83	Somalia	1970	1991	22
84	South Africa	1946	1994	49
85	South Korea	1949	1987	38
86	Spain	1946	1976	31
87	Sri Lanka	1979	1994	16
88	Sudan	1959	2010	44
89	Swaziland	1969	2010	42
90	Syria	1947	2010	55
91	Taiwan	1950	2000	51
92	Tajikistan	1992	2010	19
93	Tanzania	1965	2010	46
94	Thailand	1946	2007	42
95	The Gambia	1966	2010	45
96	Togo	1961	2010	50
97	Tunisia	1957	2010	54
98	Turkey	1946	1983	12
99	Turkmenistan	1992	2010	19
100	Uganda	1967	2010	42
101	UAE	1972	2010	39

Table B.2 -- continued from previous page

	Country	First Year	Last Year	No. Years
102	Uruguay	1974	1984	11
103	Uzbekistan	1992	2010	19
104	Venezuela	1949	2010	15
105	Vietnam	1955	2010	56
106	Yemen	1946	1989	44
107	Zambia	1968	2010	38
108	Zimbabwe	1981	2010	30

Table B.3: Sample of Countries and Years

	Country	First Year	Last Year	No. Years
1	Afghanistan	1964	2001	34
2	Albania	1964	1991	25
3	Algeria	1970	2006	37
4	Angola	1976	2006	31
5	Armenia	1995	2006	12
6	Azerbaijan	1992	2006	14
7	Bangladesh	1972	1990	19
8	Belarus	1992	2006	14
9	Benin	1964	1990	25
10	Bolivia	1964	1982	18
11	Botswana	1967	2006	40
12	Brazil	1965	1985	21
13	Bulgaria	1964	1990	24
14	Burkina Faso	1964	2006	43
15	Burma/Myanmar	1964	2006	43
16	Burundi	1964	2003	37
17	Cambodia	1964	2006	43
18	Cameroon	1964	2006	43
19	Central African Republic	1964	2006	33
20	Chad	1964	2006	40
21	Chile	1974	1989	16
22	China	1978	1990	2
23	Cuba	1964	2006	30
24	Czech Republic	1964	1989	23
25	DR of the Congo	1964	2006	43

Table B.3 -- continued from previous page

	Country	First Year	Last Year	No. Years
26	Dominican Republic	1964	1978	14
27	Ecuador	1964	1979	12
28	Egypt	1964	2006	43
29	El Salvador	1964	1994	31
30	Ethiopia	1964	2006	43
31	Gabon	1964	2006	43
32	Georgia	1992	2003	12
33	Ghana	1964	2000	32
34	Guatemala	1964	1995	32
35	Guinea	1964	2006	43
36	Guinea-Bissau	1975	2003	26
37	Honduras	1964	1981	17
38	Hungary	1964	1990	24
39	Indonesia	1964	1999	36
40	Iran	1964	2006	43
41	Ivory Coast	1964	2006	43
42	Jordan	1964	2006	43
43	Kazakhstan	1992	2006	15
44	Kenya	1964	2002	39
45	Kuwait	1974	2006	30
46	Kyrgyzstan	1992	2006	15
47	Lesotho	1971	1993	23
48	Liberia	1964	2003	33
49	Libya	1964	2006	43
50	Madagascar	1964	1993	30
51	Malawi	1965	1994	30
52	Malaysia	1964	2006	38
53	Mali	1964	1991	28
54	Mauritania	1964	2006	43
55	Mexico	1964	2000	37
56	Mongolia	1964	1993	30
57	Morocco	1964	2006	43
58	Mozambique	1976	2006	31
59	Namibia	1991	2006	16
60	Nepal	1964	2006	32
61	Niger	1964	1999	31

Table B.3 -- continued from previous page

	Country	First Year	Last Year	No. Years
62	Nigeria	1967	1999	29
63	North Korea	1964	2006	43
64	Oman	1971	2006	36
65	Pakistan	1964	2006	28
66	Panama	1969	1989	21
67	Paraguay	1964	1993	30
68	Peru	1969	2000	20
69	Philippines	1973	1986	14
70	Poland	1964	1989	23
71	Portugal	1964	1974	11
72	Republic of the Congo	1964	2006	37
73	Romania	1964	1989	26
74	Russia	1964	2006	41
75	Rwanda	1964	2006	43
76	Saudi Arabia	1964	2006	43
77	Senegal	1964	2000	37
78	Serbia	1964	2000	35
79	Sierra Leone	1968	1998	30
80	Singapore	1966	2006	41
81	South Africa	1964	1994	31
82	South Korea	1964	1987	24
83	Spain	1964	1976	13
84	Sri Lanka	1979	1994	16
85	Swaziland	1969	2006	38
86	Syria	1964	2006	43
87	Tajikistan	1992	2006	15
88	Tanzania	1965	2006	42
89	Thailand	1964	1992	23
90	The Gambia	1966	2006	41
91	Togo	1964	2006	43
92	Tunisia	1964	2006	43
93	Turkey	1981	1983	3
94	Turkmenistan	1992	2006	15
95	Uganda	1967	2006	38
96	United Arab Emirates	1993	2006	14
97	Uruguay	1974	1984	11

Table B.3 -- continued from previous page

	Country	First Year	Last Year	No. Years
98	Uzbekistan	1992	2006	15
99	Venezuela	2006	2006	1
100	Zambia	1968	2006	34
101	Zimbabwe	1981	2006	26

B.1.3 Illustrative figures

Before presenting the regression results and marginal effects, I provide a series of illustrative figures that illuminate the relationship between regime types, party institutionalization and women's political inclusion.

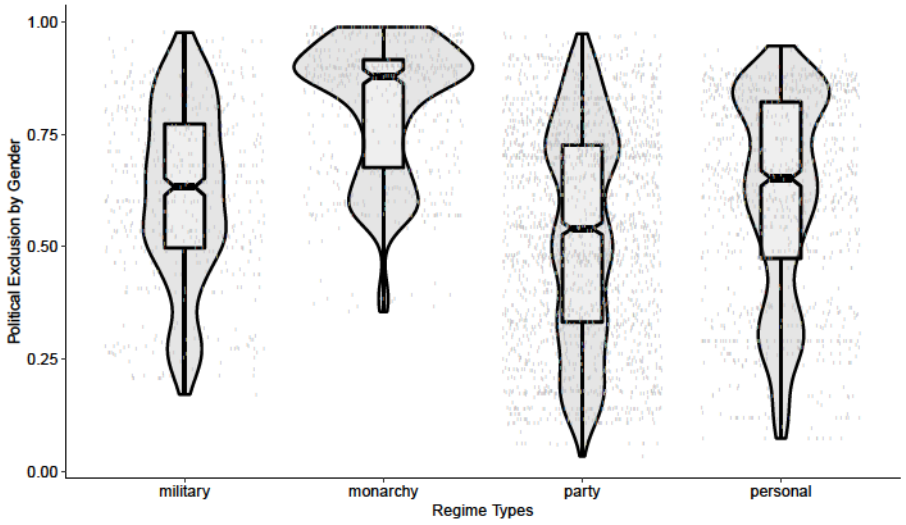


Figure B.1: Women's Political Exclusion by Regime Type, 1946 - 2010

This violin plot shows a boxplot, rotated kernel density plots on both sides, as well as raw data points. Data on women's political exclusion comes from Coppedge et al., 2019b. Data on regime types comes from Geddes et al., 2014.

Figure B.3 shows the distribution of party institutionalization by authoritarian regime type and clearly indicates that party institutionalization is not endogenous to Geddes et al.'s regime types.

B.1.4 Data description

Table B.4 shows the summary statistics for the data employed in the main Models 1 and 2 in Table 3.5. All continuous variables are mean centered at the group means, or respectively at the grand mean. Missing observations at one variable leads to dropping of

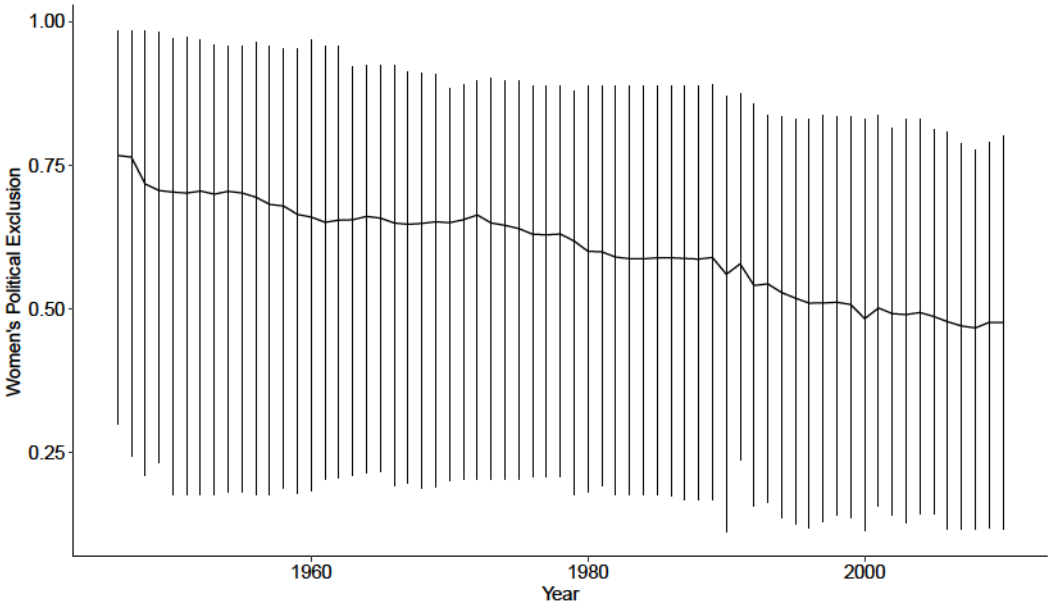


Figure B.2: Data on women's political exclusion comes from Coppedge et al., 2019a. The horizontal line indicates the mean of women's political exclusion by year, the error bars the 95% confidence intervals.

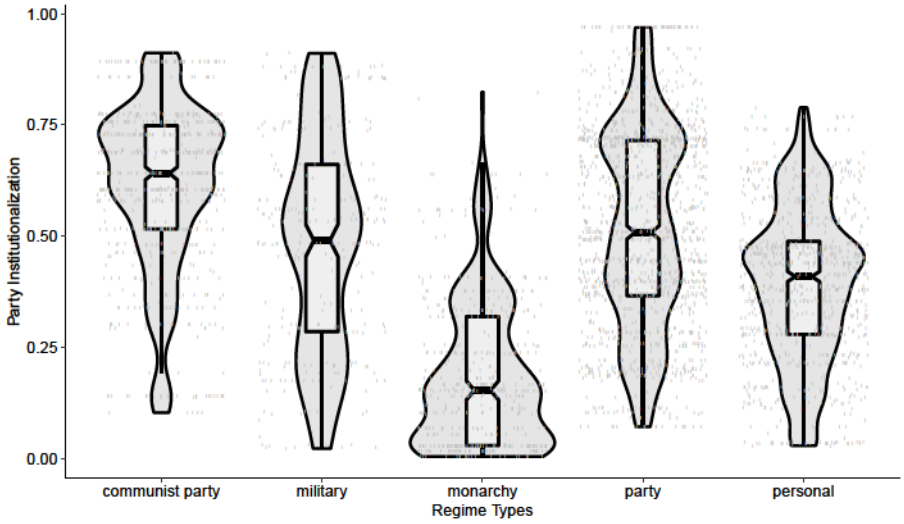


Figure B.3: Party Institutionalization by Regime Type, 1945 - 2018

This violin plot shows a boxplot, rotated kernel density plots on both sides as well as raw data points. Data on party institutionalization come from Coppedge et al., 2019b. Data on regime types come from Geddes et al., 2014.

that observation. Table B.5 shows summary statistics for the data employed in the main Models 2 and 4 in Table 3.5. Table B.6 shows summary statistics for the data employed in the main models in Table 3.6.

Table B.4: Summary Statistics

Statistic	N	Mean	Median	Min	Max	St. Dev.
Women's Exclusion	4,185	0.599	0.633	0.033	0.989	0.237
Statistic	N of 1					
Communist Party	645					
Military	527					
Monarchy	568					
Party	1440					
Personal	1005					
Communist Party	457					
Communist Party with ME	188					
Military	152					
Military with ME	375					
Monarchy	311					
Monarchy with ME	257					
Party	380					
Party with ME	1060					
Personal	306					
Personal with ME	699					

Table B.5: Summary Statistics

Statistic	N	Mean	Median	Min	Max	St. Dev.
Women's Exclusion	2,951	0.581	0.609	0.033	0.975	0.226
GDP pc (within)	2,951	0.000	0.007	−1.454	1.512	0.288
GDP pc (between)	2,951	8.010	7.880	6.286	11.433	0.929
Population log (within)	2,951	−0.000	0.003	−0.420	0.321	0.122
Population log (between)	2,951	6.943	6.936	5.874	9.018	0.549
Excluded Population (within)	2,951	0.000	0.000	−0.671	0.497	0.122
Excluded Population (between)	2,951	0.215	0.149	0.000	0.915	0.216
Resource Income (within)	2,951	0.000	−0.0003	−17.392	45.378	1.880
Resource Income (between)	2,951	0.742	0.077	0.000	18.138	2.333
Statistic	N of 1					
Communist Party	437					
Military	382					
Monarchy	332					
Party	1084					
Personal	716					
Communist Party	274					
Communist Party with ME	108					
Military	121					
Military with ME	316					
Monarchy	152					
Monarchy with ME	180					
Party	243					
Party with ME	841					
Personal	197					
Personal with ME	519					

Table B.6: Summary Statistics

Statistic	N	Mean	Median	Min	Max	St. Dev.
Women's Exclusion	2,472	0.567	0.588	0.033	0.975	0.227
GDP pc (within)	2,472	−0.000	0.009	−1.454	1.512	0.288
GDP pc (between)	2,472	8.057	7.885	6.286	11.433	0.933
Population log (within)	2,472	0.000	0.005	−0.423	0.321	0.122
Population log (between)	2,472	6.957	6.947	5.878	9.018	0.550
Excluded Population (within)	2,472	0.000	0.000	−0.720	0.453	0.112
Excluded Population (between)	2,472	0.203	0.126	0.000	0.915	0.216
Resource Income (within)	2,472	−0.000	−0.0003	−9.164	32.192	1.591
Resource Income (between)	2,472	0.704	0.096	0.000	16.010	2.055
Party Institutionalization (within)	2,472	−0.000	0.000	−0.344	0.532	0.079
Party Institutionalization (between)	2,472	0.458	0.420	0.004	0.960	0.214
Statistic	N of 1					
Communist Party	374					
Military	319					
Monarchy	274					
Party	1028					
Personal	577					
Communist Party	274					
Communist Party with ME	100					
Military	43					
Military with ME	176					
Monarchy	132					
Monarchy with ME	142					
Party	237					
Party with ME	791					
Personal	145					
Personal with ME	432					

Table B.7: Bayesian factor analysis for the Exclusion by Gender Index components (Input Side)

	Loadings (Λ)	**CIs***	**Uniqueness (Ψ)**
power distributed by gender	-0.881	[-0.994; -0.68]	0.214
equality in respect for civil liberties by gender	-0.7	[-0.891; -0.602]	0.502

Note: Entries are factor loadings, 95% confidence intervals and uniqueness from a normal theory Bayesian factor analysis model, run through the MCMCfactanal() command in the MCMC package for R (Martin et al., 2011); n = 4323 country-years; CIs: Confidence Intervals.

Table B.8: Bayesian factor analysis for the Exclusion by Gender Index components (Output Side)

	Loadings (Λ)	**CIs***	**Uniqueness (Ψ)**
access to public services by gender	-0.753	[-0.78; -0.727]	0.434
access to state jobs by gender	-0.892	[-0.917; -0.867]	0.206
access to state business opportunities by gender	-0.909	[-0.934; -0.884]	0.175

Note: Entries are factor loadings, 95% confidence intervals and uniqueness from a normal theory Bayesian factor analysis model, run through the MCMCfactanal() command in the MCMC package for R (Martin et al., 2011); n = 4185 country-years; CIs: Confidence Intervals.

B.2 Main models

One issue - potential collinearity between the variables - warrants caution when interpreting the results. However, controlling for the variance inflation factor (VIF) shows that it is not above 10 for all models, which is the threshold to detect multicollinearity. This indicates that the results are robust against potential collinearity between the variables.

B.2.1 Women's political exclusion (input and output side)

Table B.9 reports the results for Models 1-4. Model 1 estimates the relationship between women's political exclusion and regime types. Model 2 estimates the relationship between women's political exclusion using the modified Geddes et al. regime types (2014) and testing for the effect of multiparty competition within regimes. Model 3 adds control variables to Model 1, while in Model 4 controls are added to Model 2.

Model 1 shows the estimates of the relationship between women's political exclusion and regime types, without controlling for economic, demographic, and temporal factors. Drawing on 4,185 observations from 108 autocratic countries, it suggests a significant and negative effect for communist regimes, indicating that communist regimes are associated with a lower political exclusion of women (H1) compared to military regimes (reference category). Furthermore, personalist regimes and party regimes have negative effects on women's political exclusion, even if these findings were not expected for personalist regimes compared to military regimes (H1). Monarchies perform better compared to military regimes regarding the political inclusion of women. Figure B.4 reports the marginal effects on women's political exclusion of the regime types for Model 1 and Model 3. The results indicate that communist regimes as well as party regimes and personalist regimes have a negative effect on the political exclusion of women compared to military regimes whether I control for socioeconomic controls or not.

	Model 1	Model 2	Model 3	Model 4
(Intercept)	9.09***	8.97***	7.39***	7.21***
	(0.15)	(0.16)	(0.60)	(0.61)

Year	−0.00***	−0.00***	−0.00***	−0.00***
	(0.00)	(0.00)	(0.00)	(0.00)
Reference Type: Military Regime				
Communist Party Regime	−0.06***		−0.02*	
	(0.01)		(0.01)	
Monarchy	−0.01		−0.01	
	(0.01)		(0.01)	
Party Regime	−0.03***		−0.03***	
	(0.01)		(0.01)	
Personalist	−0.03***		−0.03***	
	(0.01)		(0.01)	
Reference Type: Military Regime				
Communist Regime		−0.06***		−0.03**
		(0.01)		(0.01)
Communist Regime with MC		−0.06***		−0.03*
		(0.01)		(0.01)
Military Regime with MC		−0.00		−0.02**
		(0.01)		(0.01)
Monarchy		−0.01		0.02
		(0.01)		(0.01)
Monarchy with MC		−0.01		−0.04**
		(0.01)		(0.01)
Party Regime		−0.03***		−0.05***
		(0.01)		(0.01)
Party Regime with MC		−0.04***		−0.04***
		(0.01)		(0.01)
Personalist Regime		−0.02†		−0.03***
		(0.01)		(0.01)
Personalist Regime with MC		−0.03***		−0.05***
		(0.01)		(0.01)
GDP pc log			0.01	0.00
			(0.00)	(0.00)
GDP pc log (b)			−0.11***	−0.10***
			(0.03)	(0.03)
Population log			−0.13***	−0.13***
			(0.02)	(0.02)
Population log (b)			−0.02	−0.02
			(0.04)	(0.04)
Ethnic Excluded Population			−0.01	−0.01
			(0.01)	(0.01)
Ethnic Excluded Population (b)			0.32***	0.32**
			(0.10)	(0.10)
Resource Income			−0.00	−0.00
			(0.00)	(0.00)
Resource Income (b)			0.05***	0.05***
			(0.01)	(0.01)
Random Effects				
σ^2	0.00	0.00	0.00	0.00
τ_{00}	0.01	0.01	0.01	0.01
τ_{11}	-0.00	-0.00	-0.00	0.00
ρ_{01}	-0.22	-0.38	-0.44	0.29
AIC	-10637.94	-10599.55	-8101.50	-8106.55
BIC	-10574.54	-10504.46	-7993.69	-7968.78
Log Likelihood	5328.97	5314.78	4068.75	4076.27
Number Observations	4185	4185	2951	2951
Number of Countries	108	108	101	101

$^{***}p < 0.001$, $^{**}p < 0.01$, $^{*}p < 0.05$, $^{\dagger}p < 0.1$

Between country effects are labelled by (b), indicating the between part, continuous variables without (b) are within country effects

Table B.9: Linear Within-Between Model Predicting Women's Political Exclusion (Input and Output Side)

Model 2 indicates that multiparty electoral competition in authoritarian regimes matters for explaining political gender exclusion. Figure B.5 shows the marginal effects on women's political exclusion of the modified regime types. It indicates that multiparty electoral competition still makes a difference within the regime categories. Thus, Figure B.5 reports that military regimes with multiparty elections have more political inclusion of women compared to those without multiparty elections. In addition, monarchies with multiparty competition are more politically inclusive towards women compared to their counterparts without electoral competition. Model 2 and 4 as well as Figure B.5 clearly indicate that Hypothesis 2 holds for my sample of authoritarian regimes when controlling for socioeconomic factors.

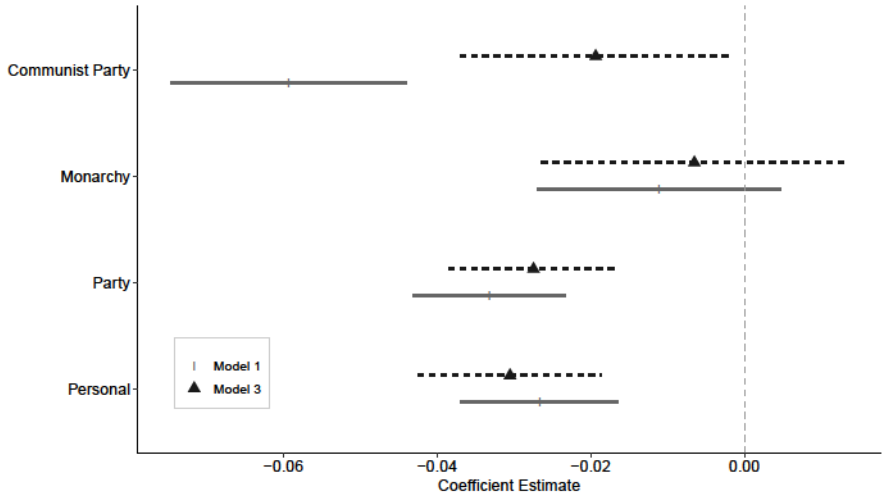


Figure B.4: Marginal Effects on Women's Political Exclusion of Regime Types

This figure reports the marginal effects on women's political exclusion of the regime types. The figure is based on Table B.9, Model 1 and 3.

While Model 1 and 2 only include a time trend and the regime types, Model 3 and 4 add socioeconomic and population controls. While Model 3 and 4 suggest that high levels of per capita GDP in the between-country part systematically increase women's political inclusion, they also suggest that high levels of ethnic excluded population and resource

income in the between country part are positively related to women's political inclusion. In addition, the results in Table B.9 indicate that in the within part only a few of the controls are significantly associated with women's political exclusion.

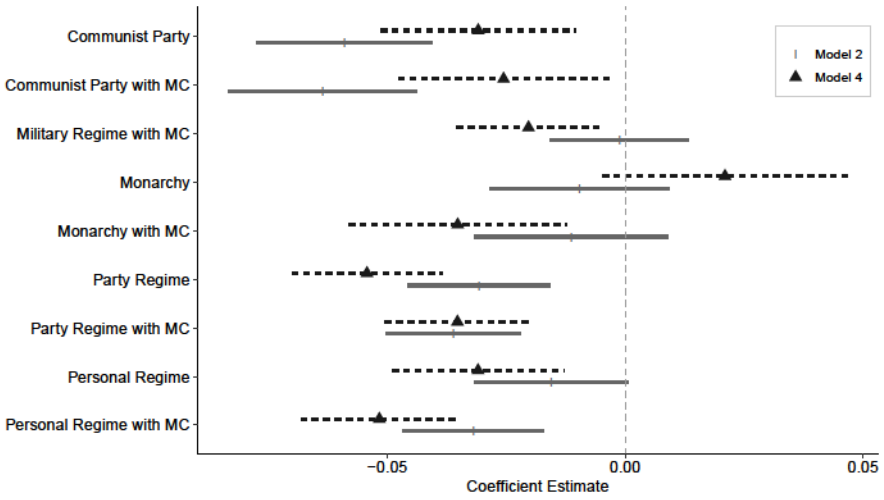


Figure B.5: Marginal Effects on Women's Political Exclusion of Modified Regime Types

This figure reports the marginal effects on women's political exclusion of the modified regime types. The figure is based on Table B.9, Model 2 and 4.

I now turn to the effects of party institutionalization. Models 5-8 in Table B.10 display the models including the between and within effects of party institutionalization on women's political exclusion. As Figure B.6 clearly indicates that one-unit increase in party institutionalization between countries increases the women's political inclusion by 0.52 (Model 5). The result holds when controlling for income, population, resource income, and excluded population in Model 7, and party institutionalization only drops from 0.52 to 0.35 and remains highly significant. Within countries, party institutionalization increases women's political inclusion by 0.13 and remains highly significant when including controls in Model 7. While the degree of party institutionalization is the main driver of women's political inclusion, the regime type effects become substantially irrelevant and are statistically insignificant, as indicated by my theory and depicted in Figure B.6.

Figure B.7 displays the results for Model 6 and 8 when controlling for the regime types with and without multiparty competition and the effect of party institutionalization. As the

marginal effect plot clearly indicates, between countries party institutionalization increases women's political inclusion, while whether the specific regime types have multiparty electoral competition or not does not affect the level of women's political inclusion much. Only for monarchies I can depict an effect of multiparty electoral competition. Monarchies without that kind of competition significantly decreases the inclusion of women compared to monarchies with multiparty competition.

	Model 5	Model 6	Model 7	Model 8
(Intercept)	7.98***	8.08***	6.27***	6.06***
	(0.24)	(0.24)	(0.64)	(0.63)
Year	−0.00***	−0.00***	−0.00***	−0.00***
	(0.00)	(0.00)	(0.00)	(0.00)
Reference Type: Military Regime				
Communist Party Regime	0.01		0.03**	
	(0.01)		(0.01)	
Monarchy	0.02	0.04**	0.01	0.04**
	(0.01)	(0.02)	(0.01)	(0.02)
Party Regime	0.00	−0.01	0.01	−0.01
	(0.01)	(0.01)	(0.01)	(0.01)
Personal	−0.01		−0.00	
	(0.01)		(0.01)	
Party Institutionalization	−0.13***	−0.13***	−0.14*	−0.12***
	(0.03)	(0.03)	(0.07)	(0.03)
Party Institutionalization (b)	−0.52***	−0.51***	−0.35***	−0.34**
	(0.09)	(0.09)	(0.11)	(0.10)
Reference Type: Military Regime				
Communist Regime		0.02		0.03†
		(0.01)		(0.01)
Communist Regime with MC		0.03*		0.04*
		(0.01)		(0.01)
Military Regime with MC		0.01		0.01
		(0.01)		(0.01)
Monarchy with MC		0.02		0.02
		(0.01)		(0.01)
Party Regime with MC		0.02		0.02
		(0.01)		(0.01)
Personal Regime		0.01		0.01
		(0.01)		(0.01)
Personal Regime with MC		−0.01		−0.01
		(0.01)		(0.01)
GDP pc log			0.00	0.00
			(0.00)	(0.00)
GDP pc log (b)			−0.09**	−0.08**
			(0.03)	(0.03)
Population log			−0.09***	−0.12***
			(0.02)	(0.02)
Population log (b)			−0.00	0.01
			(0.04)	(0.04)
Ethnic Excluded Population			−0.03**	−0.03**
			(0.01)	(0.01)
Ethnic Excluded Population (b)			0.22*	0.25**
			(0.10)	(0.09)
Resource Income			−0.00	−0.00†
			(0.00)	(0.00)
Resource Income (b)			0.03*	0.03*
			(0.01)	(0.01)

	Model 5	Model 6	Model 7	Model 8
Random Effects				
σ^2	0.00	0.00	0.00	0.00
τ_{00}	0.00	0.00	0.00	0.00
	0.00	0.00	0.00	0.00
τ_{11}	0.00	0.00	0.00	0.00
	0.03	0.03	0.37	0.03
ρ_{01}	-1.0	-0.52	-1.0	0.75
	-0.77	0.25	-1.00	0.24
AIC	-7511.17	-7503.76	-7751.83	-7486.84
BIC	-7423.98	-7387.51	-7618.13	-7324.08
Log Likelihood	3770.59	3771.88	3898.91	3771.42
Number of Observations	2472	2472	2472	2472
Number of Countries	100	100	100	100

$^{***}p < 0.001$, $^{**}p < 0.01$, $^{*}p < 0.05$, $^{\dagger}p < 0.1$
Between country effects are labelled by (b), indicating the between part, continuous variables without (b) are within country effects

Table B.10: Linear Within-Between Model Predicting Women's Political Exclusion (Input and Output Side)

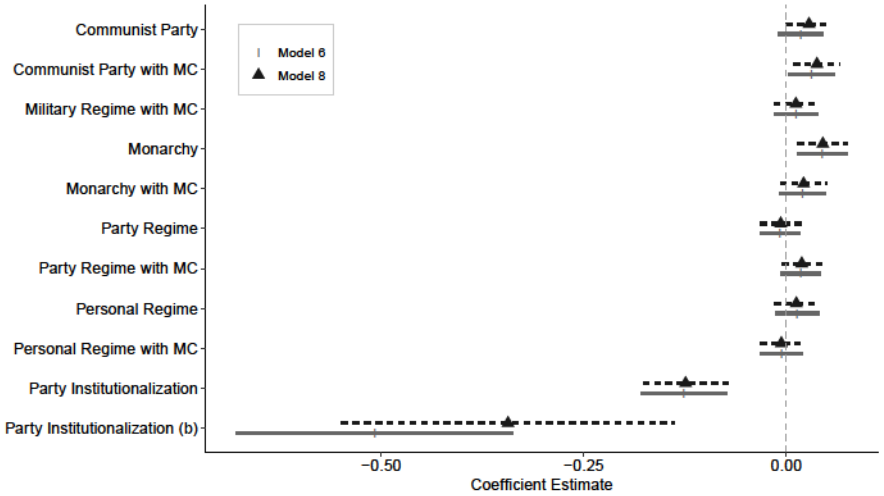


Figure B.6: Marginal Effects on Women's Political Exclusion of Party Institutionalization

This figure reports the marginal effects on women's political exclusion of party institutionalization and regime types. The figure is based on Table B.10, Model 5 and 7.

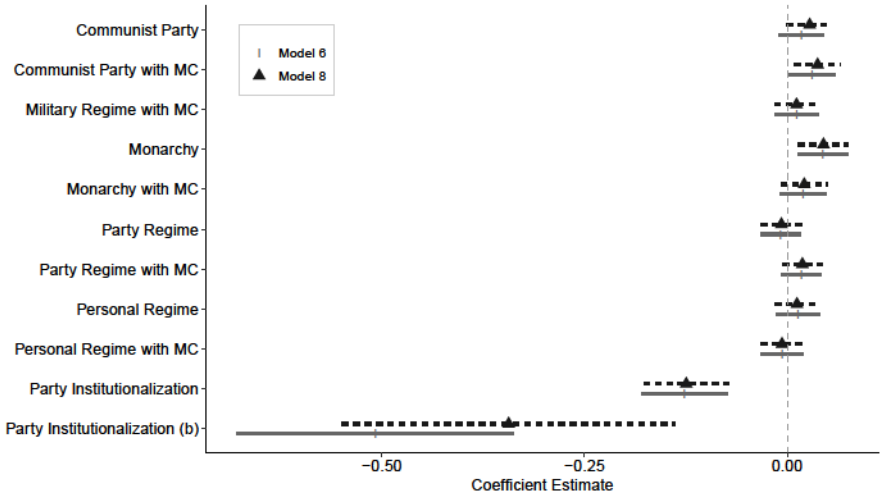


Figure B.7: Marginal Effects on Women's Political Exclusion of Party Institutionalization

This figure reports the marginal effects on women's political exclusion of party institutionalization and modified regime types. The figure is based on Table B.10, Model 6 and 8.

B.2.2 Output side of women's political exclusion

Table B.11 reports the results for Models 1-4 for the output side of women's political exclusion. Model Model 1 shows the estimates of the relationship between women's political exclusion and regime types, without controlling for economic, demographic, and temporal factors. Drawing on 4,157 observations from 106 autocratic countries, it suggests a significant and negative effect for communist regimes, indicating that communist regimes are associated with a lower political exclusion of women (H1) compared to military regimes (reference category). Furthermore, party regimes have negative effects on women's political exclusion. Monarchies perform much worse compared to military regimes regarding the political inclusion of women in the output dimension. Figure B.8 reports the marginal effects on women's political exclusion of the regime types for Model 1 and Model 3. The results indicate that party regimes have a positive effect on the political inclusion of women compared to military regimes whether I control for socioeconomic controls or not.

	Model 1	Model 2	Model 3	Model 4
(Intercept)	6.30***	6.35***	3.84***	3.84***
	(0.12)	(0.13)	(0.47)	(0.47)
Year	−0.00***	−0.00***	−0.00***	−0.00***
	(0.00)	(0.00)	(0.00)	(0.00)
Communist Party Regime	−0.04***		−0.00	
	(0.01)		(0.01)	
Monarchy	0.05***	0.06***	0.04***	0.06***
	(0.01)	(0.01)	(0.01)	(0.01)
Party Regime	−0.02***	−0.02**	−0.01***	−0.03***
	(0.00)	(0.01)	(0.00)	(0.01)
Personal	−0.01†		−0.01	
	(0.00)		(0.00)	
Communist Regime		−0.03***		0.01
		(0.01)		(0.01)
Communist Regime with MC		−0.04***		−0.00
		(0.01)		(0.01)
Military Regime with MC		0.01*		0.00
		(0.01)		(0.01)
Monarchy with MC		0.05***		0.04***
		(0.01)		(0.01)
Party Regime with MC		−0.01*		−0.01
		(0.01)		(0.01)
Personal Regime		0.00		0.00
		(0.01)		(0.01)
Personal Regime with MC		0.00		−0.01
		(0.01)		(0.01)
GDP pc log			−0.01***	−0.01***
			(0.00)	(0.00)
GDP pc log (b)			−0.08***	−0.08***
			(0.02)	(0.02)
Population log			−0.11***	−0.11***
			(0.02)	(0.02)
Population log (b)			−0.02	−0.02
			(0.03)	(0.03)
Ethnic Excluded Population			0.00	−0.00
			(0.01)	(0.01)
Ethnic Excluded Population (b)			0.24**	0.24**
			(0.08)	(0.08)
Resource Income			0.00***	0.00***
			(0.00)	(0.00)
Resource Income (b)			0.03***	0.03***
			(0.01)	(0.01)
Random Effects				
σ^2	0.00	0.00	0.00	0.00
τ_{00}	0.01	0.03	0.00	0.00
τ_{11}	0.00	0.00	0.00	0.00
ρ_{01}	0.00	-0.00	-0.00	-0.00
AIC	-12344.84	-12328.59	-9567.31	-9560.28
BIC	-12281.51	-12233.61	-9459.63	-9422.69
Log Likelihood	6182.42	6179.30	4801.66	4803.14
Num. obs.	4157	4157	2928	2928
Num. countries	106	106	99	99

$^{***}p < 0.001$, $^{**}p < 0.01$, $^{*}p < 0.05$, $^{\dagger}p < 0.1$

Table B.11: Linear Within-Between Model Predicting Women's Political Exclusion (Output Dimension)

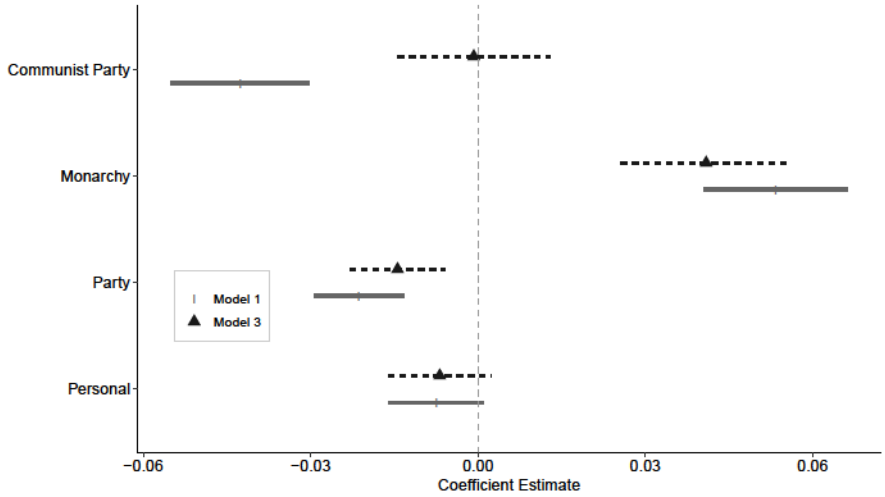


Figure B.8: Marginal Effects on Women's Political Exclusion of Party Institutionalization

This figure reports the marginal effects on women's political exclusion of party institutionalization and modified regime types. The figure is based on Table B.11, Model 1 and 3.

Model 2 indicates that multiparty electoral competition in authoritarian regimes matters for explaining political gender exclusion. Figure B.9 shows the marginal effects on women's political exclusion of the modified regime types. It indicates that multiparty electoral competition still makes little difference within the regime categories. Thus, Figure B.9 reports that multiparty competition has only a marginal effect on within regime types on the output side of women's political inclusion. Thus, Model 2 and 4 as well as Figure B.9 clearly indicate that Hypothesis 2 do not hold for my sample of authoritarian regimes when controlling for socioeconomic factors.

While Model 1 and 2 only include a time trend and the regime types, Model 3 and 4 add socioeconomic and population controls. While Model 3 and 4 suggest that high levels of per capita GDP in the between-country part systematically increase women's political inclusion, they also suggest that high levels of ethnic excluded population and resource income in the between country part are negatively related to women's political inclusion. In addition, the results in Table B.11 indicate that in the within part only a few of the controls are significantly associated with women's political exclusion. This finding indicates that modelling between- and within-effects separately reveals that within countries there

is not a lot of variation to explain.

Models 5-8 in Table B.12 display the models including the between and within effects of party institutionalization on women's political exclusion. As Figure B.10 clearly indicates that one-unit increase in party institutionalization between countries increases the women's political inclusion by 0.38 (Model 5). The result holds when controlling for income, population, resource income, and excluded population in Model 7, and party institutionalization only drops from 0.38 to 0.24 and remains highly significant. Within countries, party institutionalization increases women's political inclusion by 0.07 and remains highly significant when including controls in Model 7. While the degree of party institutionalization is the main driver of women's political inclusion, the regime type effects become substantially irrelevant, as indicated by my theory and depicted in Figure B.10.

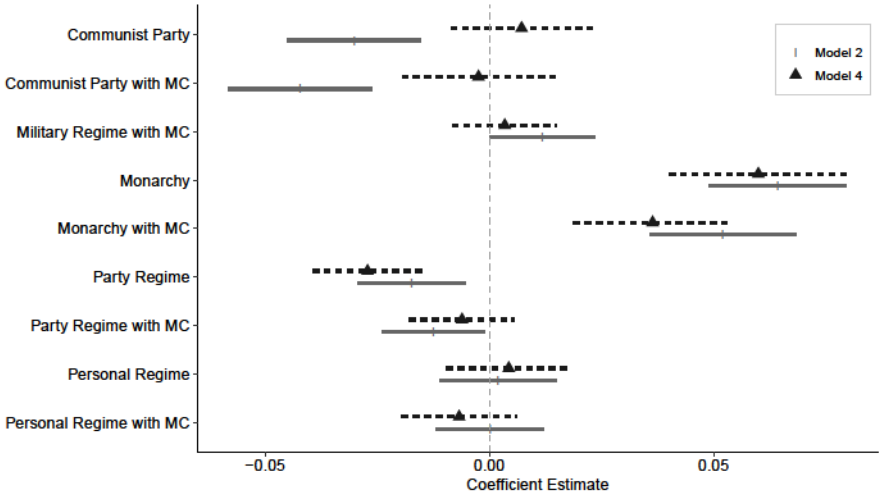


Figure B.9: Marginal Effects on Women's Political Exclusion of Party Institutionalization

This figure reports the marginal effects on women's political exclusion of party institutionalization and modified regime types. The figure is based on Table B.11, Model 2 and 4.

Figure B.11 displays the results for Model 6 and 8 when controlling for the regime types with and without multiparty competition and the effect of party institutionalization. As the figure clearly indicates, between countries party institutionalization increases women's political inclusion, while whether the specific regime types have multiparty electoral competition or not does not affect the level of women's political inclusion much. In

summary, increased party institutionalization within a country over time leads to improved gender equality in this country. Moreover, among different authoritarian countries those regimes with higher degrees of party institutionalization outperform other authoritarian countries with less institutionalized parties.

	Model 5	Model 6	Model 7	Model 8
(Intercept)	5.42***	5.54***	3.03***	3.05***
	(0.18)	(0.18)	(0.49)	(0.49)
Year	−0.00***	−0.00***	−0.00***	−0.00***
	(0.00)	(0.00)	(0.00)	(0.00)
Communist Party Regime	0.01†		0.03***	
	(0.01)		(0.01)	
Monarchy	0.05***	0.07***	0.05***	0.08***
	(0.01)	(0.01)	(0.01)	(0.01)
Party Regime	0.00	0.01	0.00	0.01
	(0.01)	(0.01)	(0.01)	(0.01)
Personal	0.01		0.01	
	(0.01)		(0.01)	
Party Institutionalization	−0.07***	−0.07***	−0.07***	−0.06**
	(0.02)	(0.02)	(0.02)	(0.02)
Party Institutionalization (b)	−0.37***	−0.37***	−0.24**	−0.23**
	(0.07)	(0.07)	(0.08)	(0.08)
Communist Regime		0.05***		0.06***
		(0.01)		(0.01)
Communist Regime with MC		0.04***		0.05***
		(0.01)		(0.01)
Military Regime with MC		0.04***		0.04***
		(0.01)		(0.01)
Monarchy with MC		0.08***		0.08***
		(0.01)		(0.01)
Party Regime with MC		0.04***		0.04***
		(0.01)		(0.01)
Personal Regime		0.05***		0.05***
		(0.01)		(0.01)
Personal Regime with MC		0.04***		0.04***
		(0.01)		(0.01)
GDP pc log			−0.01***	−0.01***
			(0.00)	(0.00)
GDP pc log (b)			−0.06*	−0.06*
			(0.02)	(0.02)
Population log			−0.11***	−0.12***
			(0.02)	(0.02)
Population log (b)			−0.00	−0.01
			(0.03)	(0.03)
Ethnic Excluded Population			−0.01*	−0.01†
			(0.01)	(0.01)
Ethnic Excluded Population (b)			0.20**	0.20**
			(0.08)	(0.08)
Resource Income			0.00**	0.00**
			(0.00)	(0.00)
Resource Income (b)			0.02†	0.02†
			(0.01)	(0.01)
Random Effects				
σ^2	0.00	0.00	0.00	0.00
τ_{00}	0.00	0.00	0.00	0.00
	0.00	0.00	0.00	0.00
τ_{11}	0.00	0.00	0.00	0.00

	Model 5	Model 6	Model 7	Model 8
ρ_{01}	0.01 0.00 -0.00	0.02 0.00 -0.00	0.01 0.00 -0.00	0.02 0.00 -0.00
AIC	-8707.91	-8746.27	-8702.15	-8768.11
BIC	-8620.84	-8630.18	-8568.64	-8605.58
Log Likelihood	4368.95	4393.14	4374.07	4412.05
Num. obs.	2452	2452	2452	2452
Num. countries	98	98	98	98

$^{***}p < 0.001$, $^{**}p < 0.01$, $^{*}p < 0.05$, $^{\dagger}p < 0.1$

Table B.12: Linear Within-Between Model Predicting Women's Political Exclusion (Output Dimension)

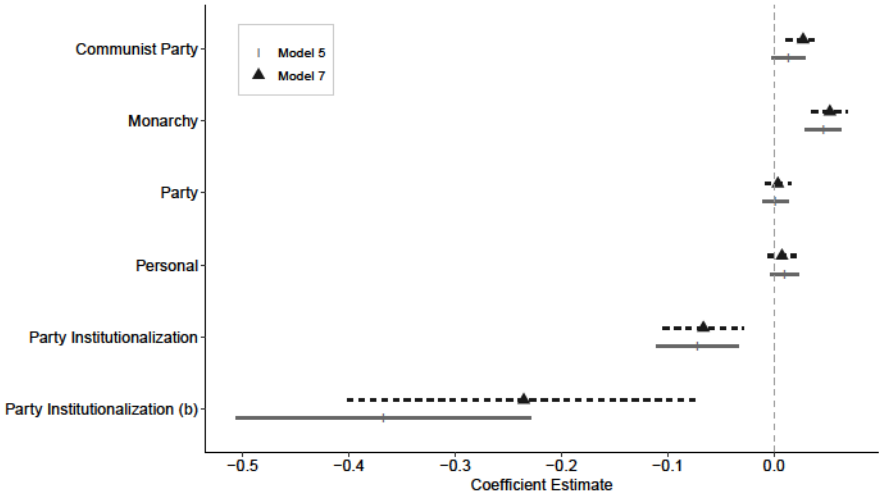


Figure B.10: Marginal Effects on Women's Political Exclusion of Party Institutionalization

This figure reports the marginal effects on women's political exclusion of party institutionalization and modified regime types. The figure is based on Table B.12, Model 5 and 7.

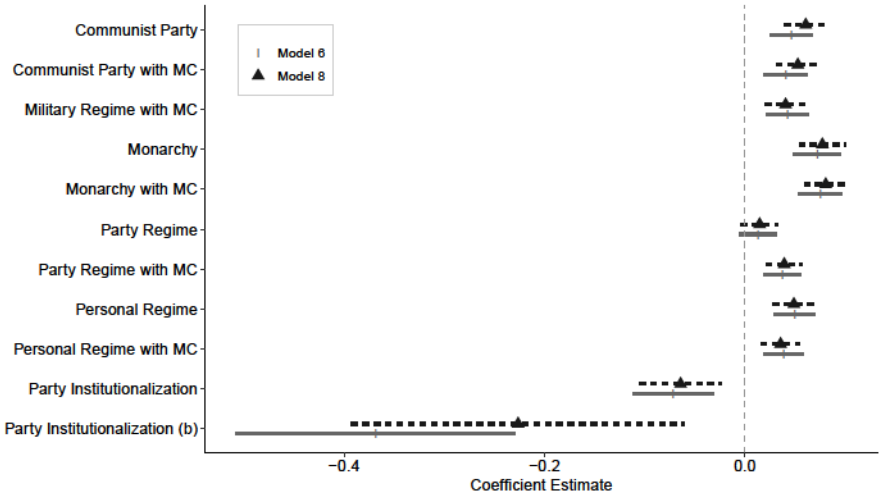


Figure B.11: Marginal Effects on Women's Political Exclusion of Party Institutionalization

This figure reports the marginal effects on women's political exclusion of party institutionalization and modified regime types. The figure is based on Table B.12, Model 6 and 8.

B.3 Additional robustness tests

Model 1-4, Table B.13 replicates Table 3.5 using the power distributed by gender indicator. I find negative effects of communist regimes, party regimes and personalist regimes on unequal power distribution of women and men. Model 5-8, Table B.14 shows the negative effect of party institutionalization on unequal political power distribution. In Tables B.15 and B.16 these results are mainly confirmed for the equality in respect for civil liberties by gender as the dependent variable. Table B.17 - B.22 use the remaining three sub-indicators of the women's political exclusion variable and verify the aforementioned results. Party institutionalization is the main driver of women's political inclusion in authoritarian regimes. Whenever testing for the effect of party institutionalization, the effect of the different regime types disappears almost entirely.

B.3.1 DV: power distributed by gender

	Model 1	Model 2	Model 3	Model 4
(Intercept)	−44.76***	−42.22***	−55.88***	−52.10***
	(0.90)	(0.94)	(3.58)	(3.57)
Year	0.02***	0.02***	0.03***	0.03***
	(0.00)	(0.00)	(0.00)	(0.00)
Communist Party Regime	0.22***		0.20***	
	(0.05)		(0.06)	
Monarchy	0.22***	0.23***	0.22***	0.18*
	(0.05)	(0.06)	(0.07)	(0.08)
Party Regime	0.06†	0.13**	0.08*	0.25***
	(0.03)	(0.04)	(0.04)	(0.05)
Personal	0.28***		0.25***	
	(0.03)		(0.04)	
Communist Regime		0.38***		0.49***
		(0.06)		(0.07)
Communist Regime with MC		0.43***		0.41***
		(0.06)		(0.07)
Military Regime with MC		0.27***		0.41***
		(0.04)		(0.05)
Monarchy with MC		0.54***		0.58***
		(0.06)		(0.07)
Party Regime with MC		0.29***		0.40***
		(0.04)		(0.05)
Personal Regime		0.43***		0.47***
		(0.05)		(0.06)
Personal Regime with MC		0.50***		0.60***
		(0.04)		(0.05)
GDP pc log			−0.03	0.02
			(0.02)	(0.02)
GDP pc log (b)			−0.02	−0.01
			(0.12)	(0.13)

	Model 1	Model 2	Model 3	Model 4
Population log			−0.21	−0.23†
			(0.14)	(0.13)
Population log (b)			0.14	0.12
			(0.16)	(0.16)
Ethnic Excluded Population			−0.17**	−0.17**
			(0.05)	(0.05)
Ethnic Excluded Population (b)			−1.12**	−1.16**
			(0.44)	(0.44)
Resource Income			0.01†	0.00
			(0.00)	(0.00)
Resource Income (b)			−0.17***	−0.16***
			(0.05)	(0.05)
Random Effects				
σ^2	0.14	0.14	0.12	0.12
τ_{00}	0.37	0.36	0.43	0.38
τ_{11}	0.00	0.00	0.00	0.00
ρ_{01}	-0.00	-0.00	0.00	0.00
AIC	4274.05	4201.28	2782.48	2697.70
BIC	4337.45	4296.37	2890.30	2835.47
Log Likelihood	-2127.03	-2085.64	-1373.24	-1325.85
Num. of observations	4185	4185	2951	2951
Num. of countries	108	108	101	101

$^{***}p < 0.001$, $^{**}p < 0.01$, $^{*}p < 0.05$, $^{\dagger}p < 0.1$

Table B.13: Linear Within-Between Model Predicting Power distributed by Gender

	Model 5	Model 6	Model 7	Model 8
(Intercept)	−36.62***	−35.83***	−38.10***	−37.37***
	(1.39)	(1.41)	(3.51)	(3.52)
Year	0.02***	0.02***	0.02***	0.02***
	(0.00)	(0.00)	(0.00)	(0.00)
Communist Party Regime	−0.04		−0.02	
	(0.06)		(0.06)	
Monarchy	−0.06	−0.03	−0.03	−0.01
	(0.07)	(0.09)	(0.07)	(0.09)
Party Regime	−0.09†	0.07	−0.08†	0.07
	(0.05)	(0.07)	(0.05)	(0.07)
Personal	0.18***		0.17***	
	(0.05)		(0.05)	
Party Institutionalization	0.62***	0.56***	0.64***	0.57***
	(0.15)	(0.15)	(0.15)	(0.15)
Party Institutionalization (b)	1.93***	1.87***	1.39**	1.39**
	(0.39)	(0.39)	(0.46)	(0.46)
Communist Regime		0.21*		0.23**
		(0.08)		(0.08)
Communist Regime with MC		0.16†		0.18*
		(0.09)		(0.09)
Military Regime with MC		0.33***		0.32***
		(0.08)		(0.08)
Monarchy with MC		0.22**		0.24**
		(0.09)		(0.09)
Party Regime with MC		0.18*		0.18*
		(0.07)		(0.07)
Personal Regime		0.39***		0.38***
		(0.08)		(0.08)
Personal Regime with MC		0.43***		0.42***

	Model 5	Model 6	Model 7	Model 8
		(0.08)		(0.08)
GDP pc log			−0.06**	−0.05*
			(0.02)	(0.02)
GDP pc log (b)			−0.07	−0.08
			(0.12)	(0.12)
Population log			−0.04	−0.06
			(0.13)	(0.13)
Population log (b)			−0.00	−0.01
			(0.15)	(0.15)
Ethnic Excluded Population			0.02	0.03
			(0.06)	(0.05)
Ethnic Excluded Population (b)			−0.85*	−0.87*
			(0.41)	(0.41)
Resource Income			0.01	0.01
			(0.00)	(0.00)
Resource Income (b)			−0.11†	−0.10†
			(0.06)	(0.06)
Random Effects				
σ^2	0.07	0.07	0.07	0.07
τ_{00}	0.08	0.07	0.07	0.07
	0.07	0.07	0.07	0.07
τ_{11}	0.00	0.00	0.00	0.00
	0.84	0.78	0.83	0.81
ρ_{01}	0.00	0.00	0.00	0.00
	0.02	0.01	0.02	0.02
AIC	1202.70	1204.58	1232.56	1226.33
BIC	1289.89	1320.84	1366.25	1389.09
Log Likelihood	-586.35	-582.29	-593.28	-585.17
Num. of observations	2472	2472	2472	2472
Num. of countries	100	100	100	100

$^{***}p < 0.001$, $^{**}p < 0.01$, $^{*}p < 0.05$, $^{\dagger}p < 0.1$

Table B.14: Linear Within-Between Model Predicting Power Distributed by Gender

B.3.2 DV: equality in respect for civil liberties by gender

	Model 1	Model 2	Model 3	Model 4
(Intercept)	−37.49***	−37.44***	−25.21***	−25.15***
	(0.86)	(0.91)	(3.34)	(3.27)
Year	0.02***	0.02***	0.01***	0.01***
	(0.00)	(0.00)	(0.00)	(0.00)
Communist Party Regime	−0.25***		−0.09†	
	(0.04)		(0.05)	
Monarchy	−0.42***	−0.61***	0.14*	−0.25***
	(0.05)	(0.06)	(0.06)	(0.08)
Party Regime	−0.14***	−0.07†	0.02	0.09†
	(0.04)	(0.04)	(0.04)	(0.05)
Personal	−0.14***		−0.00	
	(0.04)		(0.05)	
Communist Regime		−0.10**		−0.18***
		(0.04)		(0.04)
Communist Regime with MC		−0.31***		−0.18**
		(0.05)		(0.06)
Military Regime with MC		−0.25***		−0.11*
		(0.05)		(0.05)

	Model 1	Model 2	Model 3	Model 4
Monarchy with MC		-0.22^{***}		0.24^{***}
		(0.06)		(0.07)
Party Regime with MC		-0.21^{***}		$-0.07^{\dagger}$
		(0.04)		(0.04)
Personal Regime		-0.18^{***}		$-0.10^{\dagger}$
		(0.05)		(0.05)
Personal Regime with MC		-0.14^{**}		-0.00
		(0.04)		(0.05)
GDP pc log			-0.12^{***}	-0.10^{***}
			(0.02)	(0.02)
GDP pc log (b)			0.50^{***}	0.42^{**}
			(0.14)	(0.14)
Population log			0.85^{***}	0.83^{***}
			(0.12)	(0.12)
Population log (b)			-0.13	-0.11
			(0.18)	(0.18)
Ethnic Excluded Population			0.17^{***}	0.20^{***}
			(0.05)	(0.05)
Ethnic Excluded Population (b)			-1.13^{*}	-1.19^{*}
			(0.51)	(0.49)
Resource Income			0.00	0.00
			(0.00)	(0.00)
Resource Income (b)			-0.27^{***}	-0.25^{***}
			(0.06)	(0.05)
Random Effects				
σ^2	0.13	0.13	0.09	0.09
τ_{00}	0.38	0.37	0.24	0.23
τ_{11}	0.00	0.00	0.00	0.00
τ_{11}	-0.00	0.00	-0.00	-0.00
AIC	3994.28	3895.50	2044.59	1957.32
BIC	4057.67	3990.58	2152.40	2095.08
Log Likelihood	-1987.14	-1932.75	-1004.29	-955.66
Num. of observations	4183	4183	2950	2950
Num. of countries	108	108	101	101

$^{***}p < 0.001$, $^{**}p < 0.01$, $^{*}p < 0.05$, $^{\dagger}p < 0.1$

Table B.15: Linear Within-Between Model Predicting Equality in Respect for Civil Liberties by Gender

	Model 1	Model 2	Model 3	Model 4
(Intercept)	-33.60^{***}	-34.45^{***}	-26.15^{***}	-28.07^{***}
	(1.32)	(1.35)	(3.49)	(3.44)
Year	0.02^{***}	0.02^{***}	0.01^{***}	0.01^{***}
	(0.00)	(0.00)	(0.00)	(0.00)
Communist Party Regime	0.07		0.09	
	(0.06)		(0.06)	
Monarchy	0.27^{***}	-0.03	0.32^{***}	0.04
	(0.06)	(0.08)	(0.06)	(0.08)
Party Regime	0.02	0.04	0.04	0.07
	(0.04)	(0.05)	(0.04)	(0.05)
Personal	0.00		0.03	
	(0.05)		(0.05)	
Party Institutionalization	0.65^{***}	0.62^{***}	0.73^{***}	0.72^{***}
	(0.15)	(0.14)	(0.14)	(0.14)
Party Institutionalization (b)	2.17^{***}	2.05^{***}	1.22^{*}	1.22^{*}
	(0.47)	(0.46)	(0.58)	(0.54)

	Model 1	Model 2	Model 3	Model 4
Communist Regime		−0.19***		−0.17***
		(0.04)		(0.04)
Communist Regime with MC		−0.07		−0.03
		(0.08)		(0.08)
Military Regime with MC		−0.02		0.01
		(0.07)		(0.07)
Monarchy with MC		0.23***		0.27***
		(0.06)		(0.06)
Party Regime with MC		−0.10*		−0.08†
		(0.04)		(0.04)
Personal Regime		−0.11†		−0.06
		(0.06)		(0.06)
Personal Regime with MC		−0.06		−0.03
		(0.05)		(0.05)
GDP pc log			−0.11***	−0.11***
			(0.02)	(0.02)
GDP pc log (b)			0.26†	0.29*
			(0.15)	(0.15)
Population log			0.48***	0.42***
			(0.12)	(0.12)
Population log (b)			−0.18	−0.19
			(0.19)	(0.18)
Ethnic Excluded Population			0.42***	0.41***
			(0.05)	(0.05)
Ethnic Excluded Population (b)			−0.91†	−1.05*
			(0.52)	(0.49)
Resource Income			0.01*	0.01*
			(0.00)	(0.00)
Resource Income (b)			−0.21**	−0.21**
			(0.07)	(0.07)
Random Effects				
σ^2	0.07	0.07	0.06	0.06
τ_{00}	0.07	0.07	0.07	0.06
	0.07	0.07	0.06	0.06
τ_{11}	0.00	0.00	0.00	0.00
	0.91	0.74	0.70	0.71
ρ_{01}	0.00	0.00	0.00	0.00
	0.06	0.01	-0.11	0.02
AIC	1015.09	1031.50	991.80	960.42
BIC	1102.27	1147.74	1125.49	1123.17
Log Likelihood	-492.54	-495.75	-472.90	-452.21
Num. of observations	2471	2471	2471	2471
Num. of countries	100	100	100	100

$^{***}p < 0.001$, $^{**}p < 0.01$, $^{*}p < 0.05$, $^{\dagger}p < 0.1$

Table B.16: Linear Within-Between Model Predicting Equality in Respect for Civil Liberties by Gender

B.3.3 DV: access to public services by gender

	Model 1	Model 2	Model 3	Model 4
(Intercept)	−34.10***	−34.59***	−27.33***	−27.03***
	(0.70)	(0.74)	(2.68)	(2.67)
Year	0.02***	0.02***	0.01***	0.01***
	(0.00)	(0.00)	(0.00)	(0.00)

	Model 1	Model 2	Model 3	Model 4
Communist Party Regime	0.31***		0.23***	
	(0.04)		(0.04)	
Monarchy	0.03	−0.04	0.09*	−0.09
	(0.04)	(0.04)	(0.04)	(0.06)
Party Regime	0.11***	0.10**	0.12***	0.19***
	(0.02)	(0.04)	(0.02)	(0.03)
Personal	−0.01		0.04	
	(0.02)		(0.03)	
Communist Regime		0.23***		0.16***
		(0.04)		(0.05)
Communist Regime with MC		0.31***		0.33***
		(0.05)		(0.05)
Military Regime with MC		−0.07*		−0.01
		(0.03)		(0.03)
Monarchy with MC		0.03		0.16**
		(0.05)		(0.05)
Party Regime with MC		0.05		0.09**
		(0.03)		(0.03)
Personal Regime		−0.07†		−0.02
		(0.04)		(0.04)
Personal Regime with MC		−0.06†		0.04
		(0.04)		(0.04)
GDP pc log			0.02	0.02
			(0.02)	(0.02)
GDP pc log (b)			0.72***	0.72***
			(0.13)	(0.13)
Population log			0.31***	0.36***
			(0.09)	(0.09)
Population log (b)			−0.06	−0.05
			(0.16)	(0.16)
Ethnic Excluded Population			0.09*	0.10**
			(0.04)	(0.04)
Ethnic Excluded Population (b)			−0.98*	−0.94*
			(0.45)	(0.45)
Resource Income			0.00	0.00†
			(0.00)	(0.00)
Resource Income (b)			−0.22***	−0.22***
			(0.05)	(0.05)
Random Effects				
σ^2	0.08	0.08	0.06	0.05
τ_{00}	0.25	0.25	0.15	0.14
τ_{11}	0.00	0.00	0.00	0.00
ρ_{01}	0.00	0.00	-0.00	-0.00
AIC	2169.13	2184.03	551.78	505.56
BIC	2232.52	2279.12	659.60	643.33
Log Likelihood	-1074.57	-1077.02	-257.89	-229.78
Num. of observations	4185	4185	2951	2951
Num. of countries	108	108	101	101

$^{***}p < 0.001$, $^{**}p < 0.01$, $^{*}p < 0.05$, $^{\dagger}p < 0.1$

Table B.17: Linear Within-Between Model Predicting Access to Public Services by Gender

	Model 1	Model 2	Model 3	Model 4
(Intercept)	−26.41***	−24.62***	−22.17***	−21.39***
	(1.03)	(0.97)	(2.79)	(2.79)
Year	0.01***	0.01***	0.01***	0.01***

	Model 1	Model 2	Model 3	Model 4
	(0.00)	(0.00)	(0.00)	(0.00)
Communist Party Regime	0.18***		0.13**	
	(0.05)		(0.05)	
Monarchy	0.09†	−0.01	0.08	−0.07
	(0.05)	(0.06)	(0.05)	(0.07)
Party Regime	0.07*	0.12*	0.06	0.12*
	(0.03)	(0.05)	(0.03)	(0.05)
Personal	−0.00		0.01	
	(0.04)		(0.04)	
Party Institutionalization	0.46***	0.35	0.47***	0.40**
	(0.12)	(0.34)	(0.12)	(0.12)
Party Institutionalization (b)	2.26***	2.33***	1.72***	1.74***
	(0.44)	(0.45)	(0.49)	(0.50)
Communist Regime		0.05		0.05
		(0.06)		(0.06)
Communist Regime with MC		0.14*		0.15*
		(0.06)		(0.06)
Military Regime with MC		−0.08		−0.06
		(0.06)		(0.06)
Monarchy with MC		0.13*		0.07
		(0.06)		(0.06)
Party Regime with MC		−0.04		−0.01
		(0.05)		(0.05)
Personal Regime		−0.16**		−0.09
		(0.06)		(0.06)
Personal Regime with MC		−0.09		−0.01
		(0.05)		(0.06)
GDP pc log			0.04*	0.05**
			(0.02)	(0.02)
GDP pc log (b)			0.59***	0.60***
			(0.13)	(0.13)
Population log			0.27**	0.33***
			(0.10)	(0.10)
Population log (b)			−0.23	−0.24
			(0.17)	(0.17)
Ethnic Excluded Population			0.16***	0.14***
			(0.04)	(0.04)
Ethnic Excluded Population (b)			−0.60	−0.56
			(0.45)	(0.45)
Resource Income			0.00†	0.00†
			(0.00)	(0.00)
Resource Income (b)			−0.15*	−0.15*
			(0.06)	(0.06)
Random Effects				
σ^2	0.04	0.03	0.04	0.04
τ_{00}	0.04	0.00	0.04	0.06
	0.04	0.00	0.04	0.06
τ_{11}	0.00	0.00	0.00	0.00
	0.55	8.70	0.55	0.65
ρ_{01}	0.00	0.00	0.00	-0.00
	0.03	0.00	0.04	0.04
AIC	-264.49	-744.68	-276.71	-365.71
BIC	-177.30	-628.43	-143.01	-202.95
Log Likelihood	147.25	392.34	161.35	210.85
Num. of observations	2472	2472	2472	2472
Num. of countries	100	100	100	100

$^{***}p < 0.001$, $^{**}p < 0.01$, $^{*}p < 0.05$, $^{\dagger}p < 0.1$

Table B.18: Linear Within-Between Model Predicting Access to Public Services by Gender

B.3.4 DV: access to state jobs by gender

	Model 1	Model 2	Model 3	Model 4
(Intercept)	−32.38***	−31.96***	−17.23***	−16.60***
	(0.80)	(0.84)	(3.13)	(3.12)
Year	0.02***	0.02***	0.01***	0.01***
	(0.00)	(0.00)	(0.00)	(0.00)
Communist Party Regime	0.21***		0.05	
	(0.04)		(0.05)	
Monarchy	−0.28***	−0.31***	−0.13**	−0.14*
	(0.04)	(0.05)	(0.05)	(0.07)
Party Regime	0.08**	0.04	0.10**	0.17***
	(0.03)	(0.04)	(0.03)	(0.04)
Personal	0.07*		0.11***	
	(0.03)		(0.03)	
Communist Regime		0.18***		0.03
		(0.05)		(0.05)
Communist Regime with MC		0.20***		0.04
		(0.05)		(0.06)
Military Regime with MC		−0.03		−0.00
		(0.04)		(0.04)
Monarchy with MC		−0.30***		−0.14*
		(0.05)		(0.06)
Party Regime with MC		0.07†		0.06
		(0.04)		(0.04)
Personal Regime		−0.00		0.04
		(0.04)		(0.05)
Personal Regime with MC		0.06		0.12**
		(0.04)		(0.04)
GDP pc log			−0.01	−0.01
			(0.02)	(0.02)
GDP pc log (b)			0.42**	0.36*
			(0.14)	(0.14)
Population log			0.68***	0.69***
			(0.11)	(0.11)
Population log (b)			0.14	0.12
			(0.18)	(0.18)
Ethnic Excluded Population			−0.16***	−0.15***
			(0.04)	(0.04)
Ethnic Excluded Population (b)			−1.69***	−1.53**
			(0.50)	(0.50)
Resource Income			−0.00	−0.00
			(0.00)	(0.00)
Resource Income (b)			−0.19***	−0.16**
			(0.06)	(0.06)
Random Effects				
σ^2	0.11	0.11	0.08	0.08
τ_{00}	0.32	0.32	0.19	0.19
τ_{11}	0.00	0.00	0.00	0.00
ρ_{01}	-0.00	-0.00	-0.00	0.00
AIC	3254.52	3281.24	1523.32	1521.75
BIC	3317.92	3376.33	1631.14	1659.52
Log Likelihood	-1617.26	-1625.62	-743.66	-737.88
Num. of observations	4185	4185	2951	2951
Num. of countries	108	108	101	101

$^{***}p < 0.001$, $^{**}p < 0.01$, $^{*}p < 0.05$, $^{\dagger}p < 0.1$

Table B.19: Linear Within-Between Model Predicting Access to State Jobs by Gender

	Model 1	Model 2	Model 3	Model 4
(Intercept)	−24.82***	−25.12***	−13.63***	−15.27***
	(1.21)	(1.22)	(3.20)	(3.23)
Year	0.01***	0.01***	0.01***	0.01***
	(0.00)	(0.00)	(0.00)	(0.00)
Communist Party Regime	−0.14*		−0.17**	
	(0.05)		(0.05)	
Monarchy	−0.26***	−0.32***	−0.26***	−0.25**
	(0.06)	(0.08)	(0.06)	(0.08)
Party Regime	−0.06	−0.12†	−0.06	−0.19**
	(0.04)	(0.06)	(0.04)	(0.06)
Personal	−0.02		−0.03	
	(0.04)		(0.04)	
Party Institutionalization	0.45***	0.45***	0.42**	0.43
	(0.13)	(0.13)	(0.13)	(0.31)
Party Institutionalization (b)	2.24***	2.11***	1.48**	1.48**
	(0.44)	(0.43)	(0.53)	(0.54)
Communist Regime		−0.29***		−0.45***
		(0.07)		(0.07)
Communist Regime with MC		−0.32***		−0.44***
		(0.07)		(0.07)
Military Regime with MC		−0.21**		−0.31***
		(0.07)		(0.07)
Monarchy with MC		−0.44***		−0.37***
		(0.07)		(0.07)
Party Regime with MC		−0.26***		−0.36***
		(0.06)		(0.06)
Personal Regime		−0.27***		−0.42***
		(0.07)		(0.07)
Personal Regime with MC		−0.16*		−0.30***
		(0.07)		(0.07)
GDP pc log			−0.03	−0.02
			(0.02)	(0.02)
GDP pc log (b)			0.26†	0.25†
			(0.14)	(0.15)
Population log			0.61***	0.51***
			(0.11)	(0.11)
Population log (b)			−0.04	−0.04
			(0.18)	(0.18)
Ethnic Excluded Population			0.04	0.02
			(0.05)	(0.05)
Ethnic Excluded Population (b)			−1.12*	−1.13*
			(0.48)	(0.49)
Resource Income			−0.00	−0.00
			(0.00)	(0.00)
Resource Income (b)			−0.10	−0.11†
			(0.07)	(0.07)
Random Effects				
σ^2	0.05	0.05	0.05	0.04
τ_{00}	0.06	0.05	0.05	0.24
	0.05	0.05	0.05	0.07
τ_{11}	0.00	0.00	0.00	0.00
	0.57	0.57	0.60	6.66
ρ_{01}	-0.00	0.00	0.00	0.00
	0.01	0.01	0.01	0.02
AIC	547.71	517.35	533.69	190.37
BIC	634.90	633.61	667.38	353.12
Log Likelihood	-258.85	-238.68	-243.84	-67.18
Num. of observations	2472	2472	2472	2472
Num. of countries	100	100	100	100

$^{***}p < 0.001$, $^{**}p < 0.01$, $^{*}p < 0.05$, $^{\dagger}p < 0.1$

Table B.20: Linear Within-Between Model Predicting Access to State Jobs by Gender

B.3.5 DV: access to state business opportunities by gender

	Model 1	Model 2	Model 3	Model 4
(Intercept)	−31.35***	−32.09***	−16.58***	−16.95***
	(0.80)	(0.84)	(3.04)	(3.05)
Year	0.02***	0.02***	0.01***	0.01***
	(0.00)	(0.00)	(0.00)	(0.00)
Communist Party Regime	0.22***		−0.10*	
	(0.04)		(0.05)	
Monarchy	−0.43***	−0.51***	−0.40***	−0.55***
	(0.04)	(0.05)	(0.05)	(0.07)
Party Regime	0.14***	0.13**	0.05†	0.12**
	(0.03)	(0.04)	(0.03)	(0.04)
Personal	0.01		−0.01	
	(0.03)		(0.03)	
Communist Regime		0.14**		−0.15**
		(0.05)		(0.05)
Communist Regime with MC		0.23***		−0.10†
		(0.05)		(0.06)
Military Regime with MC		−0.08*		−0.04
		(0.04)		(0.04)
Monarchy with MC		−0.40***		−0.36***
		(0.05)		(0.06)
Party Regime with MC		0.07†		−0.00
		(0.04)		(0.04)
Personal Regime		−0.02		−0.07
		(0.04)		(0.05)
Personal Regime with MC		−0.05		−0.03
		(0.04)		(0.04)
GDP pc log			0.14***	0.14***
			(0.02)	(0.02)
GDP pc log (b)			0.44***	0.44***
			(0.13)	(0.13)
Population log			0.59***	0.62***
			(0.11)	(0.11)
Population log (b)			0.10	0.10
			(0.18)	(0.18)
Ethnic Excluded Population			0.09*	0.10*
			(0.04)	(0.04)
Ethnic Excluded Population (b)			−1.28**	−1.27**
			(0.45)	(0.46)
Resource Income			−0.02***	−0.02***
			(0.00)	(0.00)
Resource Income (b)			−0.16**	−0.15**
			(0.05)	(0.05)
Random Effects				
σ^2	0.11	0.11	0.08	0.08
τ_{00}	0.32	0.32	0.20	0.21
τ_{11}	0.00	0.00	0.00	0.00
ρ_{01}	-0.00	0.00	-0.00	-0.00
AIC	3217.55	3237.75	1462.06	1457.39
BIC	3280.88	3332.74	1569.74	1594.97
Log Likelihood	-1598.78	-1603.88	-713.03	-705.69
Num. of observations	4157	4157	2928	2928
Num. of countries	106	106	99	99

$^{***}p < 0.001$, $^{**}p < 0.01$, $^{*}p < 0.05$, $^{\dagger}p < 0.1$

Table B.21: Linear Within-Between Model Predicting Access to State Business Opportunities by Gender

	Model 1	Model 2	Model 3	Model 4
(Intercept)	−28.80***	−29.86***	−10.94***	−12.27***
	(1.22)	(1.23)	(3.22)	(3.26)
Year	0.01***	0.01***	0.00**	0.00**
	(0.00)	(0.00)	(0.00)	(0.00)
Communist Party Regime	−0.13*		−0.25***	
	(0.05)		(0.05)	
Monarchy	−0.38***	−0.59***	−0.44***	−0.69***
	(0.06)	(0.08)	(0.06)	(0.08)
Party Regime	0.00	−0.11†	−0.03	−0.21**
	(0.04)	(0.07)	(0.04)	(0.07)
Personal	−0.10*		−0.08†	
	(0.04)		(0.04)	
Party Institutionalization	0.37*	0.37*	0.32*	0.42
	(0.15)	(0.15)	(0.15)	(0.32)
Party Institutionalization (b)	1.83***	1.88***	1.12*	1.13*
	(0.42)	(0.43)	(0.53)	(0.51)
Communist Regime		−0.36***		−0.58***
		(0.07)		(0.07)
Communist Regime with MC		−0.31***		−0.51***
		(0.08)		(0.08)
Military Regime with MC		−0.32***		−0.39***
		(0.07)		(0.07)
Monarchy with MC		−0.58***		−0.70***
		(0.07)		(0.07)
Party Regime with MC		−0.24***		−0.34***
		(0.06)		(0.06)
Personal Regime		−0.34***		−0.43***
		(0.07)		(0.07)
Personal Regime with MC		−0.32***		−0.39***
		(0.07)		(0.07)
GDP pc log			0.16***	0.16***
			(0.02)	(0.02)
GDP pc log (b)			0.33*	0.39**
			(0.14)	(0.14)
Population log			0.73***	0.70***
			(0.11)	(0.12)
Population log (b)			0.02	0.06
			(0.19)	(0.18)
Ethnic Excluded Population			0.09†	0.06
			(0.05)	(0.05)
Ethnic Excluded Population (b)			−1.11*	−0.98*
			(0.48)	(0.46)
Resource Income			−0.02***	−0.02***
			(0.00)	(0.00)
Resource Income (b)			−0.10	−0.12†
			(0.07)	(0.06)
Random Effects				
σ^2	0.05	0.05	0.05	0.05
τ_{00}	0.03	0.05	0.05	0.05
	0.03	0.05	0.05	0.05
τ_{11}	0.00	0.00	0.00	0.00
	1.00	0.99	1.00	7.19
ρ_{01}	0.00	-0.00	0.00	-0.00
	-0.15	-0.20	-0.21	-0.57
AIC	499.21	484.77	424.81	283.88
BIC	586.28	600.86	558.31	446.41
Log Likelihood	-234.61	-222.39	-189.40	-113.94
Num. of observations	2452	2452	2452	2452
Num. of countries	98	98	98	98

	Model 1	Model 2	Model 3	Model 4

$^{***}p < 0.001$, $^{**}p < 0.01$, $^{*}p < 0.05$, $^{\dagger}p < 0.1$

Table B.22: Linear Within-Between Model Predicting Access to State Business Opportunities by Gender

B.3.6 Disaggregating party institutionalization

	Model 5	Model 5.1	Model 5.2	Model 5.3	Model 5.4	Model 5.5	Model 5.6
(Intercept)	7.98***	7.42***	8.48***	8.04***	7.48***	8.23***	5.86***
	(0.24)	(0.22)	(0.23)	(0.23)	(0.23)	(0.22)	(0.19)
Year	−0.00***	−0.00***	−0.00***	−0.00***	−0.00***	−0.00***	−0.00***
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Communist Party Regime	0.01	0.01	−0.04***	−0.00	−0.03**	−0.04***	−0.01
	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)
Monarchy	0.02	0.02†	−0.04**	0.10***	−0.01	0.10***	0.05***
	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)
Party Regime	0.00	0.01	−0.05***	−0.02†	−0.03**	−0.04***	−0.01
	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)
Personal	−0.01	0.01	−0.05***	−0.03**	−0.03***	−0.01	−0.02**
	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)
Party Institutionalization	−0.13***						
	(0.03)						
Party Institutionalization (b)	−0.52***						
	(0.09)						
Party Organizations		−0.05***					−0.02***
		(0.01)					(0.01)
Party Organizations (b)		−0.08***					0.01
		(0.02)					(0.04)
Local branches			−0.01				0.01*
			(0.01)				(0.01)
Local branches (b)			−0.09***				−0.07*
			(0.02)				(0.03)
Constituency linkages				−0.04***			−0.01
				(0.01)			(0.01)
Constituency linkages (b)				−0.04†			0.00
				(0.02)			(0.02)
Distinct platforms					−0.03*		−0.02***
					(0.01)		(0.01)
Distinct platforms (b)					−0.07***		−0.02
					(0.02)		(0.02)
Legislative cohesiveness						0.00	0.00
						(0.01)	(0.01)
Legislative cohesiveness (b)						−0.05**	−0.03
						(0.02)	(0.02)
Random Effects							
σ^2	0.00	0.00	0.00	0.00	0.00	0.00	0.00
τ_{00}	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	0.00	0.00	0.00	0.00	0.00	0.00	0.00

	Model 5	Model 5.1	Model 5.2	Model 5.3	Model 5.4	Model 5.5	Model 5.6
τ_{11}	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	0.03	0.01	0.00	0.01	0.01	0.01	0.00
ρ_{01}	-0.00	0.00	0.00	0.00	0.00	0.00	-0.00
	-0.01	-0.00	-0.00	0.00	-0.00	0.00	0.00
AIC	-7511.17	-7772.03	-7610.31	-7593.57	-7645.26	-7623.56	-9087.03
BIC	-7423.98	-7684.83	-7523.12	-7506.38	-7558.07	-7536.37	-8848.70
Log Likelihood	3770.59	3901.01	3820.16	3811.79	3837.63	3826.78	4584.51
Num. of observations	2472	2472	2472	2472	2472	2472	2472
Num. of countries	100	100	100	100	100	100	100

$^{***}p < 0.001$, $^{**}p < 0.01$, $^{*}p < 0.05$, $^{\dagger}p < 0.1$

Table B.23: Linear Within-Between Model Predicting Access to State Business Opportunities by Gender

B.3.7 Fixed effect regression

	Model 1	Model 2	Model 3	Model 4
Communist Party Regime	-0.065^{***}		-0.022^{*}	
	(0.013)		(0.010)	
Monarchy	0.001	0.006	0.010	$0.037^{\dagger}$
	(0.010)	(0.011)	(0.016)	(0.019)
Party Regime	-0.027^{***}	-0.022^{**}	-0.020^{**}	-0.044^{***}
	(0.006)	(0.008)	(0.008)	(0.010)
Personal	-0.018^{**}		-0.026^{***}	
	(0.006)		(0.007)	
Communist Regime		-0.061^{***}		-0.029^{**}
		(0.012)		(0.011)
Communist Regime with MC		-0.064^{***}		$-0.022^{\dagger}$
		(0.015)		(0.011)
Military Regime with MC		0.005		-0.012
		(0.007)		(0.007)
Monarchy with MC		0.001		-0.011
		(0.011)		(0.016)
Party Regime with MC		-0.025^{**}		-0.021^{*}
		(0.008)		(0.010)
Personal Regime		-0.008		-0.026^{**}
		(0.008)		(0.010)
Personal Regime with MC		$-0.017^{\dagger}$		-0.039^{***}
		(0.009)		(0.010)
GDP pc log			-0.004	-0.006
			(0.004)	(0.004)
Population log			-0.121^{***}	-0.124^{***}
			(0.020)	(0.020)
Ethnic Excluded Population			-0.008	-0.011
			(0.013)	(0.013)
Resource Income			-0.001^{*}	$-0.001^{\dagger}$
			(0.001)	(0.001)
Num. obs.	4185	4185	2951	2951
R^2 (full model)	0.937	0.937	0.948	0.949
R^2 (proj model)	0.022	0.023	0.027	0.042
Adj. R^2 (full model)	0.934	0.934	0.945	0.946
Adj. R^2 (proj model)	-0.021	-0.021	-0.026	-0.011

$^{***}p < 0.001$, $^{**}p < 0.01$, $^{*}p < 0.05$, $^{\dagger}p < 0.1$

Table B.24: Linear Fixed Effects Model predicting Women's Political Exclusion

	Model 1	Model 2	Model 3	Model 4
Communist Party Regime	-0.041^{**}		$-0.023^{\dagger}$	
	(0.013)		(0.013)	
Monarchy	0.009		0.013	
	(0.018)		(0.018)	
Party Regime	-0.030^{**}		-0.026^{*}	
	(0.011)		(0.011)	
Personal	-0.030^{*}		-0.030^{*}	
	(0.012)		(0.012)	
Party Institutionalization	-0.079^{***}	-0.074^{***}	-0.074^{***}	-0.067^{**}
	(0.020)	(0.020)	(0.021)	(0.021)
Communist Regime		-0.057^{**}		$-0.038^{\dagger}$
		(0.021)		(0.020)
Communist Regime with MC		$-0.041^{\dagger}$		-0.029

	Model 1	Model 2	Model 3	Model 4
		(0.022)		(0.020)
Military Regime with MC		−0.019		−0.022
		(0.020)		(0.019)
Monarchy		0.025		0.030
		(0.026)		(0.025)
Monarchy with MC		−0.014		−0.012
		(0.025)		(0.023)
Party Regime		−0.059**		−0.058**
		(0.020)		(0.018)
Party Regime with MC		−0.034†		−0.031†
		(0.021)		(0.019)
Personal Regime		−0.041†		−0.042*
		(0.022)		(0.021)
Personal Regime with MC		−0.043*		−0.045*
		(0.021)		(0.020)
GDP pc log			0.000	−0.001
			(0.004)	(0.004)
Population log			−0.127***	−0.131***
			(0.022)	(0.023)
Ethnic Excluded Population			−0.040*	−0.041**
			(0.016)	(0.016)
Resource Income			−0.002*	−0.002*
			(0.001)	(0.001)
Num. obs.	2472	2472	2472	2472
R^2 (full model)	0.948	0.949	0.950	0.950
R^2 (proj model)	0.024	0.038	0.048	0.063
Adj. R^2 (full model)	0.945	0.946	0.946	0.947
Adj. R^2 (proj model)	-0.037	-0.024	-0.014	0.000

$^{***}p < 0.001$, $^{**}p < 0.01$, $^{*}p < 0.05$, $^{\dagger}p < 0.1$

Table B.25: Linear Fixed Effects Model predicting Women's Political Exclusion

B.4 Robustness tests with Wahman, Teorell and Hadenius regime type data

Table B.26: WTH sample: Average Women's Political Exclusion by regime type

Regime Type	Average WPI on the input side	Average WPI on the output side
military	0.526	0.413
monarchy	0.342	0.366
multi-party	0.636	0.505
no-party	0.603	0.429
one-party	0.628	0.493

Table B.27: WTH sample: Highest and Lowest Authoritarian Regimes on Women's Political Inclusion (Input Side)

Country	Regime Type	Begin	End	Mean WPI on the input side
Top Ten Regime Spells				
Bulgaria	one-party	1972	1989	0.015
Rwanda	multi-party	2009	2014	0.02
Venezuela	multi-party	1999	2014	0.09
Ghana	multi-party	1992	2000	0.13
Liberia	multi-party	1997	2014	0.143
Romania	one-party	1972	1989	0.1483
Thailand	military	1991	2014	0.1603
Uganda	multi-party	2009	2014	0.161
Hungary	one-party	1972	1989	0.166
Romania	multi-party	1990	1995	0.171
Bottom Ten Regime Spells				
Saudi Arabia	monarchy	1972	2014	0.96
Chile	military	1973	1988	0.846
Kuwait	monarchy	1972	2014	0.814
Ecuador	military	1972	1978	0.803
Bahrain	monarchy	1972	2014	0.7483
Afghanistan	military	1973	1977	0.7443
United Arab Emirates	monarchy	1972	2014	0.7353
Burundi	military	1972	1981	0.716
Afghanistan	monarchy	1972	1972	0.712
Dominican Republic	multi-party	1972	1995	0.7012

Table B.28: WTH sample: Highest and Lowest Authoritarian Regimes on Women's Political Inclusion (Output Side)

Country	Regime Type	Begin	End	Mean WPI on the output side
Bottom Ten Regime Spells				
Cambodia	one-party	1976	1978	0.999
Cambodia	military	1975	1975	0.987
Equatorial Guinea	one-party	1972	1978	0.93
Saudi Arabia	monarchy	1972	2014	0.918
Somalia	multi-party	2012	2014	0.882
Cambodia	one-party	1972	1974	0.863
Nepal	monarchy	1972	1989	0.859
Djibouti	multi-party	1977	1980	0.853
Djibouti	one-party	1981	1991	0.851
Paraguay	multi-party	1972	1998	0.845
Top Ten Regime Spells				
Ghana	multi-party	1992	2000	0.057
Singapore	multi-party	1972	2014	0.069
Belarus	multi-party	1991	2014	0.111
Ghana	military	1981	1991	0.129
Ukraine	multi-party	1993	2014	0.14
Ghana	military	1972	1978	0.145
Ghana	multi-party	1979	1979	0.145
Moldova	multi-party	1991	2008	0.147
Cuba	military	1972	1975	0.149
Cuba	one-party	1976	2014	0.149

B.4.1 Gender exclusion (input and output side)

	Model 1	Model 3
(Intercept)	10.57***	11.36***
	(0.21)	(0.69)
Year	−0.01***	−0.01***
	(0.00)	(0.00)
Monarchy	0.15***	0.13***
	(0.01)	(0.02)
Multi-Party Regime	−0.03***	−0.02***
	(0.00)	(0.00)
No Party	0.02	
	(0.02)	
One-Party Regime	−0.00	0.01
	(0.00)	(0.01)
GDP pc log		0.00
		(0.00)
GDP pc log (b)		−0.08***
		(0.02)
Population log		−0.04†
		(0.03)
Population log (b)		−0.04
		(0.03)
Ethnic Excluded Population		0.01
		(0.01)
Ethnic Excluded Population (b)		0.30**
		(0.09)
Resource Income		−0.00*
		(0.00)
Resource Income (b)		0.02***
		(0.01)
Random Effects		
σ^2	0.00	0.00
τ_{00}	0.01	0.01
τ_{11}	0.00	0.00
ρ_{01} -0.00	0.00	
AIC	-9026.03	-6865.38
BIC	-8964.48	-6766.10
Log Likelihood	4523.02	3449.69
Num. obs.	3480	2540
Num. countries	123	108

$^{***}p < 0.001$, $^{**}p < 0.01$, $^{*}p < 0.05$, $^{\dagger}p < 0.1$

Table B.29: Linear Within-Between Model Predicting Women's Political Exclusion

	Model 5	Model 7
(Intercept)	10.72***	9.72***
	(0.30)	(0.76)
Year	−0.01***	−0.00***
	(0.00)	(0.00)
Monarchy	0.05*	0.05*
	(0.02)	(0.02)
Multi-Party Regime	−0.02***	−0.02***
	(0.00)	(0.00)
One-party	0.00	−0.00

	Model 5	Model 7
	(0.01)	(0.01)
Party Institutionalization	−0.06*	−0.05*
	(0.03)	(0.03)
Party Institutionalization (b)	−0.46***	−0.31**
	(0.09)	(0.10)
GDP pc log		0.01*
		(0.00)
GDP pc log (b)		−0.06*
		(0.02)
Population log		−0.07*
		(0.03)
Population log (b)		−0.00
		(0.03)
Ethnic Excluded Population		0.04***
		(0.01)
Ethnic Excluded Population (b)		0.25**
		(0.10)
Resource Income		−0.00**
		(0.00)
Resource Income (b)		0.02*
		(0.01)
Random Effects		
σ^2	0.00	0.00
τ_{00}	0.00	0.00
	0.00	0.00
τ_{11}	0.00	0.00
	0.02	0.02
ρ_{01}	0.00	-0.00
	0.00	-0.00
AIC	-6477.75	-6453.72
BIC	-6398.28	-6328.84
Log Likelihood	3252.87	3248.86
Num. obs.	2157	2157
Num. countries	106	106

$^{***}p < 0.001$, $^{**}p < 0.01$, $^{*}p < 0.05$, $^{\dagger}p < 0.1$

Table B.30: Linear Within-Between Model Predicting Women's Political Exclusion

B.4.2 Input side

	Model 1	Model 3
(Intercept)	10.58***	11.67***
	(0.21)	(0.69)
Year	−0.01***	−0.01***
	(0.00)	(0.00)
Monarchy	0.10***	0.13***
	(0.01)	(0.02)
Multi-Party Regime	−0.03***	−0.02***
	(0.00)	(0.00)
No-Party	−0.03	
	(0.02)	
One-Party Regime	−0.00	−0.00
	(0.00)	(0.01)
GDP pc log		0.02***
		(0.00)

	Model 1	Model 3
GDP pc log (b)		−0.00
		(0.02)
Population log		−0.00
		(0.03)
Population log (b)		−0.03
		(0.02)
Ethnic Excluded Population		0.03**
		(0.01)
Ethnic Excluded Population (b)		0.23**
		(0.07)
Resource Income		−0.00**
		(0.00)
Resource Income (b)		0.01*
		(0.01)
Random Effects		
σ^2	0.00	0.00
τ_{00}	0.01	0.00
τ_{11}	0.00	0.00
ρ_{01}	0.00	-0.00
AIC	-9102.55	-6715.38
BIC	-9041.00	-6616.11
Log Likelihood	4561.27	3374.69
Num. obs.	3479	2539
Num. countries	123	108

$^{***}p < 0.001$, $^{**}p < 0.01$, $^{*}p < 0.05$, $^{\dagger}p < 0.1$

Table B.31: Linear Within-Between Model Predicting Women's Political Exclusion

	Model 5	Model 7
(Intercept)	9.44***	9.29***
	(0.30)	(0.72)
Year	−0.00***	−0.00***
	(0.00)	(0.00)
Monarchy	0.08***	0.06**
	(0.02)	(0.02)
Multi-Party Regime	−0.02***	−0.02***
	(0.00)	(0.00)
One-Party Regime	0.01†	0.01
	(0.01)	(0.01)
Party Institutionalization	−0.04	−0.04
	(0.03)	(0.03)
Party Institutionalization (b)	−0.30***	−0.23**
	(0.06)	(0.08)
GDP pc log		0.02***
		(0.00)
GDP pc log (b)		0.01
		(0.02)
Population log		−0.01
		(0.03)
Population log (b)		−0.01
		(0.02)
Ethnic Excluded Population		0.06***
		(0.01)
Ethnic Excluded Population (b)		0.19**
		(0.07)

	Model 5	Model 7
Resource Income		−0.00*
		(0.00)
Resource Income (b)		0.01
		(0.01)
Random Effects		
σ^2	0.00	0.00
τ_{00}	0.00	0.00
	0.00	0.00
τ_{11}	0.00	0.00
	0.02	0.02
ρ_{01}	0.00	0.00
	0.00	0.00
AIC	-6599.06	-6599.90
BIC	-6519.60	-6475.03
Log Likelihood	3313.53	3321.95
Num. obs.	2156	2156
Num. countries	106	106

$^{***}p < 0.001$, $^{**}p < 0.01$, $^{*}p < 0.05$, $^{\dagger}p < 0.1$

Table B.32: Linear Within-Between Model Predicting Women's Political Exclusion

B.4.3 Output side

	Model 1	Model 3
(Intercept)	7.94***	7.91***
	(0.19)	(0.60)
Year	−0.00***	−0.00***
	(0.00)	(0.00)
Monarchy	0.14***	0.11***
	(0.01)	(0.02)
Multi-Party Regime	−0.02***	−0.02***
	(0.00)	(0.00)
No-Party Regime	0.02	
	(0.02)	
One-Party Regime	−0.00	−0.00
	(0.00)	(0.00)
GDP pc log		−0.02***
		(0.00)
GDP pc log (b)		−0.08***
		(0.02)
Population log		−0.05*
		(0.02)
Population log (b)		−0.04
		(0.03)
Ethnic Excluded Population		0.02*
		(0.01)
Ethnic Excluded Population (b)		0.25**
		(0.08)
Resource Income		0.00**
		(0.00)
Resource Income (b)		0.02**
		(0.01)
Random Effects		
σ^2	0.00	0.00
τ_{00}	0.01	0.01

	Model 1	Model 3
τ_{11}	0.00	0.00
ρ_{01}	0.00	0.00
AIC	-9817.03	-7510.05
BIC	-9755.54	-7410.91
Log Likelihood	4918.51	3772.03
Num. obs.	3460	2520
Num. countries	121	106

$^{***}p < 0.001$, $^{**}p < 0.01$, $^{*}p < 0.05$, $^{\dagger}p < 0.1$

Table B.33: Linear Within-Between Model Predicting Women's Political Exclusion

	Model 5	Model 7
(Intercept)	8.58***	6.72***
	(0.26)	(0.66)
Year	−0.00***	−0.00***
	(0.00)	(0.00)
Monarchy	0.05*	0.06**
	(0.02)	(0.02)
Multi-Party Regime	−0.02***	−0.02***
	(0.00)	(0.00)
One-Party Regime	−0.01**	−0.01**
	(0.00)	(0.00)
Party Institutionalization	−0.05*	−0.04†
	(0.02)	(0.02)
Party Institutionalization (b)	−0.40***	−0.24*
	(0.08)	(0.10)
GDP pc log		−0.01†
		(0.00)
GDP pc log (b)		−0.06**
		(0.02)
Population log		−0.10***
		(0.03)
Population log (b)		−0.02
		(0.03)
Ethnic Excluded Population		0.03***
		(0.01)
Ethnic Excluded Population (b)		0.20*
		(0.09)
Resource Income		0.00
		(0.00)
Resource Income (b)		0.02*
		(0.01)
Random Effects		
σ^2	0.00	0.00
τ_{00}	0.00	0.00
	0.00	0.00
τ_{11}	0.00	0.00
	0.02	0.02
ρ_{01}	0.00	0.00
	0.00	0.00
AIC	-7095.25	-7069.99
BIC	-7015.91	-6945.31
Log Likelihood	3561.63	3556.99
Num. obs.	2137	2137
Num. countries	104	104

	Model 5	Model 7

$^{***}p < 0.001$, $^{**}p < 0.01$, $^{*}p < 0.05$, $^{\dagger}p < 0.1$

Table B.34: Linear Within-Between Model Predicting Women's Political Exclusion

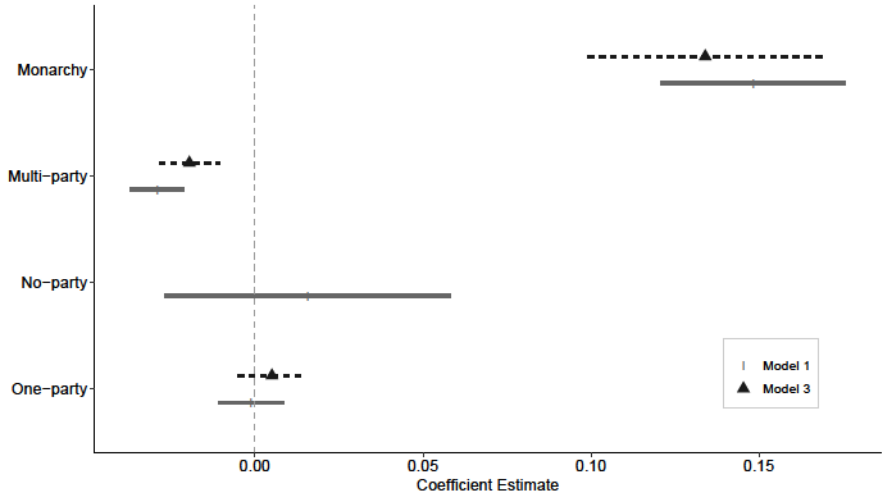


Figure B.12: Marginal Effects on Women's Political Exclusion of Regime Types

This figure reports the marginal effects on women's political exclusion of the regime types. The figure is based on Table B.29, Model 1 and 3.

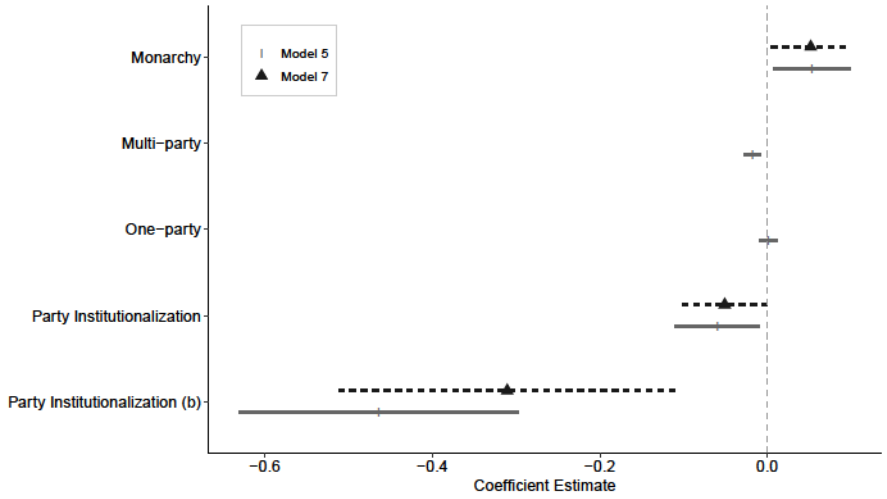


Figure B.13: Marginal Effects on Women's Political Exclusion of Regime Types

This figure reports the marginal effects on women's political exclusion of the regime types. The figure is based on Table B.30, Model 5 and 7.

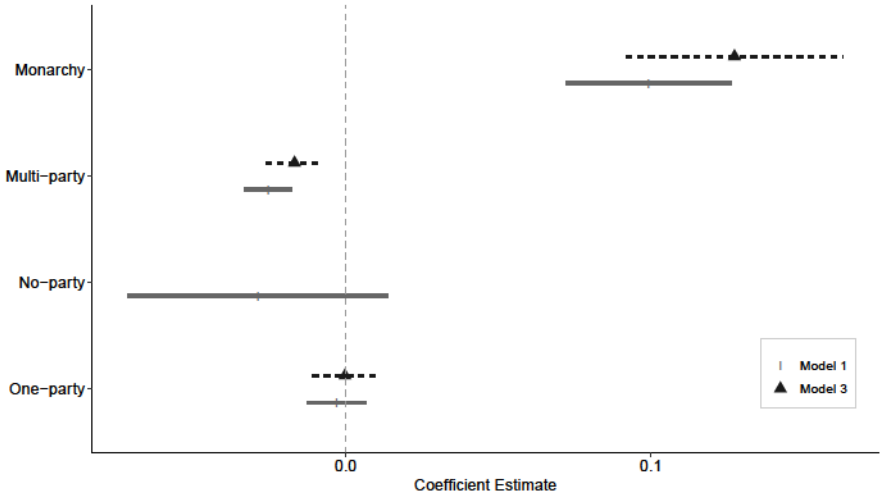


Figure B.14: Marginal Effects on Women's Political Exclusion of Regime Types

This figure reports the marginal effects on women's political exclusion of the regime types. The figure is based on Table B.31, Model 1 and 3.

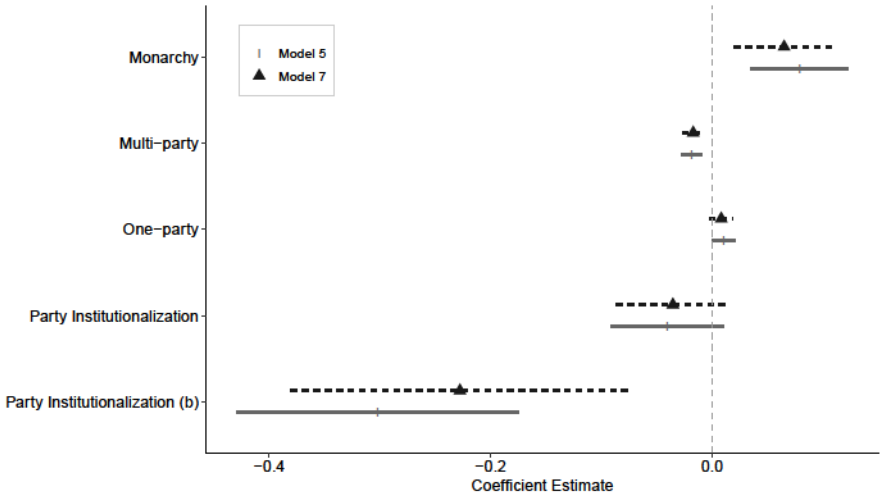


Figure B.15: Marginal Effects on Women's Political Exclusion of Regime Types

This figure reports the marginal effects on women's political exclusion of the regime types. The figure is based on Table B.32, Model 5 and 7.

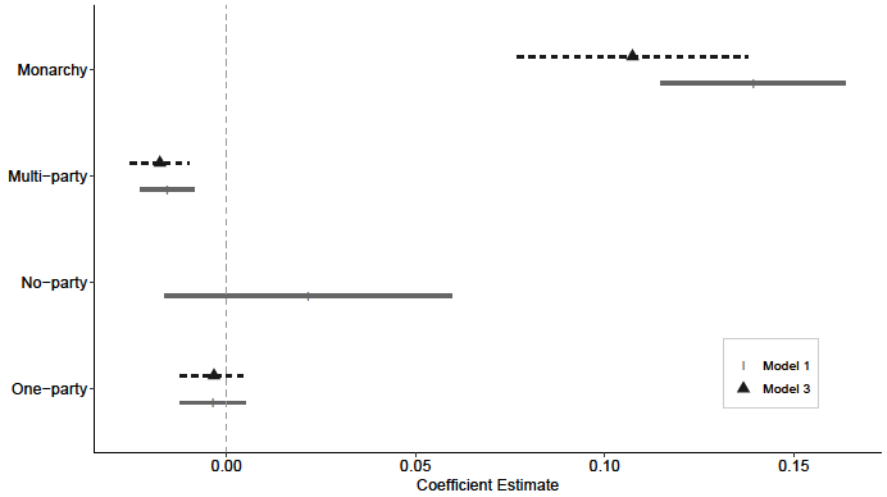


Figure B.16: Marginal Effects on Women's Political Exclusion of Regime Types

This figure reports the marginal effects on women's political exclusion of the regime types. The figure is based on Table B.33, Model 1 and 3.

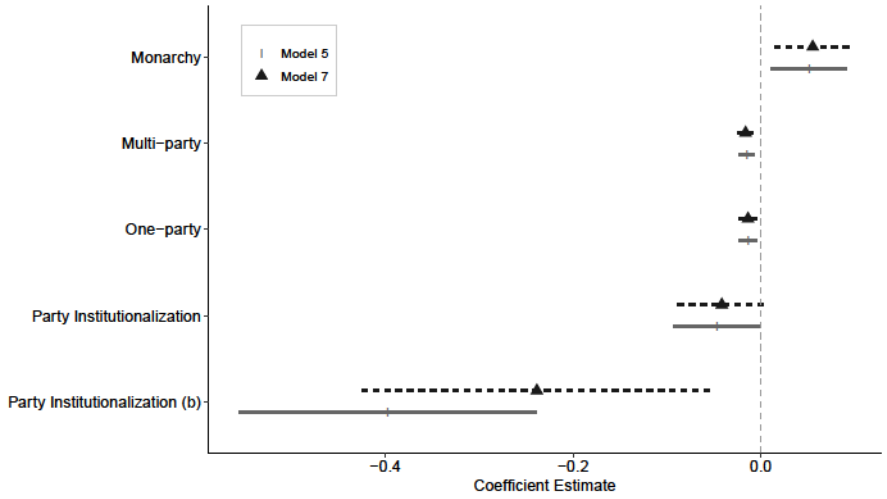


Figure B.17: Marginal Effects on Women's Political Exclusion of Regime Types

This figure reports the marginal effects on women's political exclusion of the regime types. The figure is based on Table B.34, Model 5 and 7.

Appendix C

Supplementary Appendix for *Economic inequality, income, and their effects on electoral and civil society participation in authoritarian regimes*

The Supplementary Appendix contains the following material:

The Appendix below has the following contents. Appendix C.2 presents a brief summary of the selected countries and country-years for electoral participation dataset and civil society participation dataset that are based on World Value Survey data. Appendix C.2 also presents comprehensive tables and figures with descriptive statistics including all key variables of both datasets. Appendix C.3 presents the results from the main models in table-format and shows the results of the main models with disposable Gini as the main context variable.
Appendix C.4 presents additional robustness tests for the prediction of voting (Electoral Participation Dataset) that account for various coding decisions, including the definition of individual income and additional measures for income inequality, as well as regression analysis based on multiple imputation of the data.
Appendix C.5 presents additional robustness tests for the prediction of civil society participation in authoritarian regimes (Civil Society Participation Dataset) that account for various coding decisions, including the definition of individual income and additional measures for income inequality, as well as regression analysis based on multiple imputation of the data.

The **replication data** for this article is available at Harvard Dataverse:

https://doi.org/10.7910/DVN/SMGOZH

C.1 Theoretical model

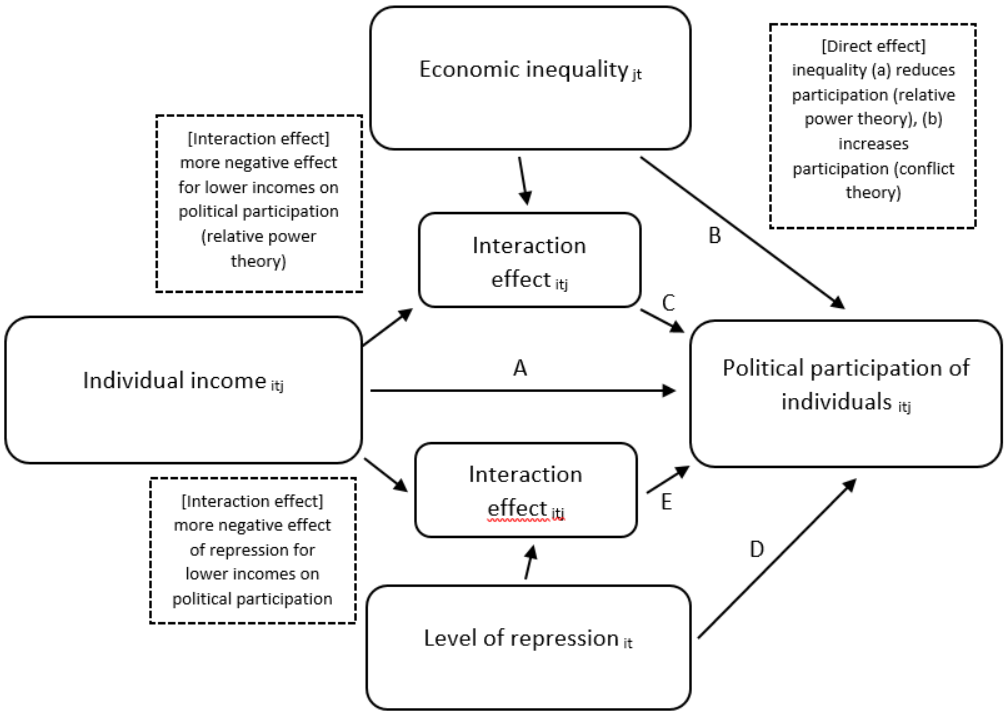


Figure C.1: Connection between inequality and political participation

Notes: This figure shows the main channels of influence among economic inequality, income, repression and political participation as examined in this article. Line A represents the direct effect of individual income on political participation, indicating that a higher income should result in greater political participation in accordance with the Resource and the Relative Power Theories. Line B shows the direct effects of economic inequality on participation. The Conflict Theory predicts that increasing inequality results in greater political participation, while the Relative Power Theory predicts that increasing inequality has a negative effect on participation, based on the interaction between income and inequality (line C). The Relative Power Theory predicts that economic inequality has a more negative effect for lower incomes. In contrast, the Resource Theory predicts that the effect of individual income is larger than the effect of interaction or inequality. Line D shows the effect of repression on political participation as mentioned in our theoretical argument. Line E shows the interaction between repression and individual income.

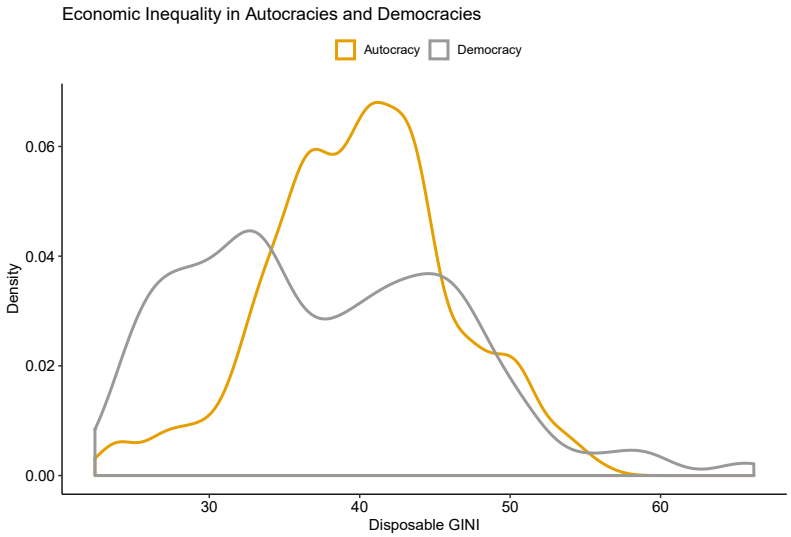


Figure C.2: Inequality across Democracies and Autocracies since 2000.

Notes: Based on V-Dem v2x_regime classification and SWIID 8.3 data by Solt (2020).

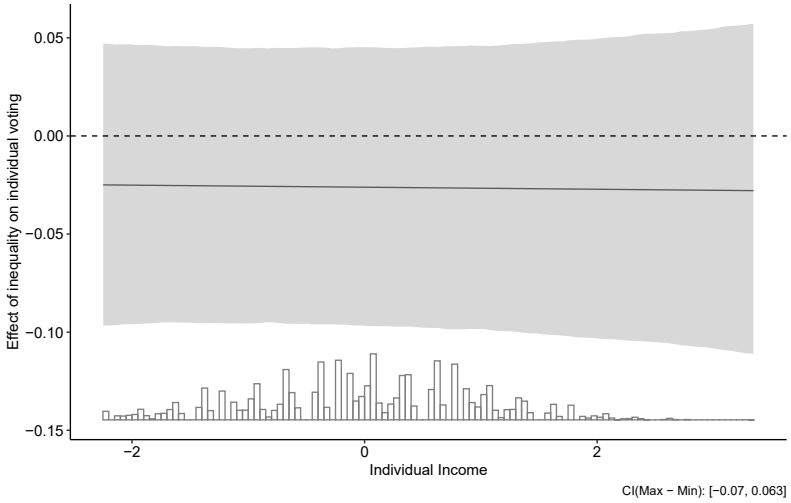


Figure C.3: Estimated Coefficients of Inequality by Individual Income.

Notes: Based on Model 6 in Figure 4.1. Conditional effects of individual income and market inequality. The lines represent the estimated change in the logged odds of the dependent. The shaded regions show the adjusted 95% confidence intervals.

C.2 Countries and years included in the Electoral Participation / Civil Society Participation datasets

Table C.1: Countries and Years included in the Electoral Participation (Voting) Dataset, *Notes: World Value Survey wave 5-6.*

Country	**Year(s)**
Algeria	2014[1]
Armenia	2011
Azerbaijan	2011[2]
Belarus	2011
Egypt	2008, 2012
Ethiopia	2007
Haiti	2016[3]
Iraq	2006, 2013
Jordan	2014
Kazakhstan	2011
Kyrgyzstan	2011
Malaysia	2006, 2012
Morocco	2007, 2011
Nigeria	2012[4]
Pakistan	2012[5]
Palestine	2012
Russia	2006, 2011
Rwanda	2012
Singapore	2012
Thailand	2007, 2013
Vietnam	2006
Yemen	2014
Zimbabwe	2012
22 countries	**28 country-years**

The following country-years are excluded because there is no information on the macro-level variables from Solt and Coppedge et al.: Hong Kong 2014, Kuwait 2014, Lebanon 2013, Libya 2014 for the Electoral Participation dataset; China 1990, Croatia 1996, Georgia 1996, Hong Kong 2014, Jordan 2007, Kuwait 2014, Lebanon 2013, Libya 2014, Mexico 1990, Russia 1990, South Africa 1982, South Korea 1982, Uzbekistan 2011, Zanzibar 2001 for the Civil Society Participation dataset.

[2]Gini for Algeria 2011.
[3]Gini for Azerbaijan 2008.
[4]Gini for Haiti 2012.
[5]Gini for Nigeria 2011.
[6]Gini for Algeria 2011.
[7]Gini for Azerbaijan 2008.
[8]Gini for Haiti 2012.
[9]Gini for Nigeria 2011.

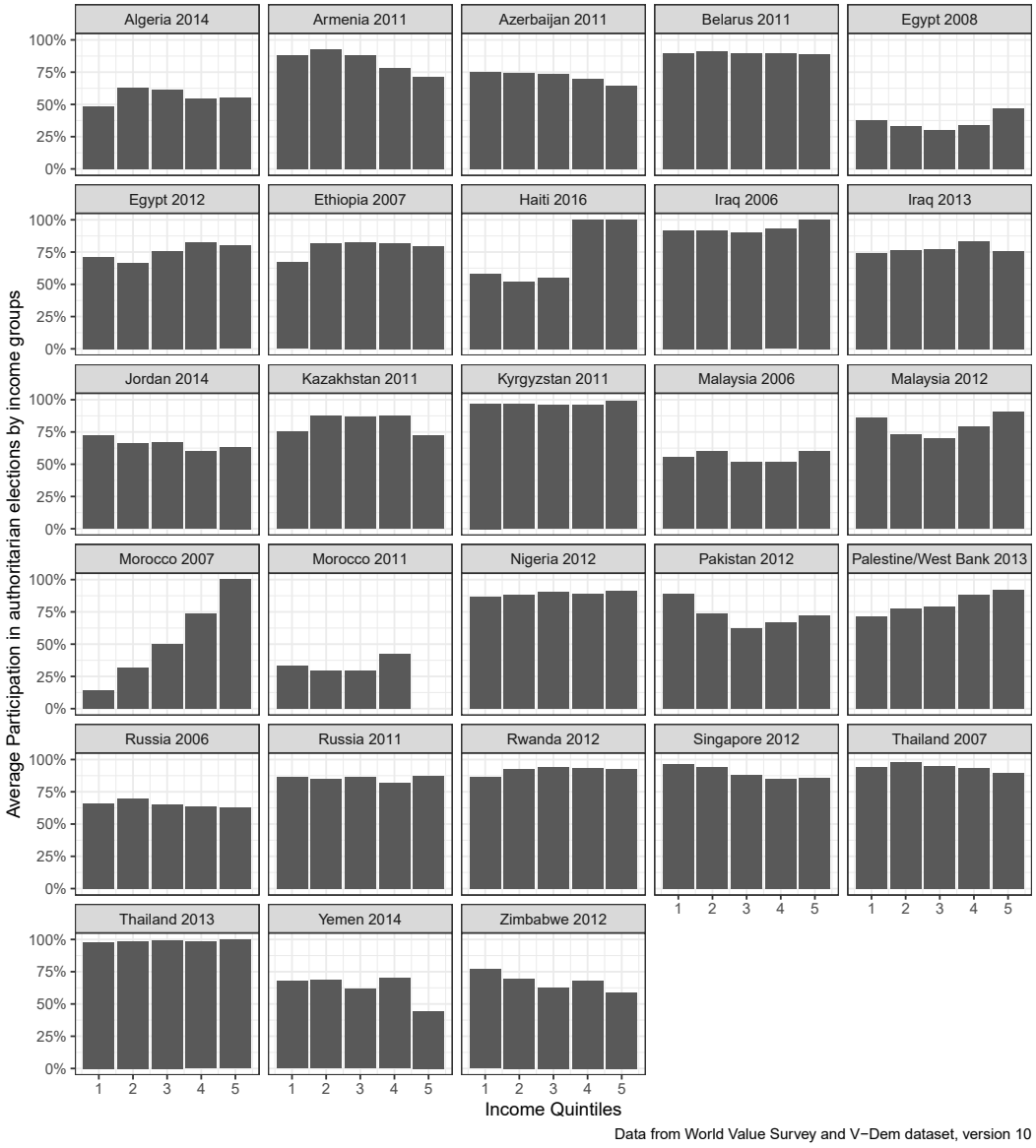


Figure C.4: Individual Income and Voting Likelihood in Authoritarian Regimes

Table C.2: Countries and Years included in the Civil Society Participation Dataset
Notes: World Value Survey wave 2-6.

Country	Year(s)
Albania	1998, 2002
Algeria	2002, 2014[6]
Armenia	1997, 2011
Azerbaijan	1997, 2011[7]
Bangladesh	2002
Belarus	2011
China	1995, 2001, 2007, 2013
Egypt	2008, 2012
Ethiopia	2007
Haiti	2016[8]
Hong Kong	2005
Iran	2007
Iraq	2013
Jordan	2014
Kazakhstan	2011
Kyrgyzstan	2003, 2011
Malaysia	2006, 2012
Morocco	2001, 2007, 2011
Nigeria	1995, 2012[9]
North Macedonia	1998, 2011
Pakistan	2012
Palestina (West Bank)m	2013
Peru	1996
Qatar	2010
Russia	1995, 2006, 2011
Rwanda	2007, 2012
Singapore	2002, 2012
Taiwan	1994
Tanzania	2001
Thailand	2007, 2013
Uganda	2001
Vietnam	2001, 2006
Yemen	2014
Zimbabwe	2001, 2012
34 countries	**54 country-years**

Table C.3: List of countries with compulsory voting

Country	Year introduced	Enforced in practice	Type of sanctions
Egypt	1956	No	‘‘Non-voter has to provide a legitimate reason for his/her abstention to avoid further sanctions. The non-voter faces a fine sanction.’’ (IDEA 2019)
Singapore	N/A	Yes	‘‘The non-voter is removed from the voter register until he/she reapplies and provides a reason. Fee applies only if the voter does not have valid reason for not voting. The non-voter is also disqualified from being a candidate at any subsequent Presidential or Parliamentary election.’’ (IDEA 2019)
Thailand	N/A	No	No sanction

Source: IDEA Voter Turnout Database (2019)

Table C.4: Summary Statistics for Electoral Participation Dataset

Statistic	N	Mean	Median	Min	Max	St. Dev.
Male	35,678	1.518	2	1	2	0.500
Age (centered)	35,678	−0.000	−0.175	−2.867	6.429	1.390
Education (centered)	35,678	−0.000	−0.232	−5.194	4.476	2.032
Children	35,678	0.665	1	0	1	0.472
Unemployed	35,678	0.095	0	0	1	0.293
Income Quintiles	35,678	−0.000	0.016	−2.248	3.344	0.952
Market Gini (c)	35,678	−0.000	1.354	−10.446	14.554	6.568
Disp. Gini (c)	35,678	−0.000	1.349	−10.151	10.949	6.172
Clean elections (c)	35,678	−0.000	0.028	−0.338	0.487	0.188
Vote Buying (c)	35,678	−0.000	−0.051	−1.836	2.544	1.068
GDP pc log (c)	35,678	0.000	0.248	−2.243	2.000	1.000
Regime Support Group	35,678	−0.000	−0.026	−0.226	0.524	0.176
Democratic Experience	35,678	−0.000	−0.082	−0.082	0.559	0.170
Vote	35,678	0.760	1	0	1	0.427

Notes: World Value Survey wave 5-6.

Table C.5: Summary Statistics for Civil Society Participation Dataset

Statistic	N	Mean	Median	Min	Max	St. Dev.
Male	65,713	1.510	2	1	2	0.500
Age (centered)	65,713	−0.000	−0.178	−2.864	6.429	1.387
Education (centered)	65,713	−0.000	−0.143	−5.194	5.303	2.015
Children	65,713	0.685	1	0	1	0.465
Unemployed	65,713	0.097	0	0	1	0.295
Income Quintiles	65,713	−0.000	0.053	−2.554	3.343	0.975
Market Gini (c)	65,713	0.000	0.061	−13.439	13.761	5.985
Disp. Gini (c)	65,713	0.000	0.221	−13.279	12.621	5.776
CSO repression (c)	65,713	0.000	0.133	−2.088	2.842	1.090
GDP pc log (c)	65,713	−0.000	−0.016	−1.436	1.614	0.787
Regime Support Group	65,713	−0.000	−0.003	−0.225	0.525	0.191
Democratic Experience	65,713	−0.000	−0.087	−0.087	0.554	0.180
Civil Society Participation	65,713	0.450	0	0	1	0.497

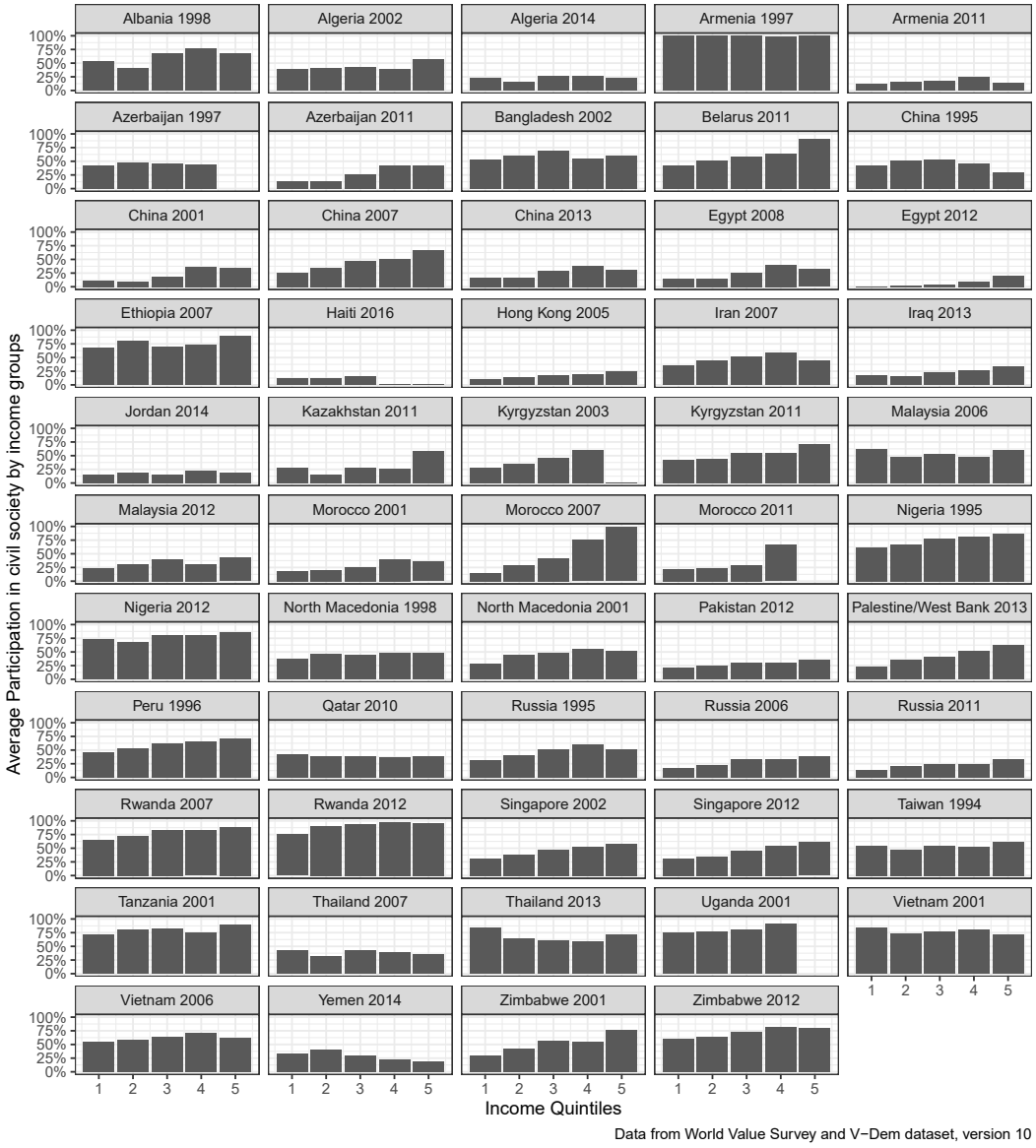


Figure C.5: Individual Income and Civil Society Participation Likelihood in Authoritarian Regimes

C.3 Main models

C.3.1 Predicting voting: main models

Table C.6: Main Models Voting

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7
(Intercept)	1.34***	1.47***	1.46***	1.49***	1.51***	1.51***	1.53***
	(0.23)	(0.24)	(0.24)	(0.21)	(0.22)	(0.22)	(0.22)
Male		−0.27***	−0.27***	−0.26***	−0.26***	−0.26***	−0.26***
		(0.03)	(0.03)	(0.03)	(0.03)	(0.03)	(0.03)
Age(centered)		0.39***	0.39***	0.39***	0.39***	0.39***	0.39***
		(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)
Education(centered)		0.06***	0.06***	0.06***	0.06***	0.06***	0.06***
		(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)
Children		0.61***	0.61***	0.61***	0.61***	0.61***	0.61***
		(0.03)	(0.03)	(0.03)	(0.03)	(0.03)	(0.03)
Unemployed		0.01	0.01	0.01	0.01	0.01	0.01
		(0.05)	(0.05)	(0.05)	(0.05)	(0.05)	(0.05)
Income quintiles (centered)		0.01	0.01	0.01	0.04	0.04	0.04
		(0.02)	(0.02)	(0.02)	(0.04)	(0.04)	(0.04)
Inequality (centered)			−0.02	−0.03	−0.03	−0.03	
			(0.04)	(0.04)	(0.04)	(0.04)	
Fairness elections (centered)				2.35	2.59	2.60	2.22
				(1.59)	(1.71)	(1.81)	(1.67)
GDP pc log (centered)				−0.28	−0.24	−0.24	−0.17
				(0.24)	(0.25)	(0.26)	(0.23)
Vote Buying (centered)				0.01	0.02	0.04	0.11
				(0.24)	(0.25)	(0.26)	(0.24)
Previous Dem. Experience (centered)				2.80*	2.63	2.64	2.40
				(1.39)	(1.45)	(1.53)	(1.44)
Regime Support Group (centered)				1.96	1.59	1.60	1.46
				(1.19)	(1.25)	(1.28)	(1.22)
Income * Inequality						−0.00	
						(0.01)	
Income * Fairness election						0.03	0.04
						(0.04)	(0.04)
Income * Vote Buying							−0.11
							(0.24)
AIC	33472.60	31087.11	31088.92	31090.00	31042.15	31045.56	31043.86
BIC	33498.05	31163.45	31173.75	31217.23	31186.35	31206.73	31196.54

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7
Log Likelihood	-16733.30	-15534.55	-15534.46	-15530.00	-15504.07	-15503.78	-15503.93
Num. obs.	35678	35678	35678	35678	35678	35678	35678
Num. groups: S025	28	28	28	28	28	28	28
Num. groups: S003	22	22	22	22	22	22	22
Var: (Country-years)	0.55	0.63	0.63	0.37	0.31	0.30	0.30
Var: (Country)	0.63	0.65	0.64	0.60	0.71	0.71	0.75
Level-2 Var Income					0.03	0.03	0.03
Level-2 Cov Income					0.03	0.03	0.03

Sources: Author's calculation with lme4 R-Packages, WVS, V-Dem and Solt 2020 data.
Notes: $^{***}p < 0.001$, $^{**}p < 0.01$, $^{*}p < 0.05$, Log Odds Coefficients (unstandardized).

Table C.7: Main Models Voting (Disp. Inequality)

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7
(Intercept)	1.34***	1.47***	1.46***	1.49***	1.51***	1.51***	1.53***
	(0.23)	(0.24)	(0.24)	(0.21)	(0.22)	(0.22)	(0.22)
Male		−0.27***	−0.27***	−0.26***	−0.26***	−0.26***	−0.26***
		(0.03)	(0.03)	(0.03)	(0.03)	(0.03)	(0.03)
Age(centered)		0.39***	0.39***	0.39***	0.39***	0.39***	0.39***
		(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)
Education(centered)		0.06***	0.06***	0.06***	0.06***	0.06***	0.06***
		(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)
Children		0.61***	0.61***	0.61***	0.61***	0.61***	0.61***
		(0.03)	(0.03)	(0.03)	(0.03)	(0.03)	(0.03)
Unemployed		0.01	0.01	0.01	0.01	0.01	0.01
		(0.05)	(0.05)	(0.05)	(0.05)	(0.05)	(0.05)
Income quintiles (centered)		0.01	0.01	0.01	0.04	0.04	0.04
		(0.02)	(0.02)	(0.02)	(0.04)	(0.04)	(0.04)
Inequality (centered)			−0.02	−0.04	−0.03	−0.03	
			(0.04)	(0.04)	(0.04)	(0.04)	
Fairness elections (centered)				2.36	2.60	2.61	2.22
				(1.49)	(1.65)	(1.71)	(1.67)
GDP pc log (centered)				−0.28	−0.24	−0.24	−0.17
				(0.24)	(0.24)	(0.25)	(0.23)
Vote Buying (centered)				0.01	0.01	0.03	0.11

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7
				(0.24)	(0.24)	(0.25)	(0.24)
Previous Dem. Experience (centered)				2.84*	2.67	2.68	2.40
				(1.30)	(1.40)	(1.43)	(1.44)
Regime Support Group (centered)				2.02	1.64	1.65	1.46
				(1.15)	(1.26)	(1.25)	(1.22)
Income * Inequality						−0.00	
						(0.01)	
Income * Fairness election						0.03	0.04
						(0.04)	(0.04)
Income * Vote Buying							−0.11
							(0.24)
AIC	33472.60	31087.11	31088.94	31089.85	31042.04	31045.46	31043.86
BIC	33498.05	31163.45	31173.77	31217.08	31186.24	31206.62	31196.54
Log Likelihood	-16733.30	-15534.55	-15534.47	-15529.92	-15504.02	-15503.73	-15503.93
Num. obs.	35678	35678	35678	35678	35678	35678	35678
Num. groups: S025	28	28	28	28	28	28	28
Num. groups: S003	22	22	22	22	22	22	22
Var: (Country-years)	0.55	0.63	0.63	0.37	0.31	0.31	0.30
Var: (Country)	0.63	0.65	0.64	0.59	0.70	0.70	0.75
Level-2 Var Income					0.03	0.03	0.03
Level-2 Cov Income					0.03	0.03	0.03

Sources: Author's calculation with lme4 R-Packages, WVS, V-Dem and Solt 2020 data.

Notes: $^{***}p < 0.001$, $^{**}p < 0.01$, $^{*}p < 0.05$, Log Odds Coefficients (unstandardized).

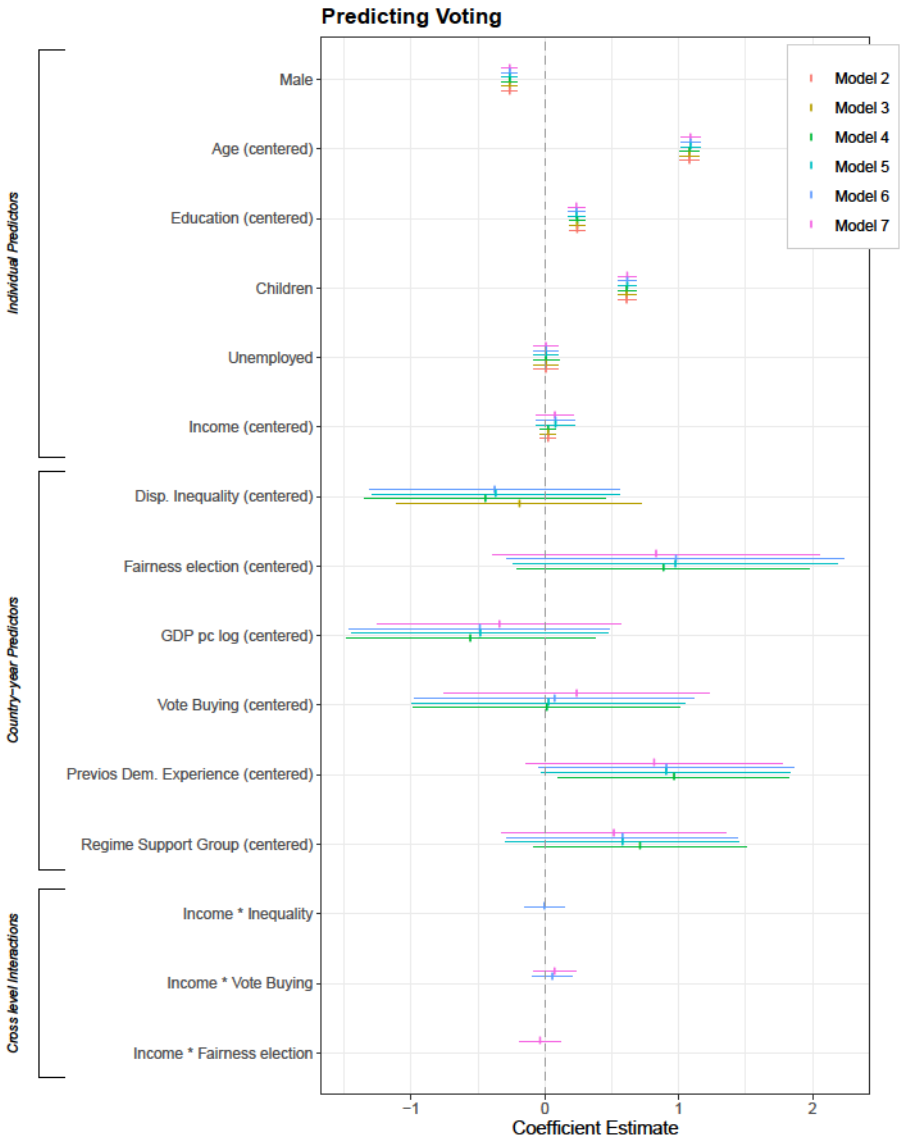


Figure C.6: Effect of disp. inequality on electoral participation (Dot-whisker plot)
Notes: The dots represent estimated change in the logged odds of voting (dependent variable) occurring for a change of two standard deviations in the predictor variables. The whiskers show the 95% confidence intervals of these estimates.

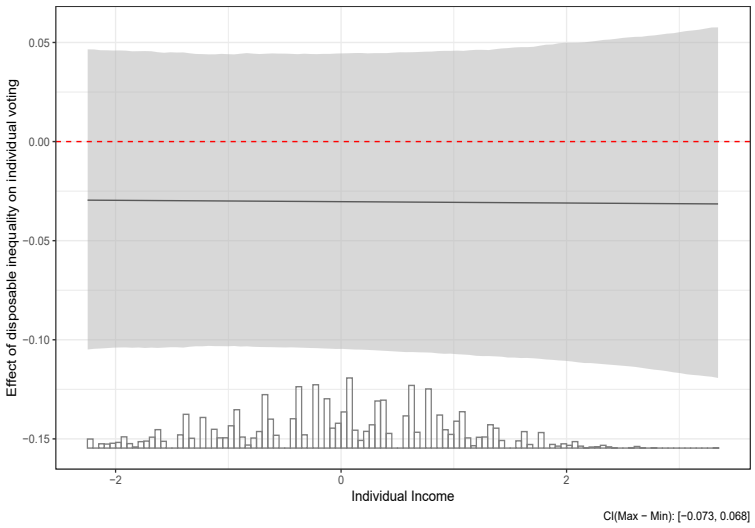


Figure C.7: Interaction of income and inequality on electoral participation (disposable inequality)

Notes: Based on Model 6 in Figure C.6. Conditional effects of individual income and market inequality. Lines represent the estimated change in the logged odds of the dependent. Shaded regions shows adjusted 95% confidence intervals.

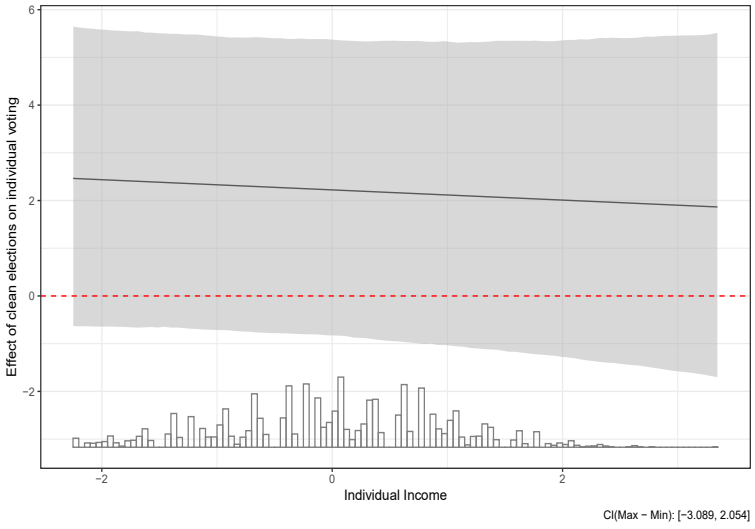


Figure C.8: Interaction between income and clean elections on electoral participation

Notes: Based on Model 6 in Figure C.6. The dots represent estimated change in the logged odds of voting (dependent variable) occurring for a change of two standard deviations in the predictor variables. The whiskers show the 95% confidence intervals of these estimates.

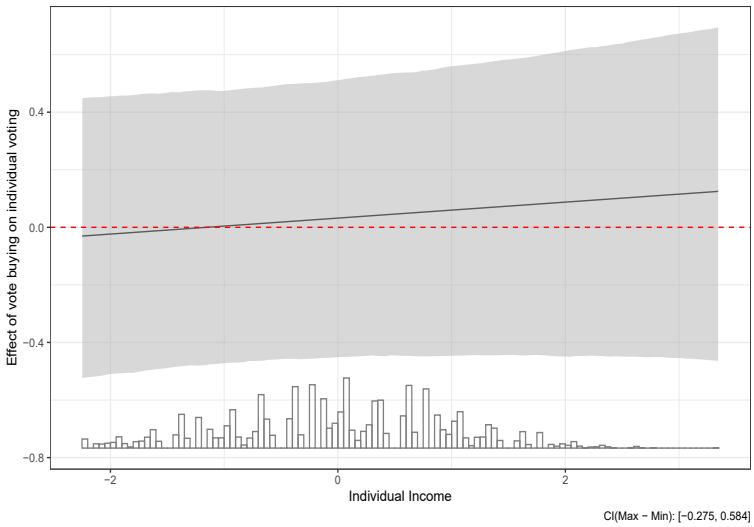


Figure C.9: Interaction between income and vote buying on electoral participation

Notes: Based on Model 7 in Figure C.6. The dots represent estimated change in the logged odds of voting (dependent variable) occurring for a change of two standard deviations in the predictor variables. The whiskers show the 95% confidence intervals of these estimates.

C.3.2 Predicting civil society participation: main models

Table C.8: Main Models Voting

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7
(Intercept)	−0.20	0.39*	0.39*	0.38*	0.38*	0.38*	0.38*
	(0.17)	(0.19)	(0.19)	(0.15)	(0.15)	(0.15)	(0.15)
Male		−0.37***	−0.37***	−0.37***	−0.36***	−0.36***	−0.36***
		(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)
Age(centered)		−0.04***	−0.04***	−0.04***	−0.04***	−0.04***	−0.04***
		(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)
Education(centered)		0.18***	0.18***	0.18***	0.18***	0.18***	0.18***
		(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Children		−0.02	−0.02	−0.02	−0.02	−0.02	−0.02
		(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)
Unemployed		−0.34***	−0.34***	−0.34***	−0.34***	−0.35***	−0.34***
		(0.03)	(0.03)	(0.03)	(0.03)	(0.03)	(0.03)
Income quintiles (centered)		0.13***	0.13***	0.13***	0.15***	0.15***	0.15***
		(0.01)	(0.01)	(0.01)	(0.03)	(0.03)	(0.03)
Inequality (centered)			0.03	−0.01	0.01	−0.01	
			(0.03)	(0.02)	(0.02)	(0.03)	
CSO repression (centered				0.17	0.06	0.18	0.17
				(0.19)	(0.19)	(0.19)	(0.19)
GDP pc log (centered)				−0.66***	−0.65***	−0.65***	−0.66***
				(0.14)	(0.14)	(0.14)	(0.13)
Previous Dem. Experience (centered)				2.28**	2.20*	2.22**	2.23*
				(0.88)	(0.87)	(0.82)	(0.90)
Regime Support Group (centered)				2.34**	2.37**	2.38***	2.40**
				(0.77)	(0.73)	(0.72)	(0.75)
Income * Inequality						0.01	
						(0.00)	
Income * CSO repression						−0.07	−0.06
						(0.04)	(0.04)
AIC	76160.03	73211.78	73212.83	73198.48	72939.02	72938.32	72936.83
BIC	76187.31	73293.62	73303.76	73325.78	73084.51	73102.00	73082.32
Log Likelihood	-38077.02	-36596.89	-36596.42	-36585.24	-36453.51	-36451.16	-36452.42
Num. obs.	65713	65713	65713	65713	65713	65713	65713
Num. groups: S025	54	54	54	54	54	54	54
Num. groups: S003	34	34	34	34	34	34	34
Var: S025 (Country-years)	1.49	1.57	1.60	1.12	1.16	1.15	1.15
Var: S003 (Country)	0.13	0.17	0.11	0.00	0.00	0.00	0.00

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7
Level-2 Var Income					0.04	0.04	0.04
Level-2 Cov Income					-0.08	-0.07	-0.08

Sources: Author's calculation with lme4 R-Packages, WVS, V-Dem and Solt 2019 data.

Notes: $^{***}p < 0.001$, $^{**}p < 0.01$, $^{*}p < 0.05$, Log Odds Coefficients (unstandardized).

Table C.9: Main Models Voting

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7
(Intercept)	−0.20	0.39*	0.39*	0.38*	0.38*	0.38*	0.38*
	(0.17)	(0.19)	(0.19)	(0.15)	(0.15)	(0.15)	(0.15)
Male		−0.37***	−0.37***	−0.37***	−0.36***	−0.36***	−0.36***
		(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)
Age(centered)		−0.04***	−0.04***	−0.04***	−0.04***	−0.04***	−0.04***
		(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)
Education(centered)		0.18***	0.18***	0.18***	0.18***	0.18***	0.18***
		(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Children		−0.02	−0.02	−0.02	−0.02	−0.02	−0.02
		(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)
Unemployed		−0.34***	−0.34***	−0.34***	−0.34***	−0.35***	−0.34***
		(0.03)	(0.03)	(0.03)	(0.03)	(0.03)	(0.03)
Income quintiles (centered)		0.13***	0.13***	0.13***	0.15***	0.15***	0.15***
		(0.01)	(0.01)	(0.01)	(0.03)	(0.03)	(0.03)
Inequality (centered)			0.03	−0.00	0.01	−0.00	
			(0.03)	(0.03)	(0.02)	(0.03)	
CSO repression (centered				0.16	0.06	0.17	0.17
				(0.19)	(0.19)	(0.19)	(0.19)
GDP pc log (centered)				−0.66***	−0.65***	−0.65***	−0.66***
				(0.14)	(0.14)	(0.14)	(0.13)
Previous Dem. Experience (centered)				2.27*	2.18**	2.20*	2.23*
				(0.94)	(0.85)	(0.86)	(0.90)
Regime Support Group (centered)				2.33**	2.36**	2.37**	2.40**
				(0.78)	(0.72)	(0.74)	(0.75)
Income * Inequality						0.01	
						(0.00)	
Income * CSO repression						−0.07	−0.06
						(0.04)	(0.04)

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7
AIC	76160.03	73211.78	73212.67	73198.52	72938.94	72938.09	72936.83
BIC	76187.31	73293.62	73303.60	73325.82	73084.43	73101.76	73082.32
Log Likelihood	-38077.02	-36596.89	-36596.33	-36585.26	-36453.47	-36451.04	-36452.42
Num. obs.	65713	65713	65713	65713	65713	65713	65713
Num. groups: S025	54	54	54	54	54	54	54
Num. groups: S003	34	34	34	34	34	34	34
Var: S025 (Country-years)	1.49	1.57	1.59	1.12	1.17	1.15	1.15
Var: S003 (Country)	0.13	0.17	0.10	0.00	0.00	0.00	0.00
Level-2 Var Income					0.04	0.04	0.04
Level-2 Cov Income					-0.08	-0.08	-0.08

Sources: Author's calculation with lme4 R-Packages, WVS, V-Dem and Solt 2019 data.

Notes: $^{***}p < 0.001$, $^{**}p < 0.01$, $^{*}p < 0.05$, Log Odds Coefficients (unstandardized).

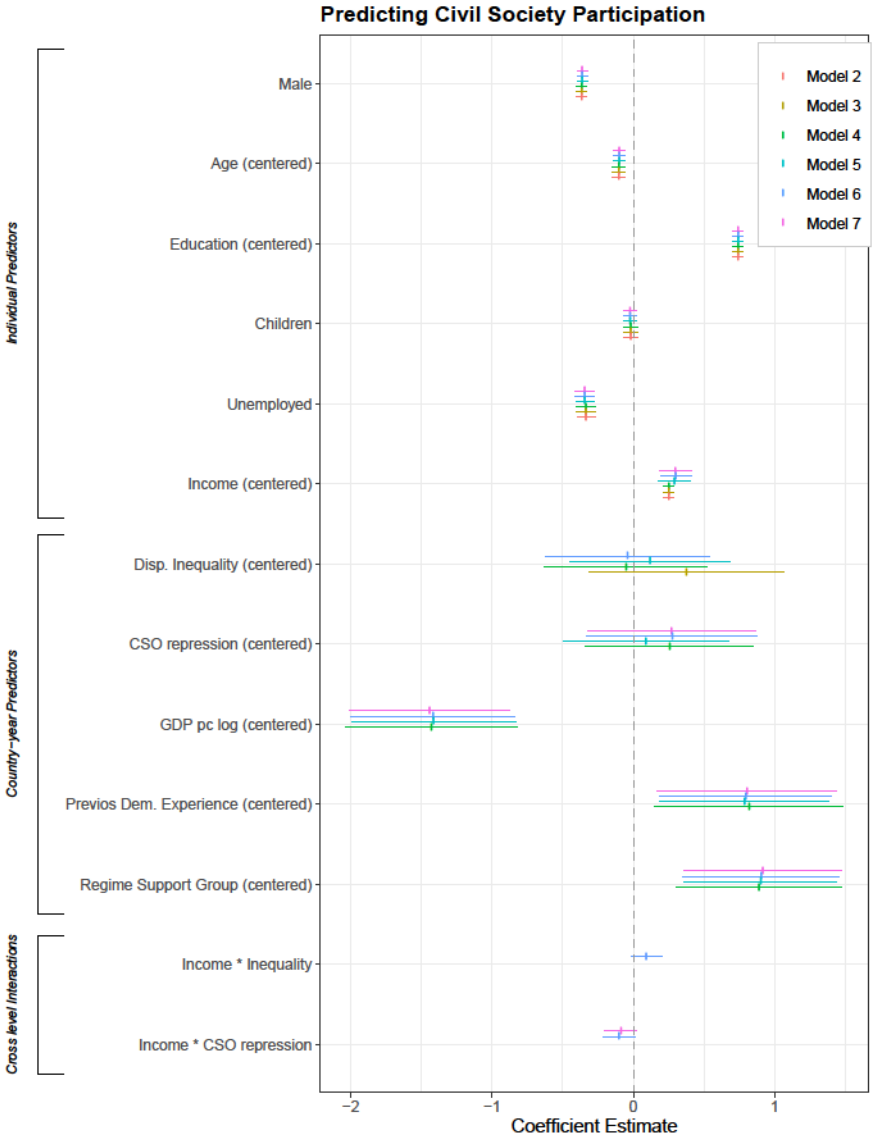


Figure C.10: Effect of disp. inequality on civil society participation (Dot-whisker plot)

Notes: The dots represent estimated change in the logged odds of civil society participation (dependent variable) occurring for a change of two standard deviations in the predictor variables. The whiskers show the % confidence intervals of these estimates.

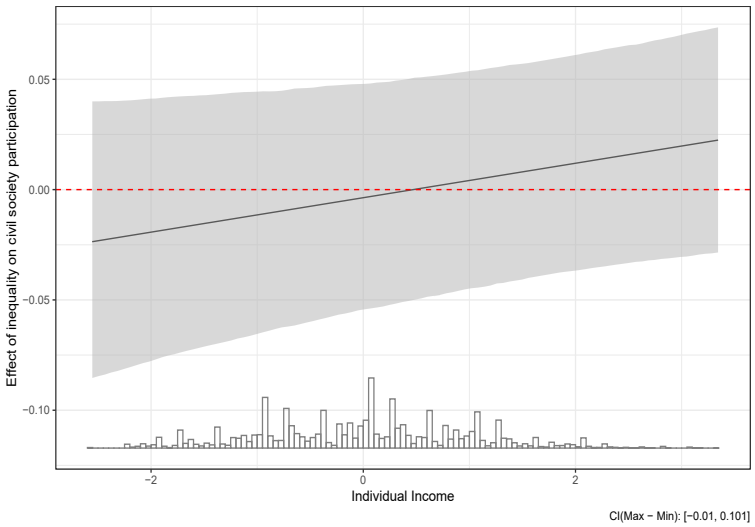


Figure C.11: Interaction of Income and Inequality on civil society participation (disposable inequality)

Notes: Based on Model 6 in Figure C.10. Conditional effects of individual income and market inequality. Lines represent the estimated change in the logged odds of the dependent. Shaded regions shows adjusted 95% confidence intervals.

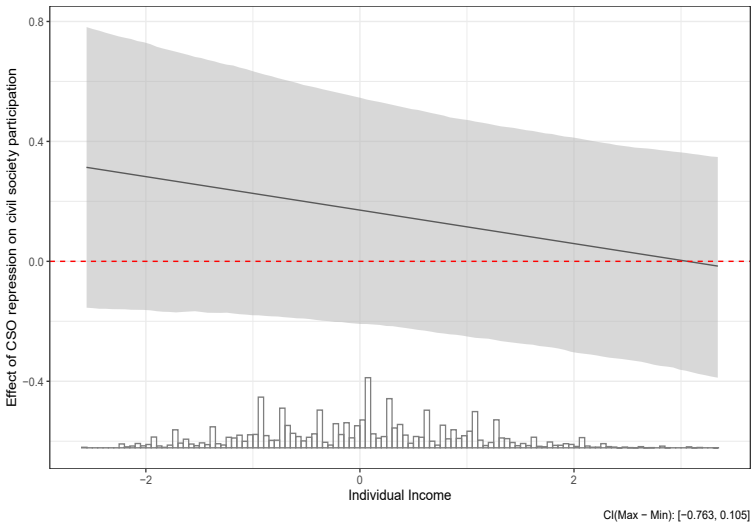


Figure C.12: Interaction of CSO repression and Income on civil society participation (disposable inequality)

Notes: Based on Model 7 in Figure C.10. Conditional effects of individual income and market inequality. Lines represent the estimated change in the logged odds of the dependent. Shaded regions shows adjusted 95% confidence intervals.

C.4 Predicting voting: additional models and robustness tests

Appendix C.4 presents additional robustness tests that account for various coding decisions, including the definition of individual income and additional measures for income inequality.
Section C.4.1 uses income deciles instead of income quintiles and market inequality for estimating the effect of income and inequality on electoral participation.
Section C.4.2 uses income deciles instead of income quintiles and disposable inequality for estimating the effect of income and inequality on electoral participation.
Section C.4.3 uses tests if the results of the main models hold when using UNU-WIDER Gini coefficients instead of the superior Gini's from Solt (2019).
Section C.4.4 controls for compulsory voting in authoritarian regimes. This models add compulsory voting as a further country-year control variable. The main results hold. Compulsory voting has a positive but statistically insignificant effect on voting likelihood. Countries with compulsory voting are Egypt, Thailand, and Singapore. Compare Table C.3.
Section C.4.5 employs multiple imputation of missings. We perform multiple imputation for all individual independent variables and controls and use country IDs to tell Amelia different patterns of missings between countries.

C.4.1 Robustness test with income deciles and market inequality

Table C.10: Robustness Test with Income Deciles and Market Inequality

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7
(Intercept)	1.34***	1.46***	1.46***	1.49***	1.51***	1.51***	1.53***
	(0.23)	(0.24)	(0.24)	(0.21)	(0.22)	(0.22)	(0.22)
Male		−0.27***	−0.26***	−0.26***	−0.26***	−0.26***	−0.26***
		(0.03)	(0.03)	(0.03)	(0.03)	(0.03)	(0.03)
Age(centered)		0.39***	0.39***	0.39***	0.39***	0.39***	0.39***
		(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)
Education(centered)		0.06***	0.06***	0.06***	0.06***	0.06***	0.06***
		(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)
Children		0.61***	0.61***	0.61***	0.61***	0.61***	0.61***
		(0.03)	(0.03)	(0.03)	(0.03)	(0.03)	(0.03)
Unemployed		0.01	0.01	0.01	0.01	0.01	0.01
		(0.05)	(0.05)	(0.05)	(0.05)	(0.05)	(0.05)
Income deciles (centered)		0.01	0.01	0.01	0.02	0.02	0.02
		(0.01)	(0.01)	(0.01)	(0.02)	(0.02)	(0.02)
Inequality (centered)			−0.02	−0.03	−0.03	−0.03	
			(0.04)	(0.04)	(0.04)	(0.04)	
Fairness elections (centered)				2.35	2.54	2.54	2.17
				(1.79)	(1.65)	(1.71)	(1.53)
GDP pc log (centered)				−0.28	−0.24	−0.24	−0.16
				(0.25)	(0.25)	(0.25)	(0.23)
Vote Buying (centered)				0.01	0.02	0.03	0.11
				(0.25)	(0.25)	(0.25)	(0.23)
Previous Dem. Experience (centered)				2.80	2.64	2.65	2.41
				(1.50)	(1.39)	(1.44)	(1.36)
Regime Support Group (centered)				1.96	1.66	1.67	1.50
				(1.28)	(1.27)	(1.28)	(1.17)
Income * Inequality						−0.00	
						(0.00)	
Income * Fairness election						0.02	0.02
						(0.02)	(0.02)
Income * Vote Buying							−0.08
							(0.13)
AIC	33472.60	31086.89	31088.70	31089.78	31025.28	31028.56	31026.77
BIC	33498.05	31163.23	31173.52	31217.01	31169.48	31189.73	31179.45
Log Likelihood	-16733.30	-15534.44	-15534.35	-15529.89	-15495.64	-15495.28	-15495.38
Num. obs.	35678	35678	35678	35678	35678	35678	35678

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7
Num. groups: S025	28	28	28	28	28	28	28
Num. groups: S003	22	22	22	22	22	22	22
Var: S025 (Country-years)	0.55	0.63	0.63	0.37	0.32	0.32	0.31
Var: S003 (Country)	0.63	0.65	0.64	0.60	0.69	0.69	0.73
Level-2 Var Income					0.01	0.01	0.01
Level-2 Cov Income					0.01	0.01	0.02

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

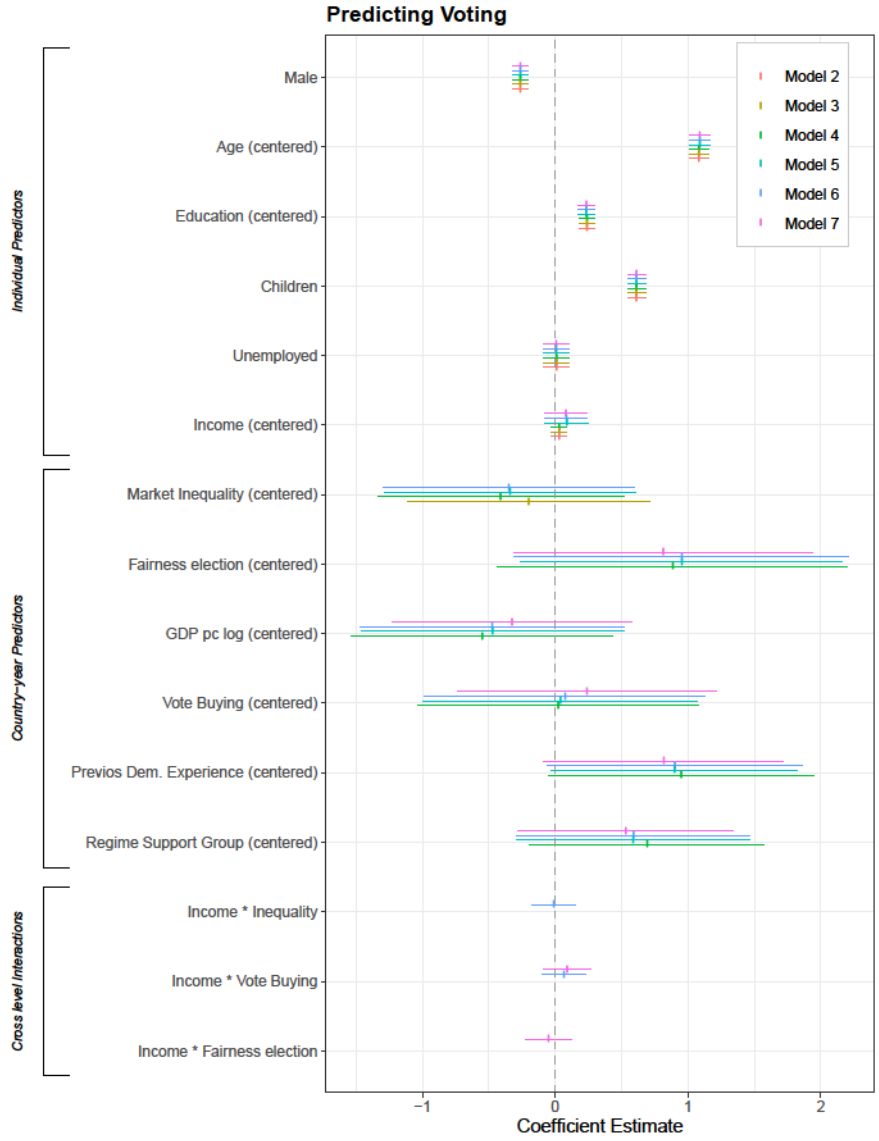


Figure C.13: Effect of market Inequality on electoral participation (Dot-whisker plot)

Note: The dots represent estimated change in the logged odds of electoral participation (dependent variable) occurring for a change of two standard deviations in the predictor variables. The whiskers show the 95% confidence intervals of these estimates.

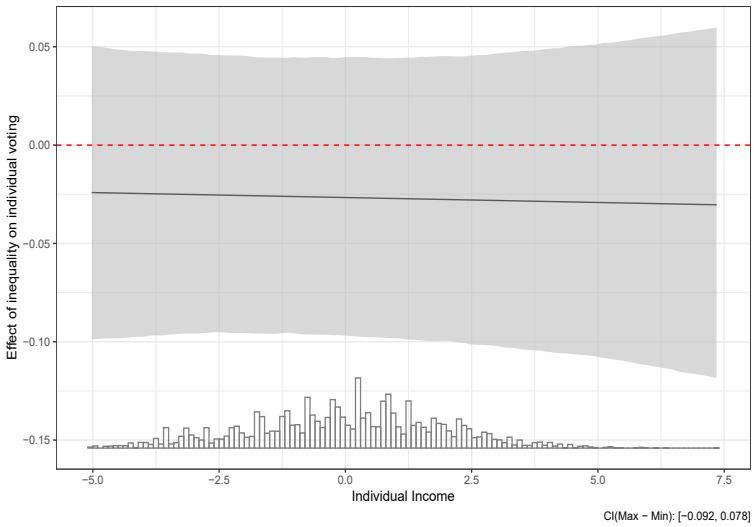


Figure C.14: Interaction of Income and Inequality on voting likelihood (market inequality)

Notes: Based on Model 6 in Figure C.13. Conditional effects of individual income and market inequality. Lines represent the estimated change in the logged odds of the dependent. Shaded regions shows adjusted 95% confidence intervals.

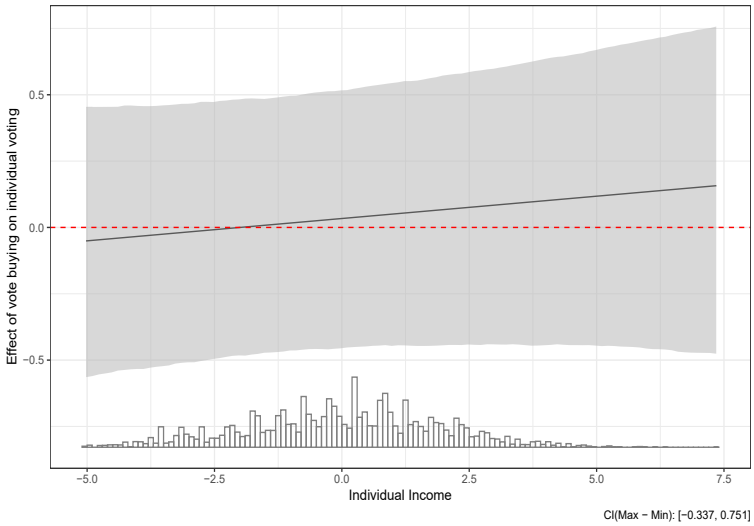


Figure C.15: Interaction of Income and vote buying on voting likelihood.

Notes: Based on Model 6 in Figure C.13. Conditional effects of individual income and vote buying. Lines represent the estimated change in the logged odds of the dependent. Shaded regions shows adjusted 95% confidence intervals.

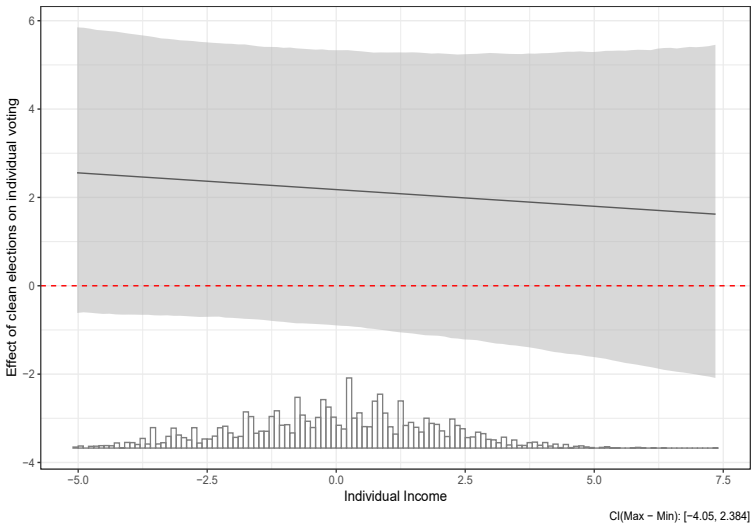


Figure C.16: Interaction of Income and clean elections on voting likelihood.

Notes: Based on Model 6 in Figure C.13. Conditional effects of individual income and clean elections. Lines represent the estimated change in the logged odds of the dependent. Shaded regions shows adjusted 95% confidence intervals.

C.4.2 Robustness test with income deciles and disp.inequality

Table C.11: Robustness Test with Income Deciles and Disp. Inequality

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7
(Intercept)	1.34***	1.46***	1.46***	1.49***	1.51***	1.51***	1.53***
	(0.23)	(0.24)	(0.24)	(0.21)	(0.22)	(0.22)	(0.22)
Male		−0.27***	−0.26***	−0.26***	−0.26***	−0.26***	−0.26***
		(0.03)	(0.03)	(0.03)	(0.03)	(0.03)	(0.03)
Age(centered)		0.39***	0.39***	0.39***	0.39***	0.39***	0.39***
		(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)
Education(centered)		0.06***	0.06***	0.06***	0.06***	0.06***	0.06***
		(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)
Children		0.61***	0.61***	0.61***	0.61***	0.61***	0.61***
		(0.03)	(0.03)	(0.03)	(0.03)	(0.03)	(0.03)
Unemployed		0.01	0.01	0.01	0.01	0.01	0.01
		(0.05)	(0.05)	(0.05)	(0.05)	(0.05)	(0.05)
Income deciles (centered)		0.01	0.01	0.01	0.02	0.02	0.02
		(0.01)	(0.01)	(0.01)	(0.02)	(0.02)	(0.02)
Inequality (centered)			−0.02	−0.04	−0.03	−0.03	
			(0.04)	(0.04)	(0.04)	(0.04)	
Fairness elections (centered)				2.36	2.54	2.54	2.17
				(1.70)	(1.70)	(1.74)	(1.53)
GDP pc log (centered)				−0.28	−0.24	−0.24	−0.16
				(0.24)	(0.25)	(0.25)	(0.23)
Vote Buying (centered)				0.01	0.01	0.03	0.11
				(0.25)	(0.25)	(0.25)	(0.23)
Previous Dem. Experience (centered)				2.84*	2.69	2.70	2.41
				(1.41)	(1.44)	(1.43)	(1.36)
Regime Support Group (centered)				2.02	1.71	1.72	1.50
				(1.25)	(1.30)	(1.28)	(1.17)
Income * Inequality						−0.00	
						(0.00)	
Income * Fairness election						0.02	0.02
						(0.02)	(0.02)
Income * Vote Buying							−0.08
							(0.13)
AIC	33472.60	31086.89	31088.72	31089.62	31025.16	31028.46	31026.77
BIC	33498.05	31163.23	31173.54	31216.86	31169.36	31189.62	31179.45
Log Likelihood	-16733.30	-15534.44	-15534.36	-15529.81	-15495.58	-15495.23	-15495.38
Num. obs.	35678	35678	35678	35678	35678	35678	35678

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7
Num. groups: S025	28	28	28	28	28	28	28
Num. groups: S003	22	22	22	22	22	22	22
Var: S025 (Country-years)	0.55	0.63	0.63	0.37	0.32	0.32	0.31
Var: S003 (Country)	0.63	0.65	0.64	0.59	0.68	0.68	0.73
Level-2 Var Income					0.01	0.01	0.01
Level-2 Cov Income					0.01	0.01	0.02

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

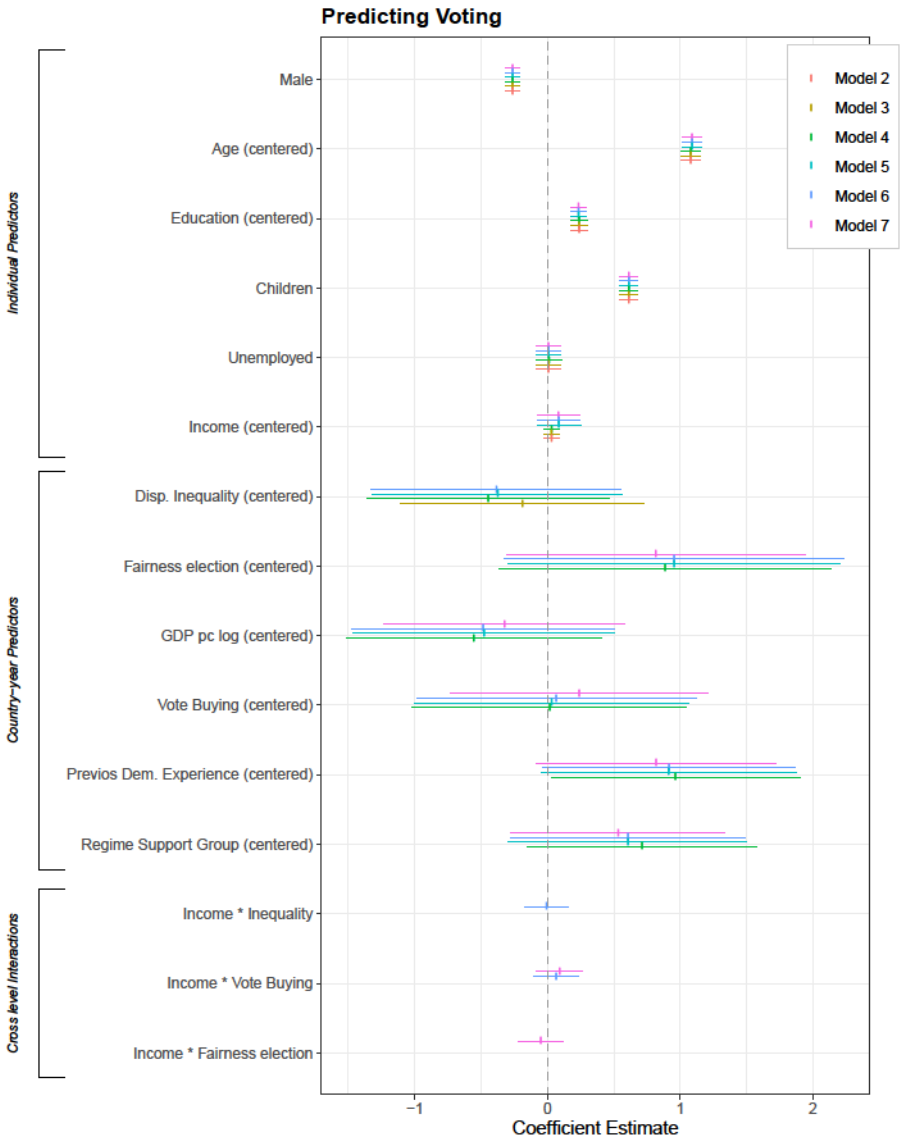


Figure C.17: Effect of disp. Inequality on electoral participation (Dot-whisker plot).

Notes: The dots represent estimated change in the logged odds of electoral participation (dependent variable) occurring for a change of two standard deviations in the predictor variables. The whiskers show the 95% confidence intervals of these estimates.

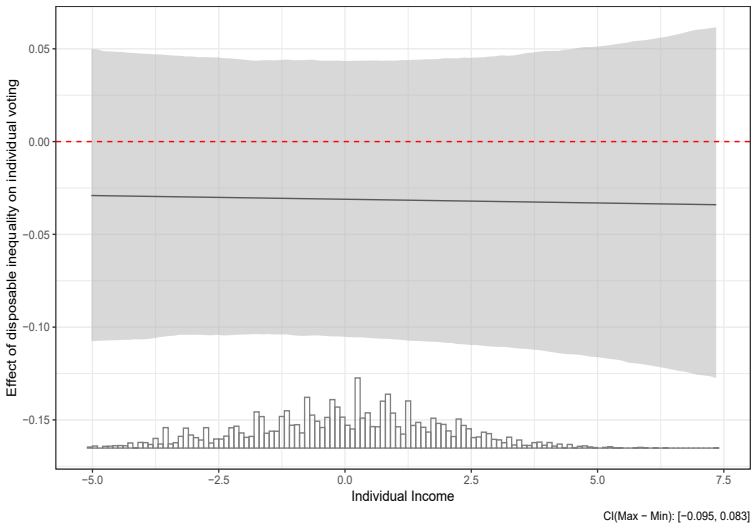


Figure C.18: Interaction of Income and Inequality on voting likelihood (disp. inequality)

Notes: Based on Model 6 in Figure C.17. Conditional effects of individual income and market inequality. Lines represent the estimated change in the logged odds of the dependent. Shaded regions shows adjusted 95% confidence intervals.

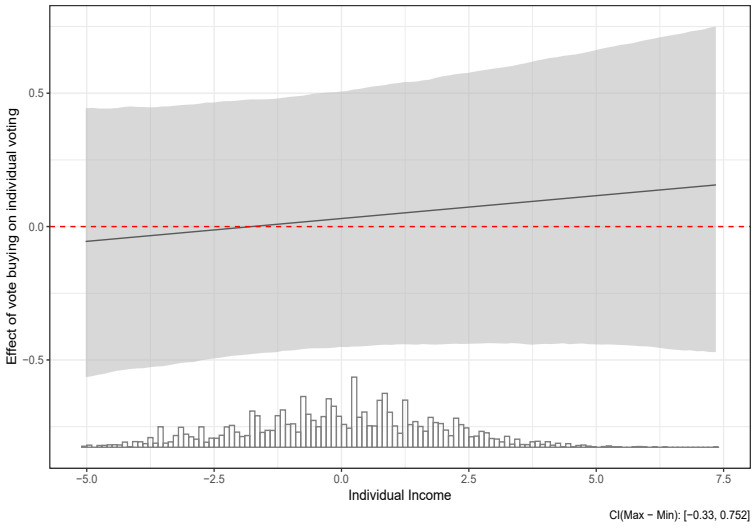


Figure C.19: Interaction of Income and vote buying on voting likelihood.

Notes: Based on Model 6 in Figure C.17. Conditional effects of individual income and vote buying. Lines represent the estimated change in the logged odds of the dependent. Shaded regions shows adjusted 95% confidence intervals.

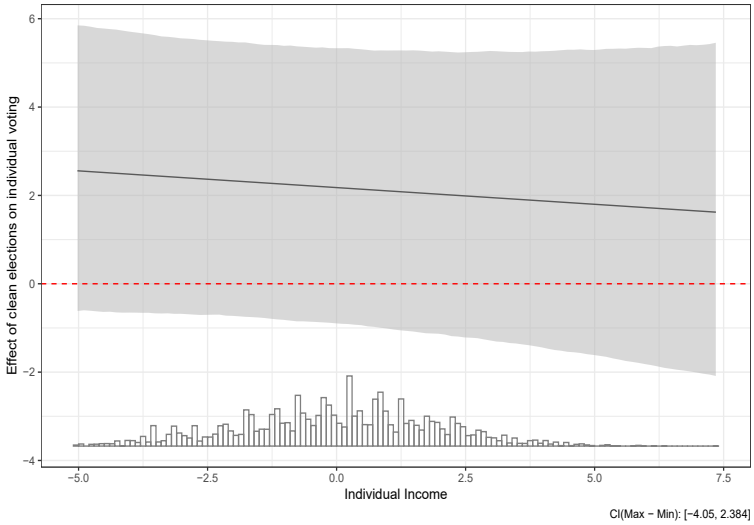


Figure C.20: Interaction of Income and clean elections on voting likelihood

Notes: Based on Model 6 in Figure C.17. Conditional effects of individual income and clean elections. Lines represent the estimated change in the logged odds of the dependent. Shaded regions shows adjusted 95% confidence intervals.

C.4.3 Robustness test with UNU-WIDER income inequality data

Table C.12: Robustness Test with UNU-WIDER Income Inequality data

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7
(Intercept)	1.32***	1.46***	1.45***	1.50***	1.52***	1.52***	1.52***
	(0.22)	(0.24)	(0.23)	(0.21)	(0.22)	(0.22)	(0.22)
Male		−0.27***	−0.27***	−0.27***	−0.27***	−0.27***	−0.27***
		(0.03)	(0.03)	(0.03)	(0.03)	(0.03)	(0.03)
Age(centered)		0.39***	0.39***	0.39***	0.39***	0.39***	0.39***
		(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)
Education(centered)		0.05***	0.05***	0.05***	0.05***	0.05***	0.05***
		(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)
Children		0.60***	0.60***	0.60***	0.60***	0.60***	0.60***
		(0.03)	(0.03)	(0.03)	(0.03)	(0.03)	(0.03)
Unemployed		0.03	0.03	0.03	0.03	0.03	0.03
		(0.05)	(0.05)	(0.05)	(0.05)	(0.05)	(0.05)
Income deciles (centered)		0.00	0.00	0.00	0.01	0.01	0.01
		(0.01)	(0.01)	(0.01)	(0.02)	(0.02)	(0.02)
Inequality (centered)			−0.01	−0.01	−0.00	−0.01	
			(0.02)	(0.02)	(0.02)	(0.02)	
Fairness elections (centered)				2.26	2.30	2.30	2.28
				(1.76)	(1.76)	(1.73)	(1.63)
GDP pc log (centered)				−0.21	−0.17	−0.17	−0.16
				(0.23)	(0.24)	(0.24)	(0.23)
Vote Buying (centered)				0.05	0.07	0.08	0.09
				(0.26)	(0.27)	(0.27)	(0.26)
Previous Dem. Experience (centered)				2.44	2.38	2.37	2.41
				(1.38)	(1.43)	(1.46)	(1.39)
Regime Support Group (centered)				1.79	1.53	1.52	1.53
				(1.13)	(1.18)	(1.18)	(1.13)
Income * Inequality						−0.00	
						(0.00)	
Income * Fairness election						0.01	0.01
						(0.02)	(0.03)
Income * Vote Buying							0.02
							(0.15)
AIC	33808.59	31398.81	31400.35	31402.19	31353.20	31355.91	31354.96
BIC	33834.05	31475.18	31485.21	31529.48	31497.46	31517.15	31507.71
Log Likelihood	-16901.30	-15690.40	-15690.17	-15686.09	-15659.60	-15658.96	-15659.48
Num. obs.	35812	35812	35812	35812	35812	35812	35812

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7
Num. groups: S025	28	28	28	28	28	28	28
Num. groups: S003	22	22	22	22	22	22	22
Var: S025 (Country-years)	0.55	0.63	0.67	0.37	0.31	0.31	0.31
Var: S003 (Country)	0.64	0.65	0.57	0.61	0.72	0.72	0.73
Level-2 Var Income					0.01	0.01	0.01
Level-2 Cov Income					0.01	0.01	0.01

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

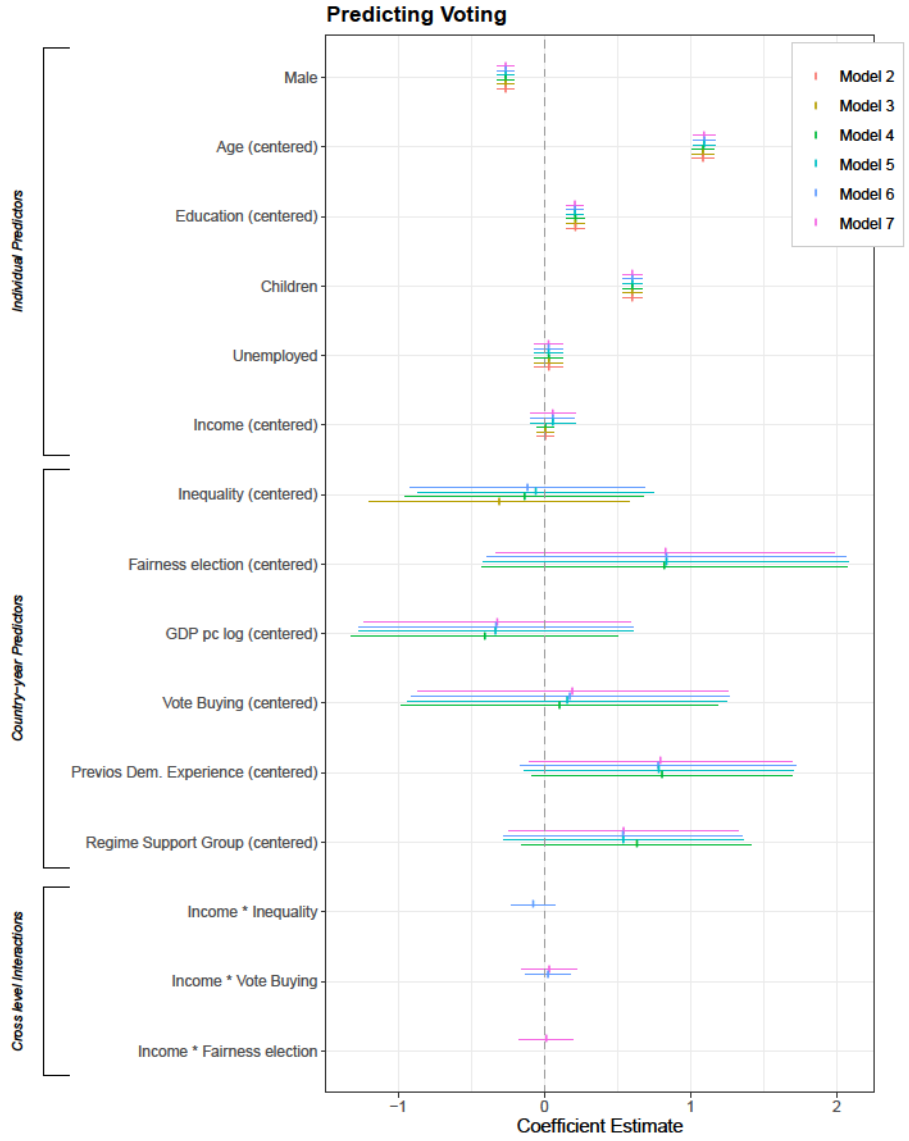


Figure C.21: Effect of Inequality (UNU-WIDER) on electoral participation (Dot-whisker plot)

Notes: The dots represent estimated change in the logged odds of electoral participation (dependent variable) occurring for a change of two standard deviations in the predictor variables. The whiskers show the 95% confidence intervals of these estimates.

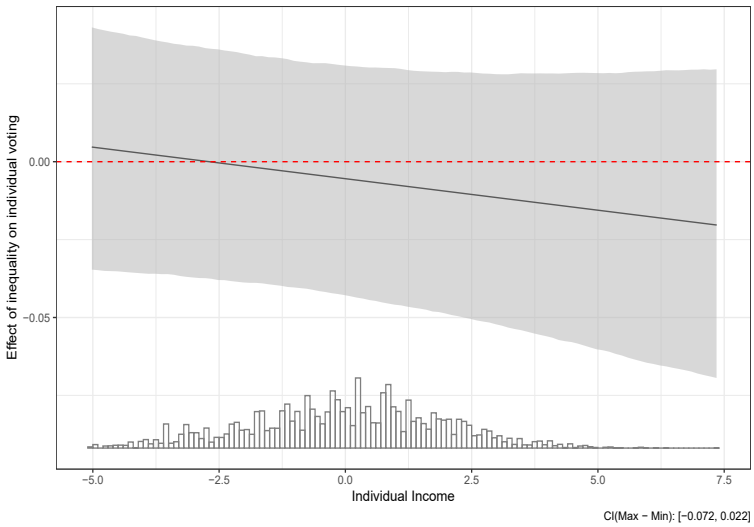


Figure C.22: Interaction of Income and Inequality on voting likelihood (disp. inequality)

Notes: Based on Model 6 in Figure C.21. Conditional effects of individual income and market inequality. Lines represent the estimated change in the logged odds of the dependent. Shaded regions shows adjusted 95% confidence intervals.

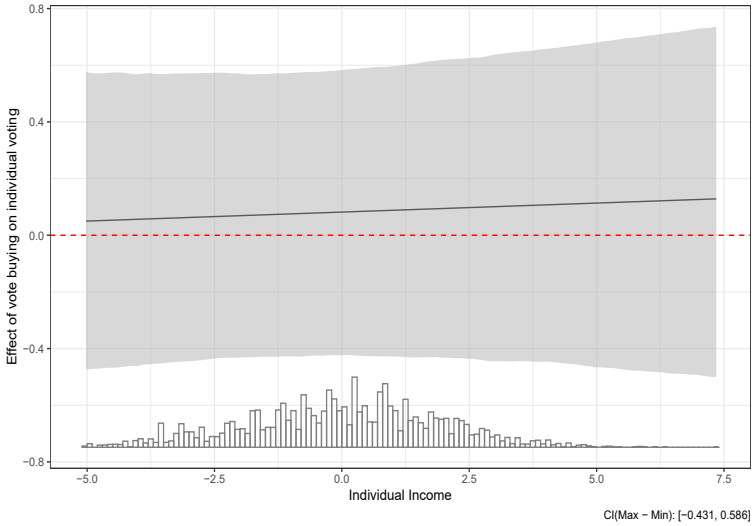


Figure C.23: Interaction of Income and vote buying on voting likelihood

Notes: Based on Model 6 in Figure C.21. Conditional effects of individual income and vote buying. Lines represent the estimated change in the logged odds of the dependent. Shaded regions shows adjusted 95% confidence intervals.

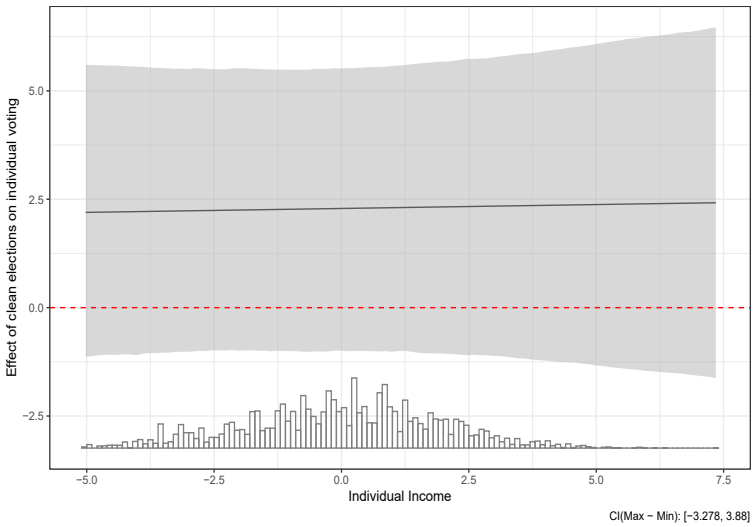


Figure C.24: Interaction of Income and clean elections on voting likelihood.

Notes: Based on Model 7 in Figure C.21. Conditional effects of individual income and clean elections. Lines represent the estimated change in the logged odds of the dependent. Shaded regions shows adjusted 95% confidence intervals.

C.4.4 Robustness test: compulsory voting

Table C.13: Robustness test: Compulsory Voting

	Model 1	Model 2	Model 3	Model 4
(Intercept)	1.40***	1.41***	1.41***	1.46***
	(0.25)	(0.25)	(0.25)	(0.25)
Male	−0.27***	−0.26***	−0.26***	−0.26***
	(0.03)	(0.03)	(0.03)	(0.03)
Age(centered)	0.39***	0.39***	0.39***	0.39***
	(0.01)	(0.01)	(0.01)	(0.01)
Education(centered)	0.06***	0.06***	0.06***	0.06***
	(0.01)	(0.01)	(0.01)	(0.01)
Children	0.61***	0.61***	0.61***	0.61***
	(0.03)	(0.03)	(0.03)	(0.03)
Unemployed	0.01	0.01	0.01	0.01
	(0.05)	(0.05)	(0.05)	(0.05)
Income quintiles (centered)	0.01	0.04	0.04	0.04
	(0.02)	(0.04)	(0.04)	(0.04)
Inequality (centered)	−0.04	−0.03	−0.04	
	(0.04)	(0.04)	(0.04)	
Fairness elections (centered)	2.21	2.46	2.47	2.05
	(1.64)	(1.92)	(1.60)	(1.69)
GDP pc log (centered)	−0.34	−0.31	−0.31	−0.20
	(0.26)	(0.27)	(0.26)	(0.24)
Vote Buying (centered)	0.00	0.01	0.03	0.13
	(0.24)	(0.26)	(0.24)	(0.24)
Compulsory Voting	0.50	0.61	0.60	0.42
	(0.70)	(0.73)	(0.72)	(0.72)
Previous Dem. Experience (centered)	2.97*	2.81	2.82*	2.47
	(1.38)	(1.56)	(1.39)	(1.43)
Regime Support Group (centered)	1.83	1.40	1.41	1.30
	(1.24)	(1.32)	(1.21)	(1.25)
Income * Inequality			−0.00	
			(0.01)	
Income * Fairness election			0.03	0.04
			(0.04)	(0.04)
Income * Vote Buying				−0.11
				(0.24)
AIC	31091.50	31043.46	31046.89	31045.52
BIC	31227.22	31196.14	31216.53	31206.69
Log Likelihood	-15529.75	-15503.73	-15503.44	-15503.76
Num. obs.	35678	35678	35678	35678
Num. groups: S025	28	28	28	28
Num. groups: S003	22	22	22	22
Var: S025 (Country-years)	0.39	0.32	0.32	0.31
Var: S003 (Country)	0.54	0.67	0.67	0.73
Level-2 Var Income		0.03	0.03	0.03
Level-2 Cov Income		0.04	0.03	0.04

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

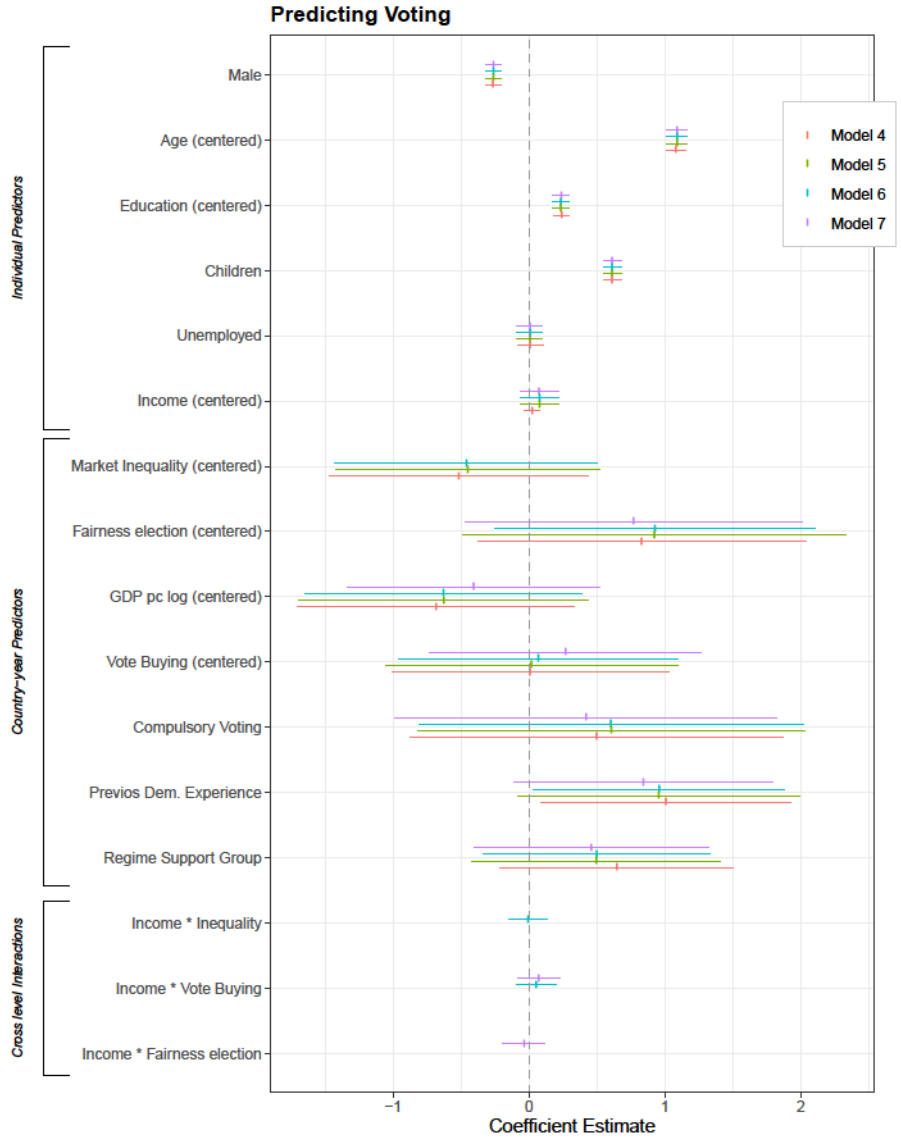


Figure C.25: Effect of Market Inequality on electoral participation (Dot-whisker plot)

Notes: The dots represent estimated change in the logged odds of electoral participation (dependent variable) occurring for a change of two standard deviations in the predictor variables. The whiskers show the 95% confidence intervals of these estimates.

C.4.5 Multiple imputation of missing's (individual level variables)

Given the problem that data on individual variables may be not *missing completely at random* or *missing at random*, missing data can substantially influence the results of repression analysis, especially when using listwise deletion. Therefore, here I employ multiple imputation of individual level missing values as described in King et al. (2001). I use Amelia II (Honaker et al. 2009) and tidyverse R package. I perform multiple imputation for all individual independent variables and controls and use country IDs to tell Amelia different patterns of missings between countries. Table C.14 gives an overview of the *imputed Electoral Participation Data Set*. Table C.15 shows summary statistics of the imputed dataset. Table C.16 predicts voting likelihood based on the imputed dataset. Figure C.28 predicts the voting likelihood using market inequality.

Table C.14: Countries and Years included in the Civil Society Participation Dataset, Multiple Imputation Dataset, m = 5
Notes: World Value Survey wave 2-6.

Country	**Year(s)**
Algeria	2014[10]
Armenia	2011
Azerbaijan	2011[11]
Belarus	2011
Egypt	2008, 2012
Ethiopia	2007
Haiti	2016[12]
Iraq	2006, 2013
Jordan	2014
Kazakhstan	2011
Kyrgyzstan	2011
Malaysia	2006, 2012
Morocco	2007, 2011
Nigeria	2012[13]
Pakistan	2012[14]
Palestine	2012
Russia	2006, 2011
Rwanda	2012
Singapore	2012
Thailand	2007, 2013
Vietnam	2006
Yemen	2014
Zimbabwe	2012
22 countries	**28 country-years**

[11] Gini for Algeria 2011
[12] Gini for Azerbaijan 2008
[13] Gini for Haiti 2012
[14] Gini for Nigeria 2011

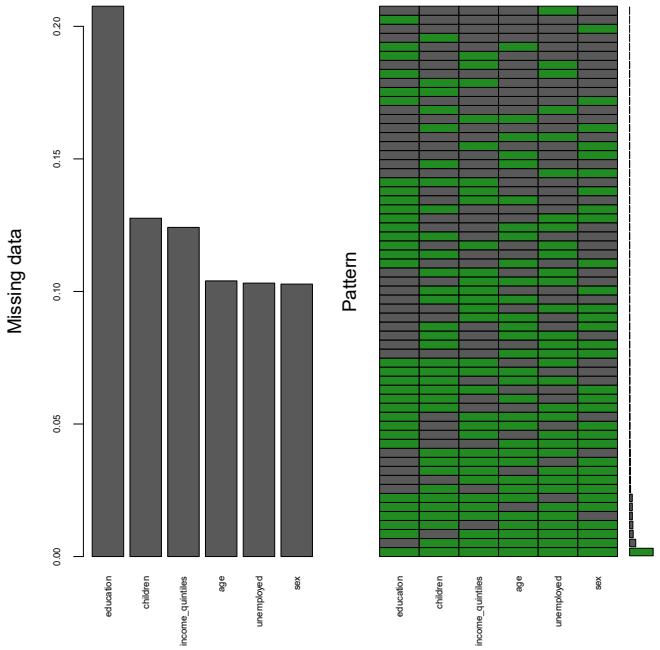
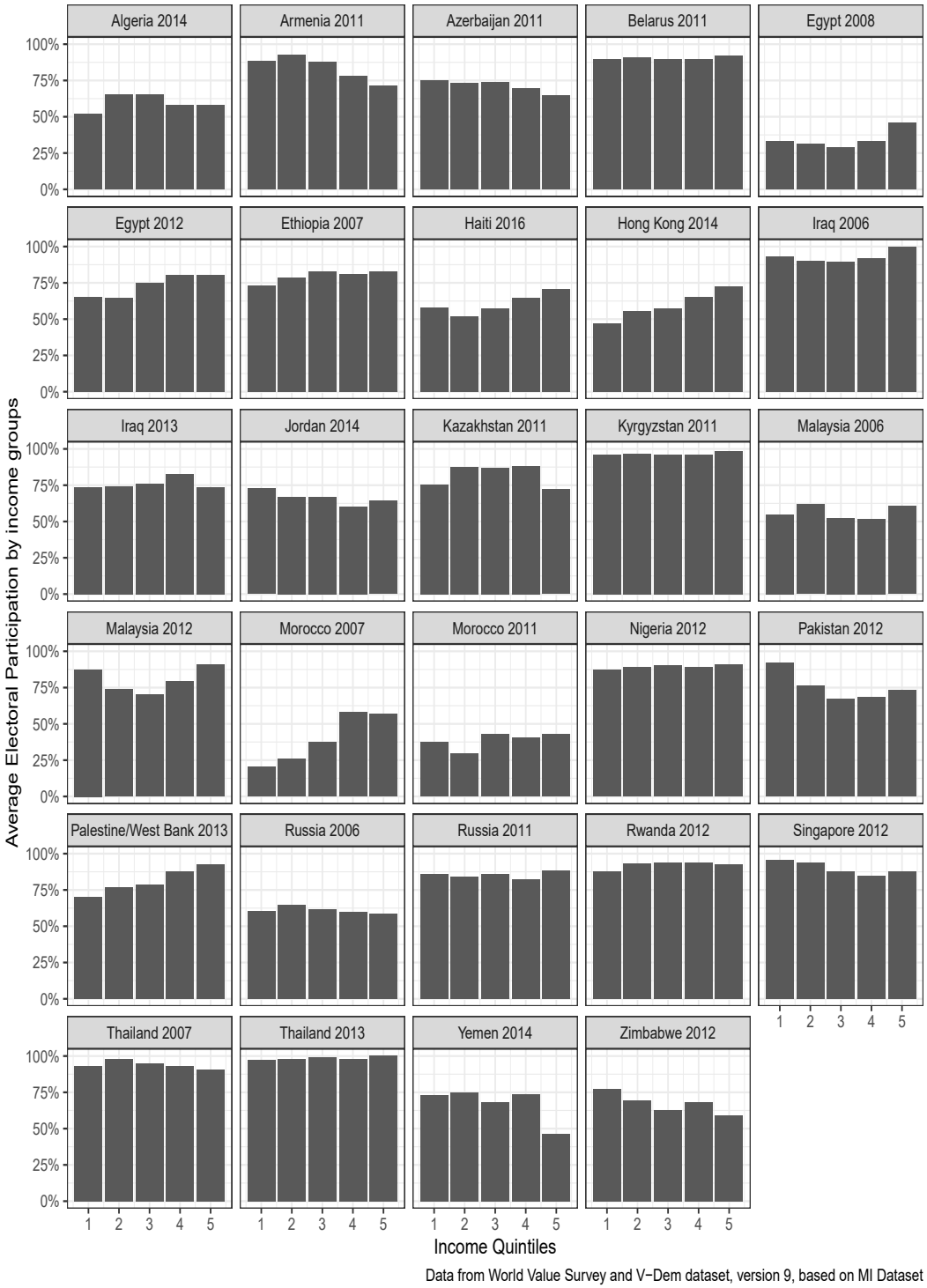


Figure C.26: Patterns of Missings in Electoral Participation Dataset

Table C.15: Summary Statistics for Electoral Participation Dataset

Statistic	N	Mean	Median	Min	Max	St. Dev.
Male	43,074	0.467	0	0	1	0.499
Age (centered)	43,074	−0.000	−0.201	−3.031	6.851	1.456
Education (centered)	43,074	−0.000	−0.214	−5.194	4.404	2.066
Children	43,074	0.678	1	0	1	0.467
Unemployed	43,074	0.091	0	0	1	0.287
Income Quintiles	43,074	0.000	0.051	−2.237	3.193	0.971
Market Gini (c)	43,074	−0.000	1.172	−10.628	14.372	6.464
Disp. Gini (c)	43,074	0.000	1.158	−10.342	10.758	6.071
Clean elections (c)	43,074	−0.000	0.026	−0.355	0.470	0.197
Vote Buying (c)	43,074	−0.000	0.047	−1.864	2.516	1.062
GDP pc log (c)	43,074	−0.000	0.247	−2.244	1.999	0.997
Regime Support Group	43,074	−0.000	−0.024	−0.224	0.526	0.168
Democratic Experience	43,074	−0.000	−0.073	−0.073	0.568	0.161
Vote	43,074	0.732	1	0	1	0.443



Notes: Based on Multiple Imputation Dataset, imputation number 5.

Figure C.27: Income and Voting Likelihood by Country-Years

Table C.16: Multiple Imputation: Predicting Voting

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7
(Intercept)	1.30***	0.80***	0.79***	0.80***	0.80***	0.80***	0.82***
	(0.21)	(0.23)	(0.23)	(0.20)	(0.20)	(0.20)	(0.21)
Age (centered)		0.29***	0.29***	0.29***	0.29***	0.29***	0.29***
		(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)
Children		0.62***	0.62***	0.62***	0.62***	0.62***	0.62***
		(0.03)	(0.03)	(0.03)	(0.03)	(0.03)	(0.03)
Education(centered)		0.04***	0.04***	0.04***	0.04***	0.04***	0.04***
		(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)
Income quintiles (centered)		0.05***	0.05***	0.05***	0.06	0.06	0.06
		(0.01)	(0.01)	(0.01)	(0.04)	(0.04)	(0.04)
Sex		0.35***	0.35***	0.35***	0.36***	0.36***	0.36***
		(0.03)	(0.03)	(0.03)	(0.03)	(0.03)	(0.03)
unemployed		−0.04	−0.04	−0.04	−0.05	−0.05	−0.05
		(0.04)	(0.04)	(0.04)	(0.04)	(0.04)	(0.04)
Inequality (centered)			−0.02	−0.04	−0.04	−0.04	
			(0.03)	(0.03)	(0.03)	(0.03)	
GDP pc log (centered)				2.68	2.73*	2.72*	2.37
				(1.38)	(1.37)	(1.36)	(1.38)
Vote Buying (centered)				−0.35	−0.35	−0.35	−0.25
				(0.24)	(0.24)	(0.24)	(0.23)
Fairness elections (centered)				2.35*	2.41*	2.41*	2.22
				(1.19)	(1.21)	(1.19)	(1.19)
Previos Dem. Experience (centered)				−0.01	−0.00	−0.02	0.10
				(0.25)	(0.25)	(0.24)	(0.23)
Regime Support Group (centered)				1.64	1.62	1.60	1.04
				(1.58)	(1.58)	(1.54)	(1.54)
Income * Inequality						0.00	
						(0.01)	
Income * Vote Buying						0.04	0.03
						(0.04)	(0.04)
Income * Fairness election							0.02
							(0.22)
AIC	41922.64	39553.31	39554.96	39556.94	39454.47	39457.31	39456.92
BIC	41948.65	39631.35	39641.67	39687.00	39601.88	39622.05	39612.99
Log Likelihood	-20958.32	-19767.66	-19767.48	-19763.4	-19710.24	-19709.65	-19710.46
Num. obs.	43074	43074	43074	45496	43074	43074	43074
Num. groups: S025	28	28	28	30	28	28	28

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7
Num. groups: S003	22	22	22	24	2224	22	22

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

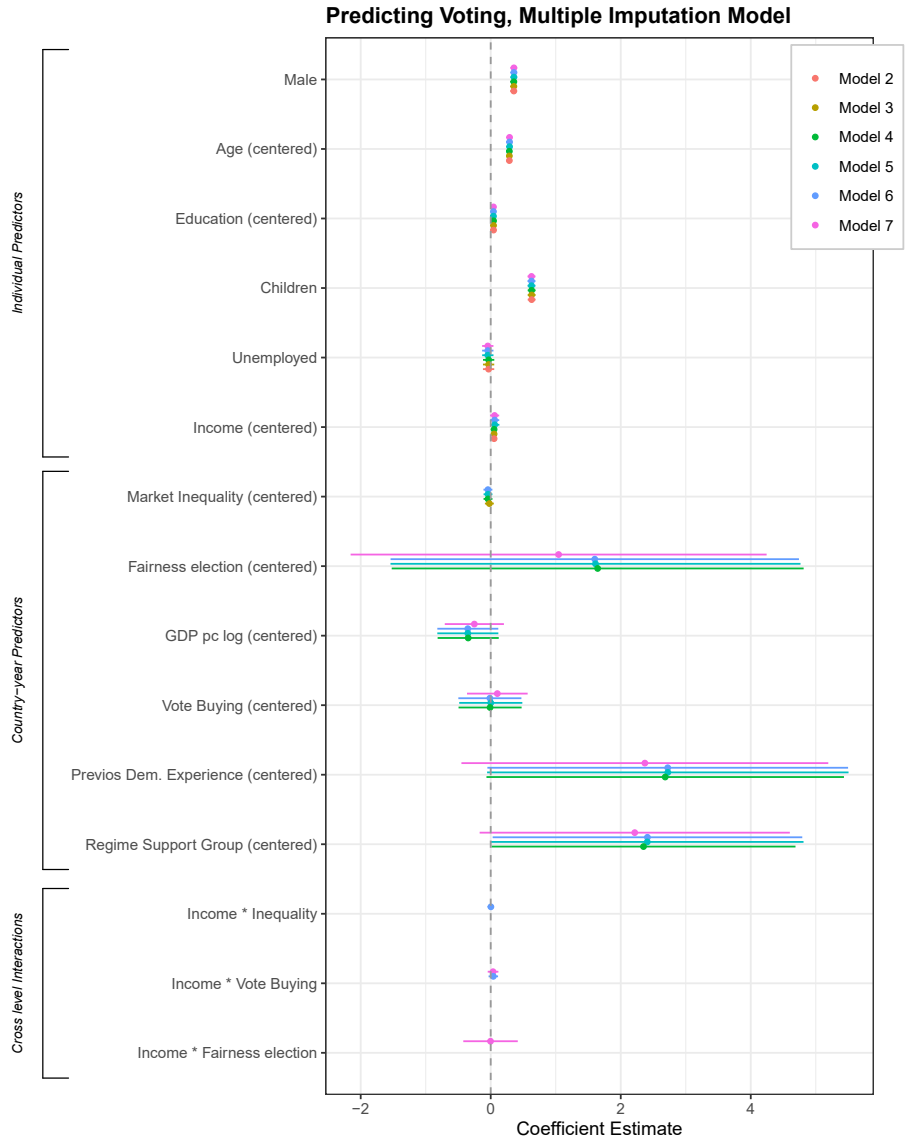


Figure C.28: Effect of Market Inequality on electoral participation (Dot-whisker plot)

Notes: The dots represent estimated change in the logged odds of electoral participation (dependent variable) occurring for a change of two standard deviations in the predictor variables. The whiskers show the 95% confidence intervals of these estimates.

C.5 Predicting civil society participation: additional models and robustness tests

Appendix C.5 presents additional robustness tests that account for various coding decisions, including the definition of individual income and additional measures for income inequality.
Section C.5.1 uses income deciles instead of income quintiles and market inequality for estimating the effect of income and inequality on civil society participation.
Section C.5.2 uses income deciles instead of income quintiles and disposable inequality for estimating the effect of income and inequality on civil society participation.
Section C.5.3 uses tests if the results of the main models hold when using UNU-WIDER Gini coefficients instead of the superior Gini's from Solt (2019).
Section C.5.4 controls for the construction of the civil society participation variable (market inequality) The modified civil society participation variable excludes individual participation in political parties. In some authoritarian regimes party membership is very common (especially at the local level). Therefore, excluding party participation from civil society participation tests the robustness of the main results. The main results hold.
Section C.5.5 controls for the construction of the civil society participation variable (disp. Inequality). The modified civil society participation variable excludes individual participation in political parties. In some authoritarian regimes party membership is very common (especially at the local level). Therefore, excluding party participation from civil society participation tests the robustness of the main results. The main results hold.
Section C.5.6 employs multiple imputation of missings. I perform multiple imputation for all individual independent variables and controls and use country IDs to tell Amelia different patterns of missings between countries.

C.5.1 Robustness test: income deciles and market inequality

Table C.17: Robustness Test: Income Deciles and market Inequality

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7
(Intercept)	−0.20	0.39*	0.39*	0.38*	0.38*	0.37*	0.37*
	(0.18)	(0.19)	(0.19)	(0.15)	(0.15)	(0.15)	(0.15)
Male		−0.36***	−0.36***	−0.36***	−0.36***	−0.36***	−0.36***
		(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)
Age(centered)		−0.04***	−0.04***	−0.04***	−0.04***	−0.04***	−0.04***
		(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)
Education(centered)		0.18***	0.18***	0.18***	0.18***	0.18***	0.18***
		(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Children		−0.02	−0.02	−0.02	−0.02	−0.02	−0.02
		(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)
Unemployed		−0.33***	−0.33***	−0.33***	−0.34***	−0.34***	−0.34***
		(0.03)	(0.03)	(0.03)	(0.03)	(0.03)	(0.03)
Income deciles (centered)		0.07***	0.07***	0.07***	0.08***	0.08***	0.08***
		(0.00)	(0.00)	(0.00)	(0.02)	(0.02)	(0.02)
Inequality (centered)			0.03	−0.01	0.00	−0.01	
			(0.03)	(0.02)	(0.02)	(0.03)	
CSO repression (centered				0.17	0.07	0.18	0.17
				(0.19)	(0.19)	(0.19)	(0.19)
GDP pc log (centered)				−0.66***	−0.66***	−0.66***	−0.67***
				(0.14)	(0.14)	(0.14)	(0.13)
Previous Dem. Experience (centered)				2.28*	2.26*	2.27*	2.27**
				(0.92)	(0.90)	(0.88)	(0.86)
Regime Support Group (centered)				2.34**	2.40**	2.41**	2.41***
				(0.78)	(0.74)	(0.73)	(0.73)
Income * Inequality						0.00	
						(0.00)	
Income * CSO repression						−0.03	−0.03
						(0.02)	(0.02)
AIC	76160.03	73192.43	73193.48	73179.13	72893.21	72893.12	72890.88
BIC	76187.31	73274.27	73284.42	73306.43	73038.70	73056.80	73036.37
Log Likelihood	−38077.02	−36587.22	−36586.74	−36575.57	−36430.61	−36428.56	−36429.44
Num. obs.	65713	65713	65713	65713	65713	65713	65713
Num. groups: S025	54	54	54	54	54	54	54
Num. groups: S003	34	34	34	34	34	34	34
Var: S025 (Country-years)	1.49	1.57	1.60	1.12	1.16	1.16	1.16

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7
Var: S003 (Country)	0.13	0.17	0.11	0.00	0.00	0.00	0.00
Level-2 Var Income					0.01	0.01	0.01
Level-2 Cov Income					−0.04	−0.04	−0.04

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

Table C.17: Civil Society Participation: Robustness Income Deciles

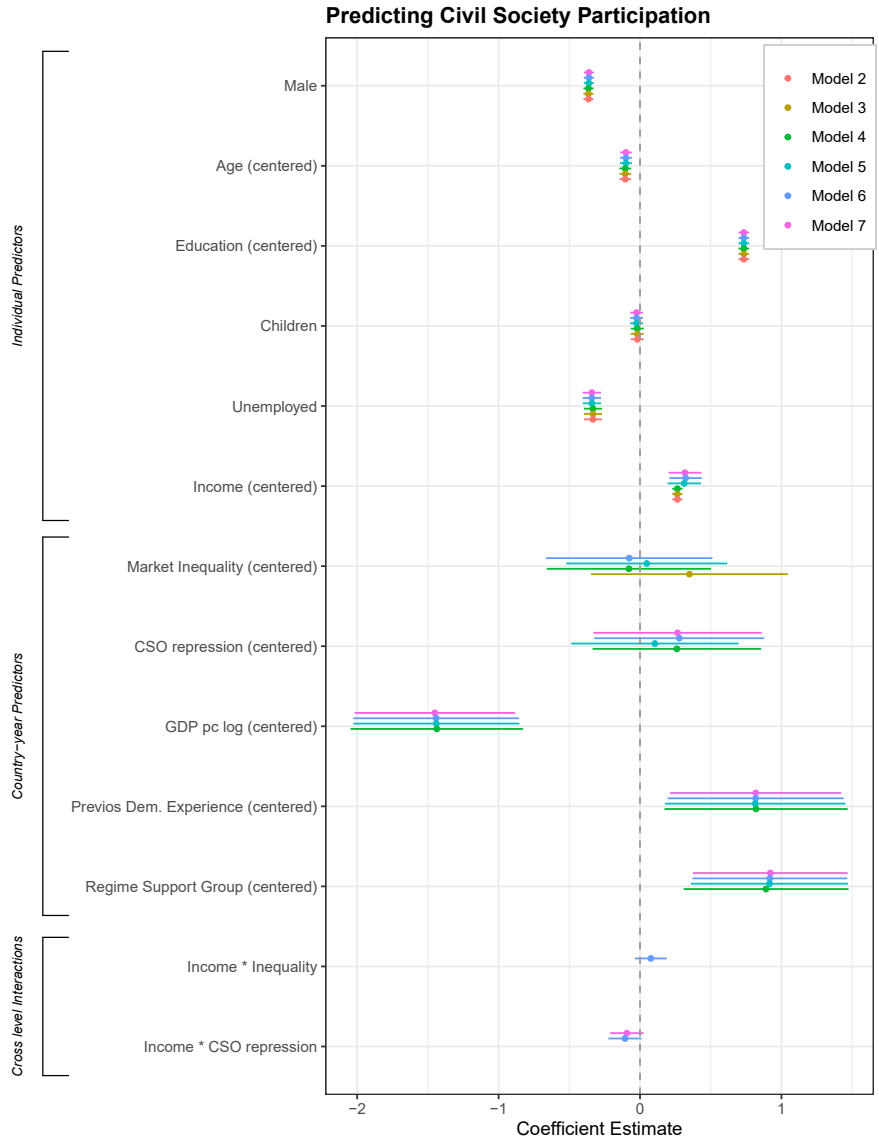


Figure C.29: Effect of market Inequality on civil society participation (Dot-whisker plot)

Notes: The dots represent estimated change in the logged odds of electoral participation (dependent variable) occurring for a change of two standard deviations in the predictor variables. The whiskers show the 95% confidence intervals of these estimates.

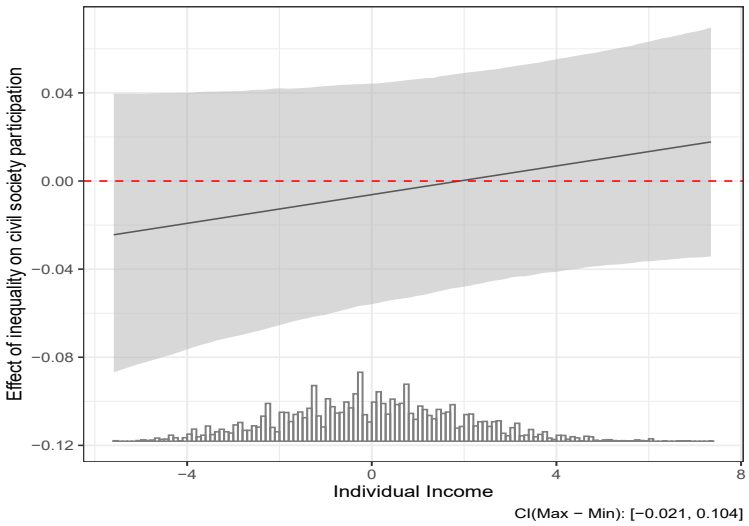


Figure C.30: Interaction of Income and Inequality on civil society participation (market inequality).

Notes: Based on Model 6 in Figure C.29. Conditional effects of individual income and market inequality. Lines represent the estimated change in the logged odds of the dependent. Shaded regions shows adjusted 95% confidence intervals.

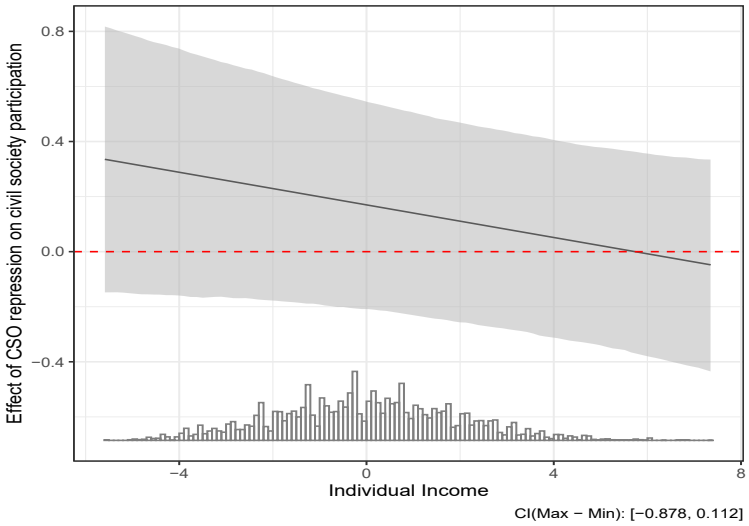


Figure C.31: Interaction of Income and CSO repression on civil society participation.

Notes: Based on Model 7 in Figure C.29. Conditional effects of individual income and vote buying. Lines represent the estimated change in the logged odds of the dependent. Shaded regions shows adjusted 95% confidence intervals.

C.5.2 Robustness test: income deciles and disp. inequality

Table C.18: Robustness Test: Income Deciles and disp. Inequality

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7
(Intercept)	−0.20	0.39*	0.39*	0.38*	0.38*	0.37*	0.37*
	(0.18)	(0.19)	(0.19)	(0.15)	(0.15)	(0.15)	(0.15)
Male		−0.36***	−0.36***	−0.36***	−0.36***	−0.36***	−0.36***
		(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)
Age(centered)		−0.04***	−0.04***	−0.04***	−0.04***	−0.04***	−0.04***
		(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)
Education(centered)		0.18***	0.18***	0.18***	0.18***	0.18***	0.18***
		(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Children		−0.02	−0.02	−0.02	−0.02	−0.02	−0.02
		(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)
Unemployed		−0.33***	−0.33***	−0.33***	−0.34***	−0.34***	−0.34***
		(0.03)	(0.03)	(0.03)	(0.03)	(0.03)	(0.03)
Income deciles (centered)		0.07***	0.07***	0.07***	0.08***	0.08***	0.08***
		(0.00)	(0.00)	(0.00)	(0.02)	(0.01)	(0.02)
Inequality (centered)			0.03	−0.00	0.01	−0.00	
			(0.03)	(0.03)	(0.02)	(0.03)	
CSO repression (centered				0.16	0.06	0.17	0.17
				(0.19)	(0.19)	(0.19)	(0.19)
GDP pc log (centered)				−0.66***	−0.66***	−0.66***	−0.67***
				(0.14)	(0.14)	(0.14)	(0.13)
Previous Dem. Experience (centered)				2.27*	2.24*	2.25**	2.27**
				(0.90)	(0.87)	(0.85)	(0.86)
Regime Support Group (centered)				2.33**	2.39**	2.39***	2.41***
				(0.76)	(0.73)	(0.72)	(0.73)
Income * Inequality						0.00	
						(0.00)	
Income * CSO repression						−0.03	−0.03
						(0.02)	(0.02)
AIC	76160.03	73192.43	73193.32	73179.17	72893.16	72892.86	72890.88
BIC	76187.31	73274.27	73284.25	73306.47	73038.65	73056.54	73036.37
Log Likelihood	−38077.02	−36587.22	−36586.66	−36575.59	−36430.58	−36428.43	−36429.44
Num. obs.	65713	65713	65713	65713	65713	65713	65713
Num. groups: S025	54	54	54	54	54	54	54
Num. groups: S003	34	34	34	34	34	34	34
Var: S025 (Country-years)	1.49	1.57	1.59	1.12	1.17	1.16	1.16

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7
Var: S003 (Country)	0.13	0.17	0.10	0.00	0.00	0.00	0.00
Level-2 Var Income					0.01	0.01	0.01
Level-2 Cov Income					−0.04	−0.04	−0.04

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

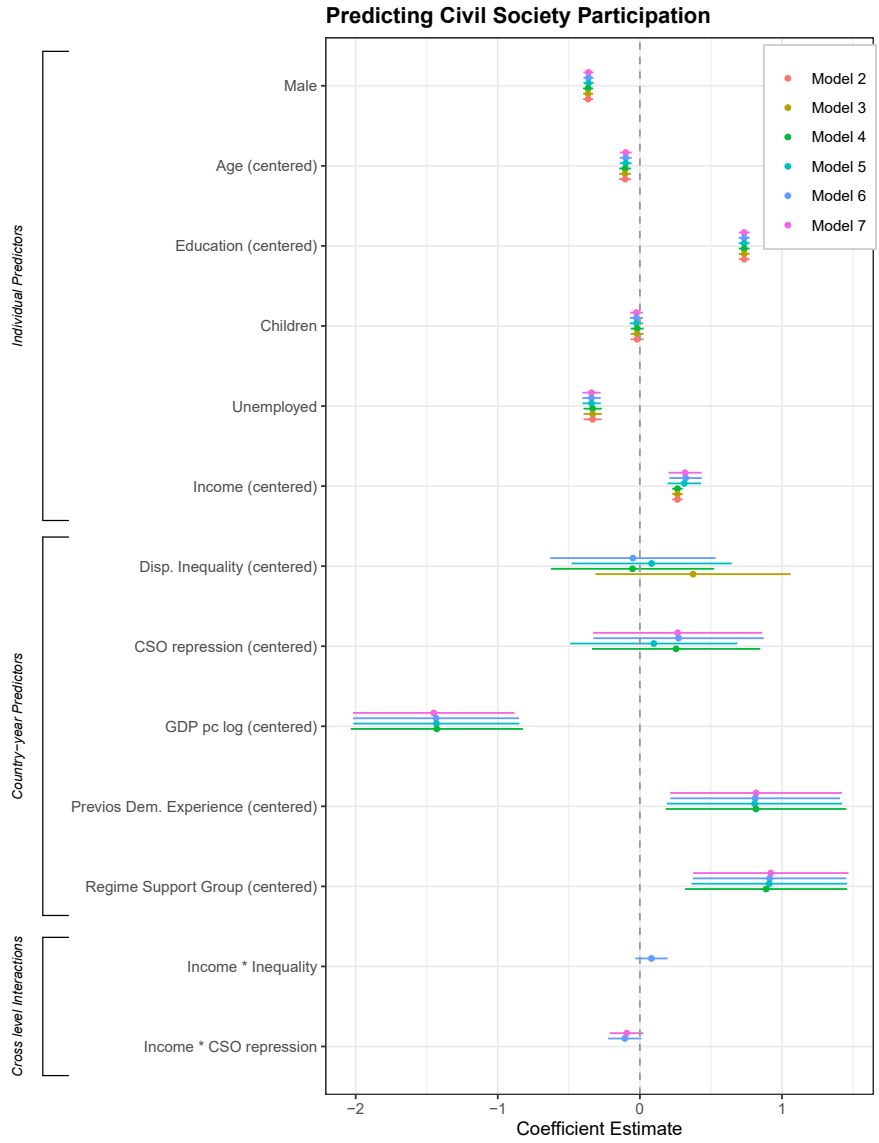


Figure C.32: Effect of disp. Inequality on civil society participation (Dot-whisker plot)

Notes: The dots represent estimated change in the logged odds of electoral participation (dependent variable) occurring for a change of two standard deviations in the predictor variables. The whiskers show the 95% confidence intervals of these estimates.

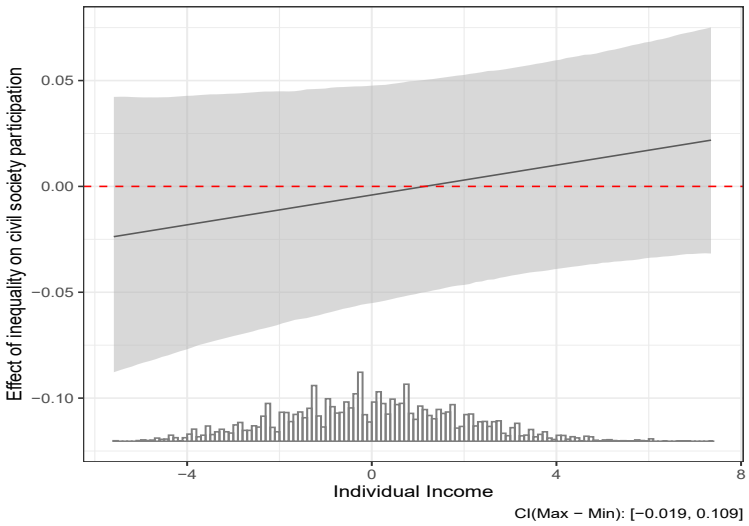


Figure C.33: Interaction of Income and Inequality on civil society participation (disp. inequality).

Notes: Based on Model 6 in Figure C.29. Conditional effects of individual income and market inequality. Lines represent the estimated change in the logged odds of the dependent. Shaded regions shows adjusted 95% confidence intervals.

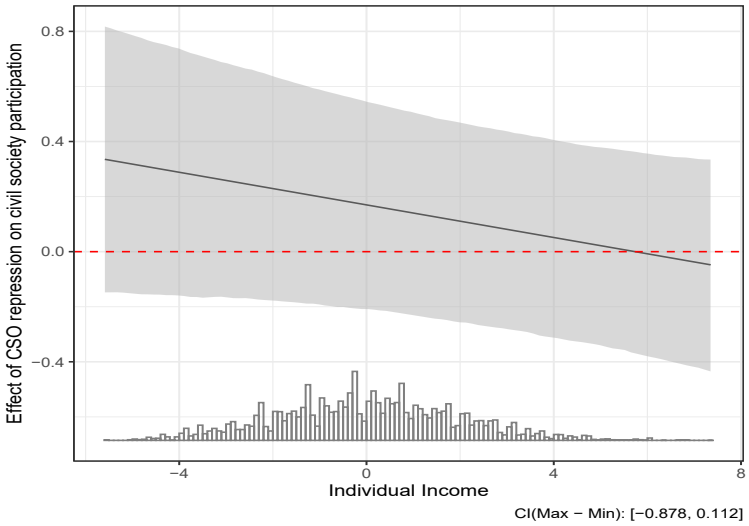


Figure C.34: Interaction of Income and CSO repression on civil society participation.

Notes: Based on Model 7 in Figure C.29. Conditional effects of individual income and vote buying. Lines represent the estimated change in the logged odds of the dependent. Shaded regions shows adjusted 95% confidence intervals.

C.5.3 Robustness test with UNU-WIDER income inequality data

Table C.19: Robustness Test with UNU-WIDER Income Inequality data

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7
(Intercept)	−0.17	0.39*	0.39*	0.38*	0.38*	0.37*	0.37*
	(0.17)	(0.19)	(0.19)	(0.15)	(0.15)	(0.15)	(0.15)
Male		−0.35***	−0.35***	−0.35***	−0.34***	−0.34***	−0.34***
		(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)
Age(centered)		−0.04***	−0.04***	−0.04***	−0.04***	−0.04***	−0.04***
		(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)
Education(centered)		0.18***	0.18***	0.18***	0.18***	0.18***	0.18***
		(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Children		−0.03	−0.03	−0.03	−0.03	−0.03	−0.03
		(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)
Unemployed		−0.36***	−0.36***	−0.36***	−0.37***	−0.37***	−0.37***
		(0.03)	(0.03)	(0.03)	(0.03)	(0.03)	(0.03)
Income quintiles (centered)		0.13***	0.13***	0.13***	0.15***	0.15***	0.15***
		(0.01)	(0.01)	(0.01)	(0.03)	(0.03)	(0.03)
Inequality (centered)			0.01	0.01	0.01	0.01	
			(0.02)	(0.02)	(0.01)	(0.02)	
CSO repression (centered)				0.23	0.13	0.24	0.24
				(0.18)	(0.18)	(0.19)	(0.19)
GDP pc log (centered)				−0.60***	−0.61***	−0.61***	−0.63***
				(0.14)	(0.14)	(0.14)	(0.14)
Previous Dem. Experience (centered)				2.17*	2.18*	2.19*	2.11*
				(0.94)	(0.88)	(0.91)	(0.86)
Regime Support Group (centered)				2.08**	2.19**	2.19**	2.22**
				(0.74)	(0.73)	(0.74)	(0.72)
Income * Inequality						0.00	
						(0.00)	
Income * CSO repression						−0.06	−0.06
						(0.04)	(0.04)
AIC	77129.71	74228.14	74229.74	74216.72	73948.73	73947.80	73946.33
BIC	77157.01	74310.06	74320.76	74344.15	74094.37	74111.65	74091.97
Log Likelihood	−38561.85	−37105.07	−37104.87	−37094.36	−36958.36	−36955.90	−36957.16
Num. obs.	66326	66326	66326	66326	66326	66326	66326
Num. groups: S025	54	54	54	54	54	54	54
Num. groups: S003	34	34	34	34	34	34	34
Var: S025 (Country-years)	1.47	1.54	1.54	1.14	1.19	1.18	1.18

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7
Var: S003 (Country)	0.13	0.16	0.16	0.00	0.00	0.00	0.00
Level-2 Var Income					0.04	0.04	0.04
Level-2 Cov Income					−0.09	−0.08	−0.08

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

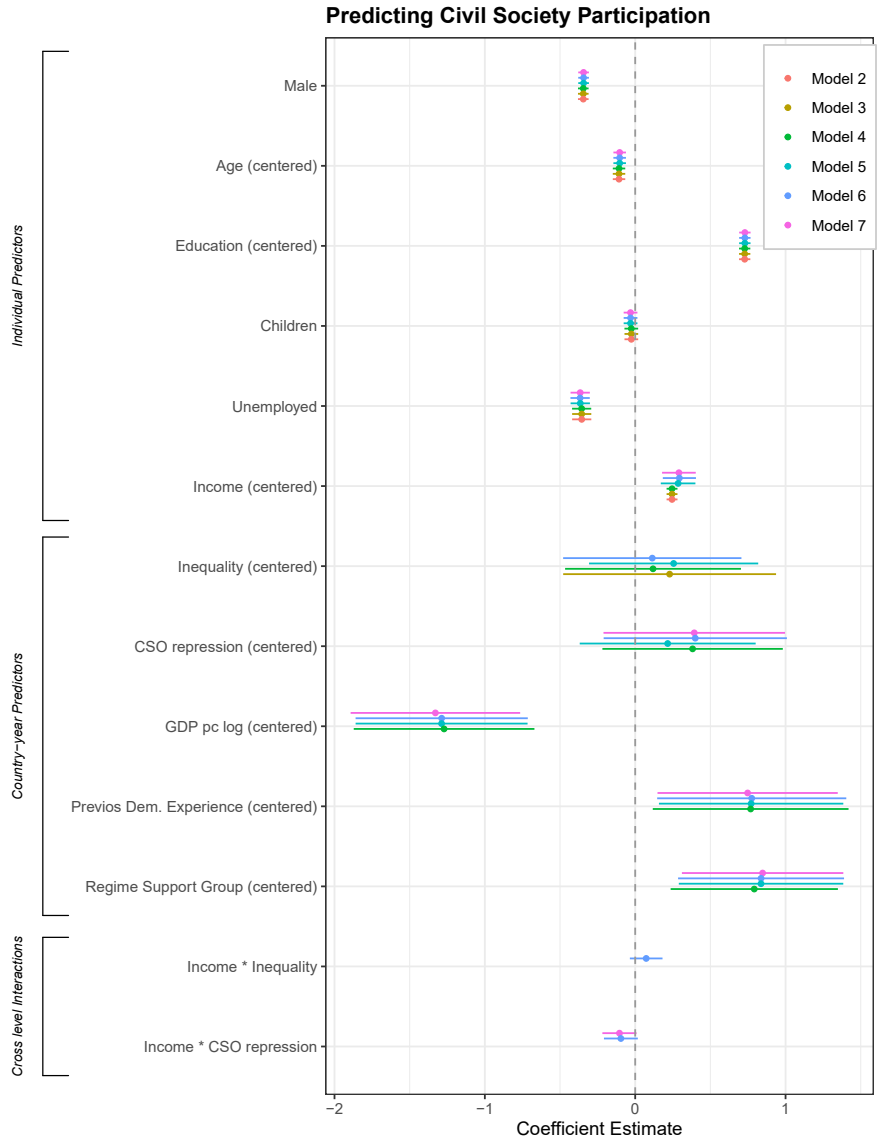


Figure C.35: Effect of Inequality on civil society participation (Dot-whisker plot)

Notes: The dots represent estimated change in the logged odds of electoral participation (dependent variable) occurring for a change of two standard deviations in the predictor variables. The whiskers show the 95% confidence intervals of these estimates.

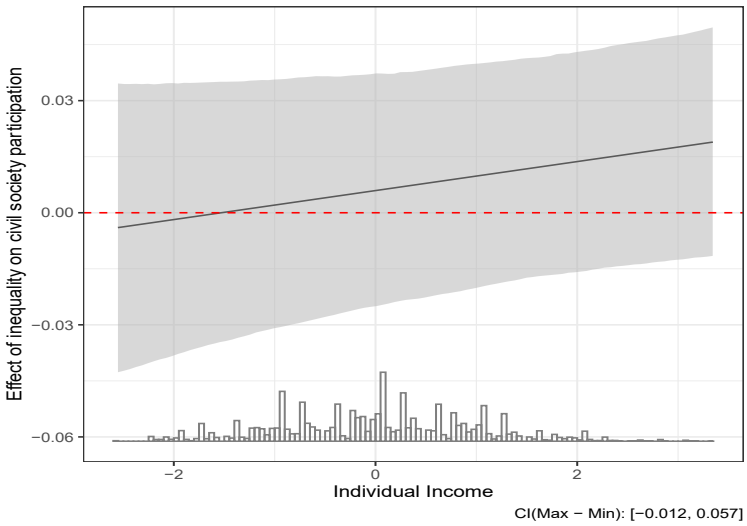


Figure C.36: Interaction of Income and Inequality on civil society participation

Notes: Based on Model 6 in Figure C.35. Conditional effects of individual income and market inequality. Lines represent the estimated change in the logged odds of the dependent. Shaded regions shows adjusted 95% confidence intervals.

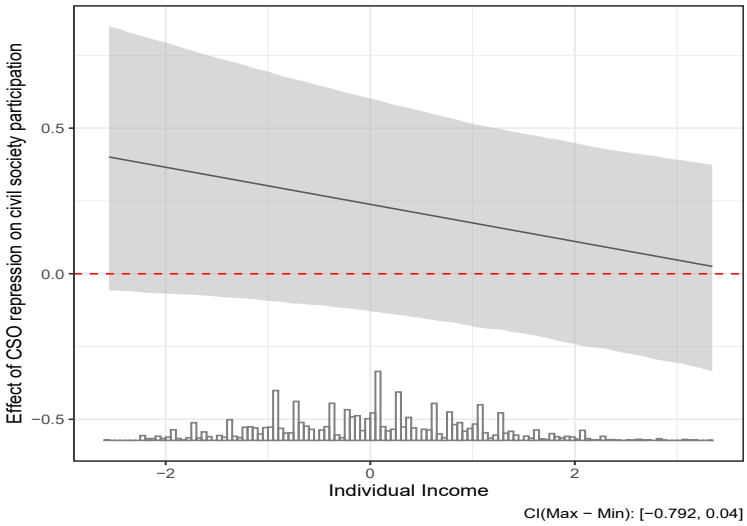


Figure C.37: Interaction of Income and CSO repression on civil society participation

Notes: Based on Model 7 in Figure C.35. Conditional effects of individual income and vote buying. Lines represent the estimated change in the logged odds of the dependent. Shaded regions shows adjusted 95% confidence intervals.

C.5.4 Robustness test: dependent variable without party-based organization and market inequality

Table C.20: Robustness Test: Dependent Variable without party-based organization and market inequality

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7
(Intercept)	−0.37*	0.12	0.13	0.12	0.12	0.11	0.11
	(0.17)	(0.19)	(0.18)	(0.16)	(0.16)	(0.16)	(0.16)
Male		−0.29***	−0.29***	−0.29***	−0.29***	−0.29***	−0.29***
		(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)
Age(centered)		−0.06***	−0.06***	−0.06***	−0.05***	−0.05***	−0.05***
		(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)
Education(centered)		0.18***	0.18***	0.18***	0.18***	0.18***	0.18***
		(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Children		−0.06*	−0.06*	−0.06*	−0.06**	−0.06**	−0.06**
		(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)
Unemployed		−0.36***	−0.36***	−0.36***	−0.36***	−0.37***	−0.36***
		(0.03)	(0.03)	(0.03)	(0.03)	(0.03)	(0.03)
Income quintiles (centered)		0.14***	0.14***	0.14***	0.17***	0.17***	0.17***
		(0.01)	(0.01)	(0.01)	(0.03)	(0.03)	(0.03)
Inequality (centered)			0.02	−0.01	0.01	−0.01	
			(0.03)	(0.03)	(0.03)	(0.03)	
CSO repression (centered				0.19	0.03	0.21	0.19
				(0.20)	(0.20)	(0.21)	(0.21)
GDP pc log (centered)				−0.62***	−0.62***	−0.62***	−0.63***
				(0.15)	(0.14)	(0.14)	(0.14)
Previous Dem. Experience (centered)				2.21*	2.09*	2.12*	2.13*
				(0.94)	(0.92)	(0.92)	(0.93)
Regime Support Group (centered)				2.17**	2.07**	2.08**	2.11**
				(0.83)	(0.78)	(0.79)	(0.76)
Income * Inequality						0.01	
						(0.00)	
Income * CSO repression						−0.07	−0.06
						(0.04)	(0.04)
AIC	75296.53	72382.55	72383.87	72373.34	72118.85	72116.91	72116.40
BIC	75323.81	72464.39	72474.80	72500.65	72264.34	72280.58	72261.89
Log Likelihood	-37645.27	-36182.28	-36181.93	-36172.67	-36043.43	-36040.45	-36042.20
Num. obs.	65713	65713	65713	65713	65713	65713	65713
Num. groups: S025	54	54	54	54	54	54	54
Num. groups: S003	34	34	34	34	34	34	34
Var: (Country-years)	1.69	1.80	1.78	1.26	1.34	1.31	1.32
Var: (Country)	0.00	0.00	0.00	0.00	0.00	0.00	0.00

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7
Level-2 Var Income					0.04	0.04	0.04
Level-2 Cov Income					-0.12	-0.10	-0.11

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

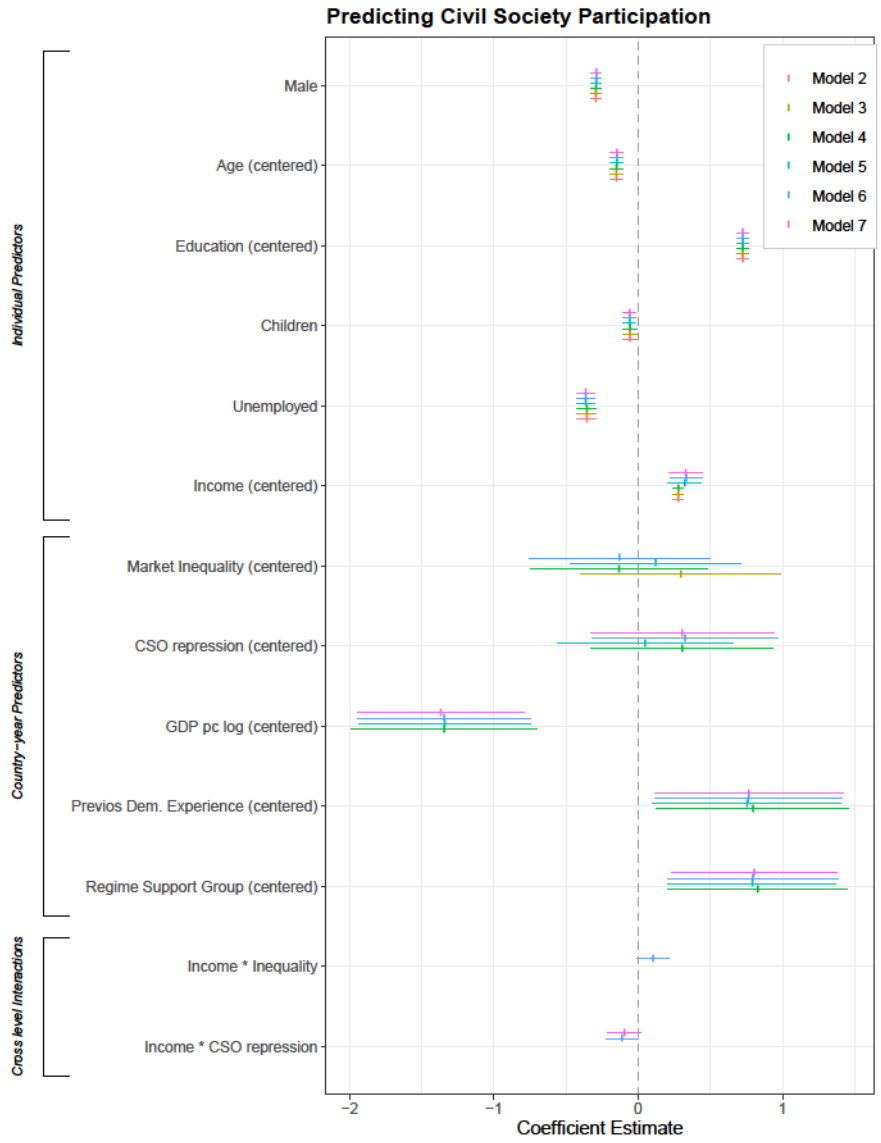


Figure C.38: Effect of Inequality on civil society participation (Dot-whisker plot)

Notes: The dots represent estimated change in the logged odds of civil society participation (dependent variable) occurring for a change of two standard deviations in the predictor variables. The whiskers show the 95% confidence intervals of these estimates.

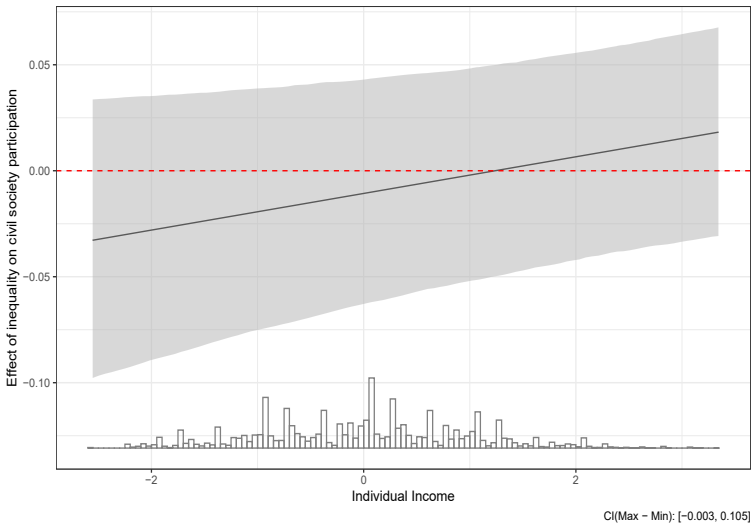


Figure C.39: Interaction of Income and market Inequality on civil society participation

Notes: Based on Model 6 in Figure C.38. Conditional effects of individual income and market inequality. Lines represent the estimated change in the logged odds of the dependent. Shaded regions shows adjusted 95% confidence intervals.

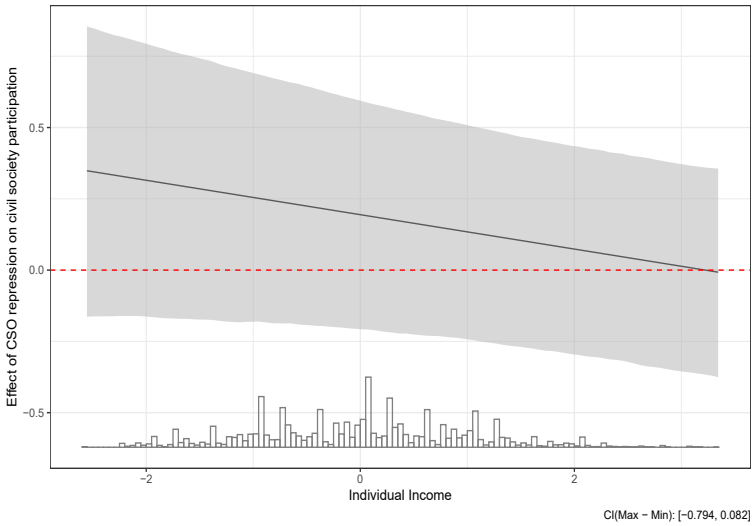


Figure C.40: Interaction of Income and CSO repression on civil society participation

Notes: Based on Model 7 in Figure C.38. Conditional effects of individual income and vote buying. Lines represent the estimated change in the logged odds of the dependent. Shaded regions shows adjusted 95% confidence intervals.

C.5.5 Robustness test: dependent variable without party-based organization and disp. inequality

Table C.21: Robustness Test: Dependent Variable without party-based organization and disp. inequality

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7
(Intercept)	−0.37*	0.12	0.13	0.12	0.12	0.11	0.11
	(0.17)	(0.19)	(0.18)	(0.16)	(0.16)	(0.16)	(0.16)
Male		−0.29***	−0.29***	−0.29***	−0.29***	−0.29***	−0.29***
		(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)
Age(centered)		−0.06***	−0.06***	−0.06***	−0.05***	−0.05***	−0.05***
		(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)
Education(centered)		0.18***	0.18***	0.18***	0.18***	0.18***	0.18***
		(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Children		−0.06*	−0.06*	−0.06*	−0.06**	−0.06**	−0.06**
		(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)
Unemployed		−0.36***	−0.36***	−0.36***	−0.36***	−0.37***	−0.36***
		(0.03)	(0.03)	(0.03)	(0.03)	(0.03)	(0.03)
Income quintiles (centered)		0.14***	0.14***	0.14***	0.17***	0.17***	0.17***
		(0.01)	(0.01)	(0.01)	(0.03)	(0.03)	(0.03)
Inequality (centered)			0.03	−0.01	0.01	−0.01	
			(0.03)	(0.03)	(0.03)	(0.03)	
CSO repression (centered				0.19	0.03	0.20	0.19
				(0.20)	(0.20)	(0.21)	(0.21)
GDP pc log (centered)				−0.61***	−0.61***	−0.61***	−0.63***
				(0.15)	(0.14)	(0.14)	(0.14)
Previous Dem. Experience (centered)				2.20*	2.07*	2.10*	2.13*
				(0.94)	(0.92)	(0.92)	(0.93)
Regime Support Group (centered)				2.17**	2.05**	2.06**	2.11**
				(0.80)	(0.75)	(0.78)	(0.76)
Income * Inequality						0.01	
						(0.00)	
Income * CSO repression						−0.07	−0.06
						(0.04)	(0.04)
AIC	75296.53	72382.55	72383.75	72373.40	72118.74	72116.61	72116.40
BIC	75323.81	72464.39	72474.68	72500.71	72264.23	72280.29	72261.89
Log Likelihood	-37645.27	-36182.28	-36181.87	-36172.70	-36043.37	-36040.31	-36042.20
Num. obs.	65713	65713	65713	65713	65713	65713	65713
Num. groups: S025	54	54	54	54	54	54	54
Num. groups: S003	34	34	34	34	34	34	34
Var: (Country-years)	1.69	1.80	1.78	1.26	1.35	1.32	1.32
Var: (Country)	0.00	0.00	0.00	0.00	0.00	0.00	0.00

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7
Level-2 Var Income					0.04	0.04	0.04
Level-2 Cov Income					-0.12	-0.10	-0.11

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

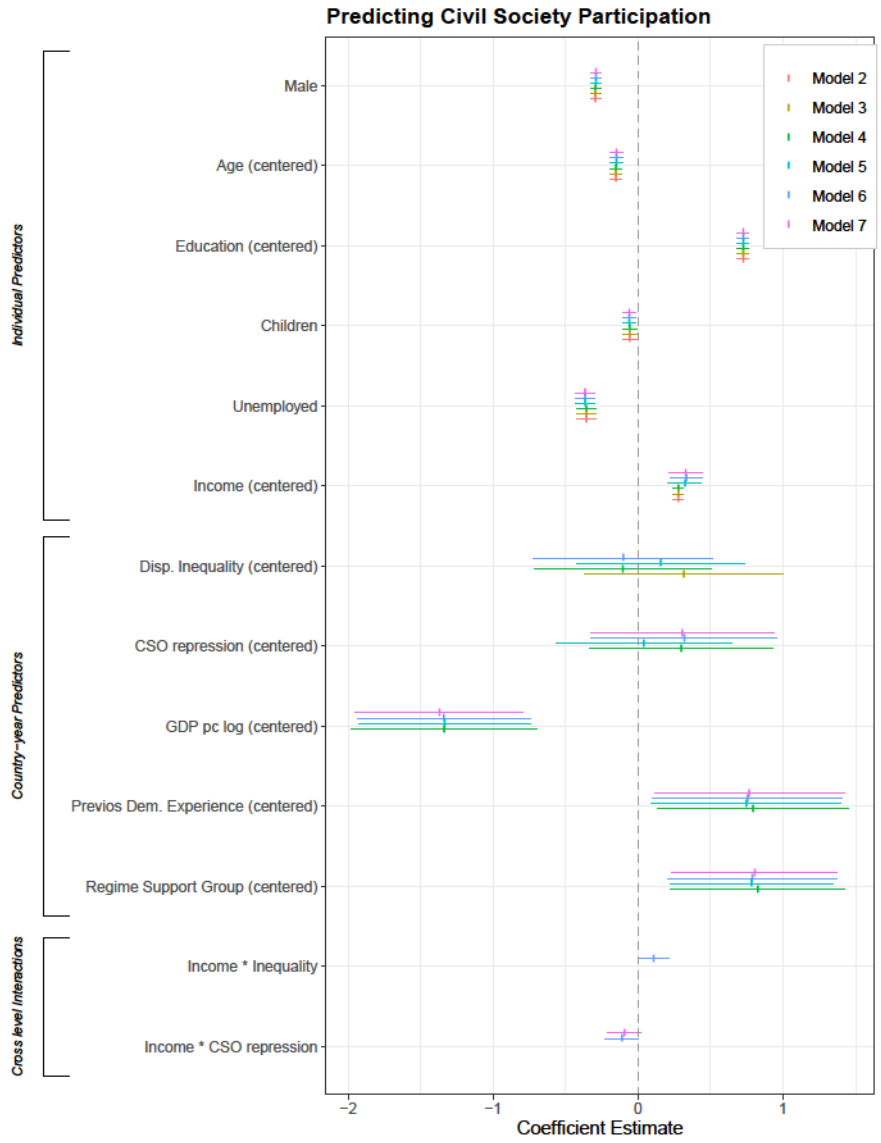


Figure C.41: Effect of Inequality on civil society participation (Dot-whisker plot).

Notes: The dots represent estimated change in the logged odds of civil society participation (dependent variable) occurring for a change of two standard deviations in the predictor variables. The whiskers show the 95% confidence intervals of these estimates.

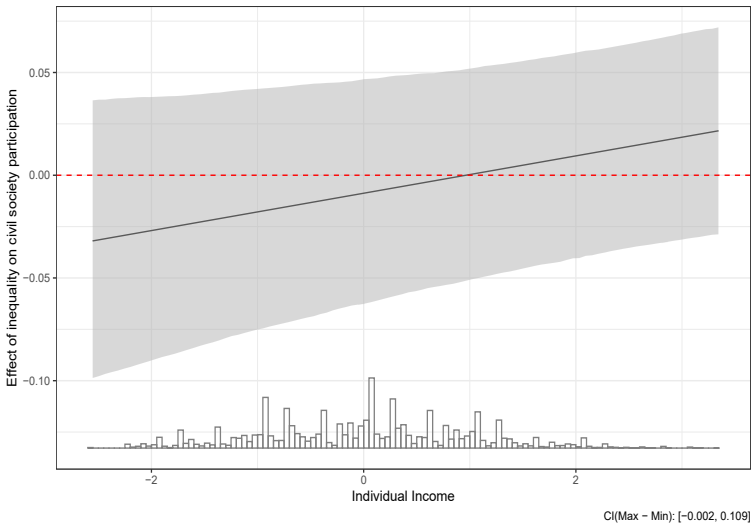


Figure C.42: Interaction of Income and disp. Inequality on civil society participation.

Notes: Based on Model 6 in Figure C.41. Conditional effects of individual income and market inequality. Lines represent the estimated change in the logged odds of the dependent. Shaded regions shows adjusted 95% confidence intervals.

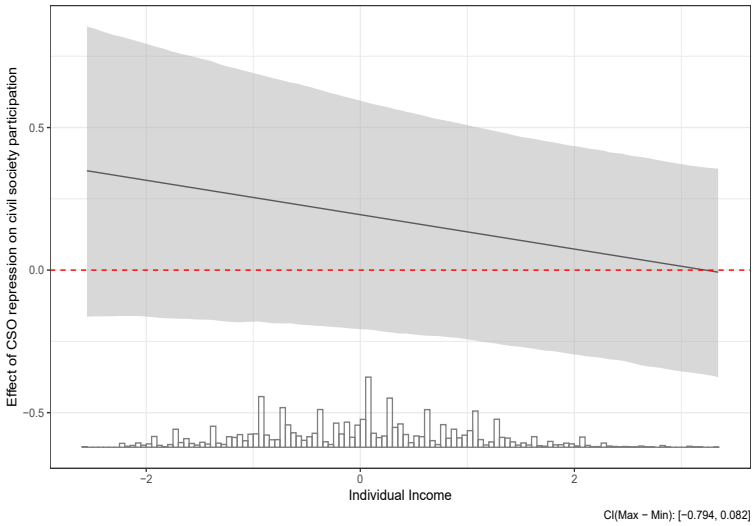


Figure C.43: Interaction of Income and CSO repression on civil society participation.

Notes: Based on Model 7 in Figure C.41. Conditional effects of individual income and vote buying. Lines represent the estimated change in the logged odds of the dependent. Shaded regions shows adjusted 95% confidence intervals.

C.5.6 Multiple imputation of missings (individual level variables)

Given the problem that data on individual variables may be not *missing completely at random* or *missing at random*, missing data can substantially influence the results of repression analysis, especially when using list-wise deletion. Therefore, here I employ multiple imputation of individual level missing values as described in King et al. (2001). I use Amelia II (Honaker et al. 2009) and tidyverse R package. We perform multiple imputation for all individual independent variables and controls and use country IDs to tell Amelia different patterns of missings between countries. Table C.22 gives an overview of the *imputed Civil Society Participation Data Set*. Figure C.46 predicts the voting likelihood using market inequality.

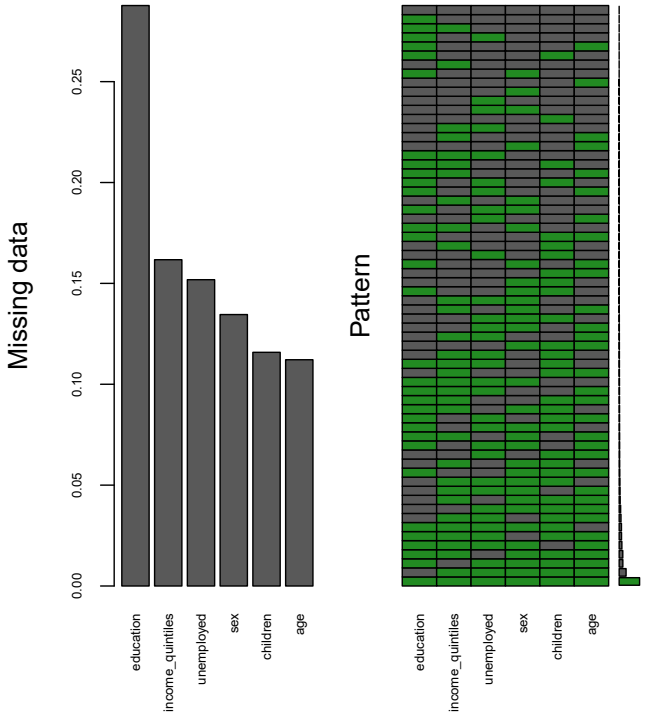


Figure C.44: Patterns of Missings in Civil Society Dataset

[15]Gini for Algeria 2011.
[16]Gini for Azerbaijan 2008.
[17]Gini for Haiti 2012.
[18]Gini for Nigeria 2011.

Table C.22: Countries and Years included in the Multiple Imputation Dataset for Civil Society Participation
Notes: World Value Survey waves 1-6.

Country	Year(s)
Albania	1998, 2002
Algeria	2002, 2014[15]
Armenia	1997, 2011
Azerbaijan	1997, 2011[16]
Belarus	2011
China	1990, 1995, 2001, 2007, 2013
Croatia	1996
Egypt	2008, 2012
Ethiopia	2007
Georgia	1996
Haiti	2016[17]
Iran	2007
Iraq	2013
Jordan	2007, 2014
Kazakhstan	2011
Kyrgyzstan	2003, 2011
Macedonia	2001
Malaysia	2006, 2012
Mexico	1981, 1990
Moldova	2006
Morocco	2001, 2007, 2011
Nigeria	1995, 2012[18]
Peru	1996
Qatar	2010
Russian Federation	1990, 2006, 2011
Rwanda	2007, 2012
Singapore	2002, 2012
South Africa	1982
South Korea	1982
Taiwan	1994
Tanzania	2001
Thailand	2007, 2013
Uganda	2001
Vietnam	2001, 2006
Yemen	2014
Zimbabwe	2001, 2012
36 countries	**59 country-years**

Table C.23: Summary Statistics for MI Civil Society Participation Dataset, Imputation Dataset 5

Statistic	N	Mean	Median	Min	Max	St. Dev.
Male	95,175	0.479	0	0	1	0.500
Age (centered)	95,175	0.000	−0.207	−3.154	6.850	1.440
Education (centered)	95,175	−0.000	−0.145	−5.191	5.125	2.071
Children	95,175	0.694	1	0	1	0.461
Unemployed	95,175	0.094	0	0	1	0.292
Income Quintiles	95,175	−0.000	0.021	−2.508	3.268	1.025
Market Gini (c)	95,175	−0.000	0.038	−13.462	21.538	6.675
Disp. Gini (c)	95,175	0.000	0.170	−13.330	21.670	6.516
CSO repression (c)	95,175	0.000	0.0003	−1.722	1.629	0.800
GDP pc log (c)	95,175	0.000	0.116	−2.105	2.825	1.031
Regime Support Group	95,175	−0.000	0.016	−0.234	0.516	0.202
Democratic Experience	95,175	−0.000	−0.064	−0.064	0.577	0.159
Civil Society Participation	95,175	0.422	0	0	1	0.494

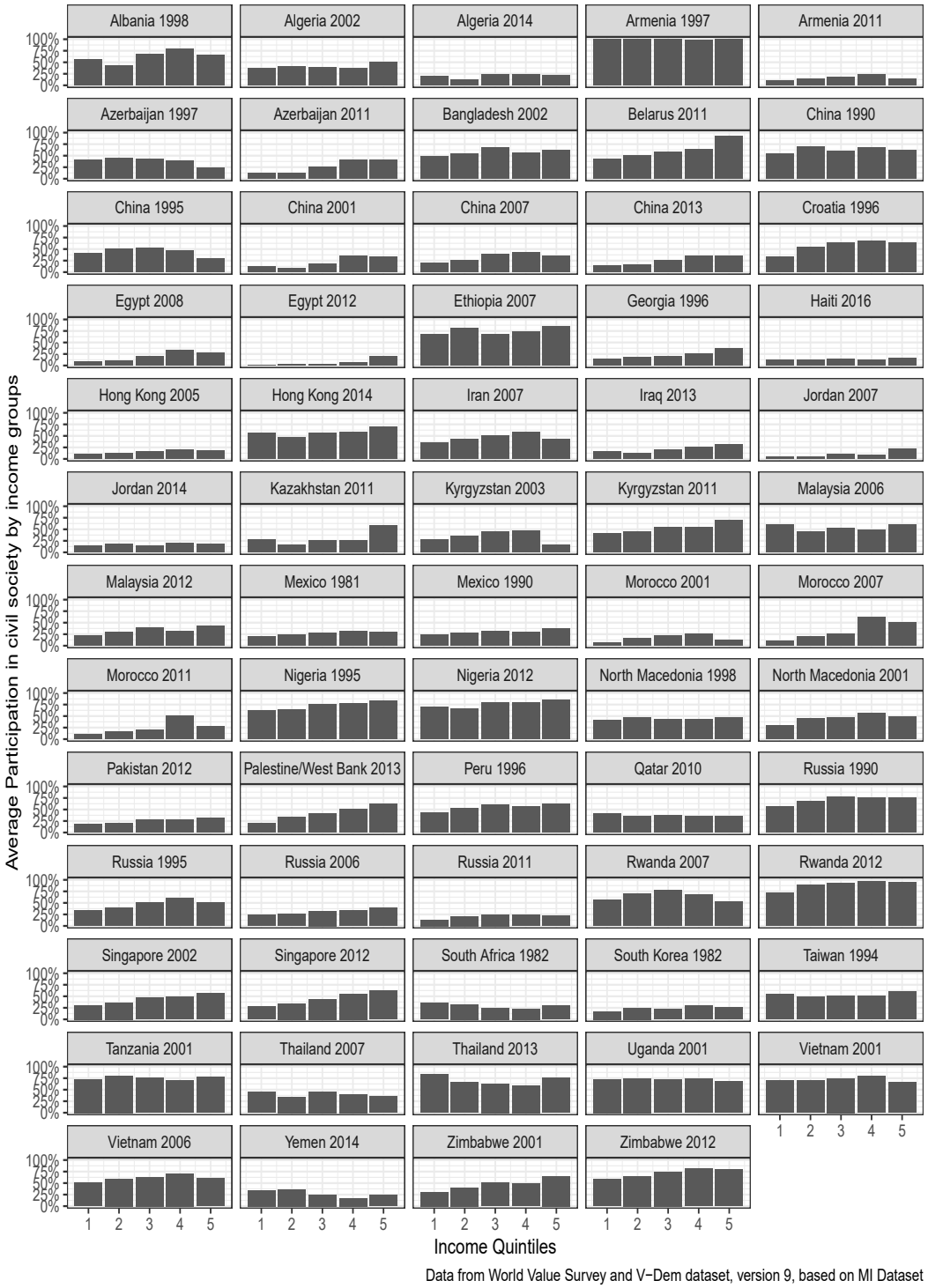


Figure C.45: Income and Civil Society Participation by Country-Years.

Notes: Based on Multiple Imputation Dataset, imputation number 5.

Table C.24: Multiple Imputation: Predicting Civil Society Participation

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7
(Intercept)	−0.34*	−0.50**	−0.50**	−0.50***	−0.50***	−0.50***	−0.50***
	(0.15)	(0.17)	(0.17)	(0.14)	(0.14)	(0.14)	(0.14)
Age (centered)		−0.08***	−0.08***	−0.08***	−0.08***	−0.08***	−0.08***
		(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)
Children		−0.01	−0.01	−0.01	−0.01	−0.01	−0.01
		(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)
Education(centered)		0.13***	0.13***	0.13***	0.13***	0.13***	0.13***
		(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Income quintiles (centered)		0.14***	0.14***	0.14***	0.16***	0.16***	0.16***
		(0.01)	(0.01)	(0.01)	(0.03)	(0.03)	(0.03)
Sex		0.38***	0.38***	0.38***	0.38***	0.38***	0.38***
		(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)
unemployed		−0.32***	−0.32***	−0.32***	−0.32***	−0.32***	−0.32***
		(0.03)	(0.03)	(0.03)	(0.03)	(0.03)	(0.03)
Inequality (centered)			0.00	0.00	−0.00	0.00	
			(0.01)	(0.01)	(0.01)	(0.01)	
CSO repression (centered)				2.38**	2.43**	2.42**	2.42**
				(0.85)	(0.86)	(0.86)	(0.87)
GDP pc log (centered)				−0.55***	−0.57***	−0.57***	−0.57***
				(0.14)	(0.13)	(0.13)	(0.13)
Previos Dem. Experience (centered)				2.30***	2.51***	2.51***	2.51***
				(0.70)	(0.70)	(0.69)	(0.69)
Regime Support Group (centered)				0.18	0.15	0.20	0.20
				(0.17)	(0.16)	(0.17)	(0.17)
Income * Inequality						−0.00	
						(0.00)	
Income * CSO repression						−0.02	−0.02
						(0.03)	(0.03)
AIC	108379.6	105036.6	105038.5	105025.1	104616.2	104619.5	104615.6
BIC	108408.0	105121.8	105133.2	105157.6	104767.6	104789.9	104767.0
Log Likelihood	-54186.81	-52509.29	-52509.27	-52498.55	-52292.09	-52291.77	-52291.80
Num. obs.	88,237	88,237	88,237	88,237	88,237	88,237	88,237
Num. groups: S025	59	59	59	59	59	59	59
Num. groups: S003	36	36	36	36	36	36	36

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

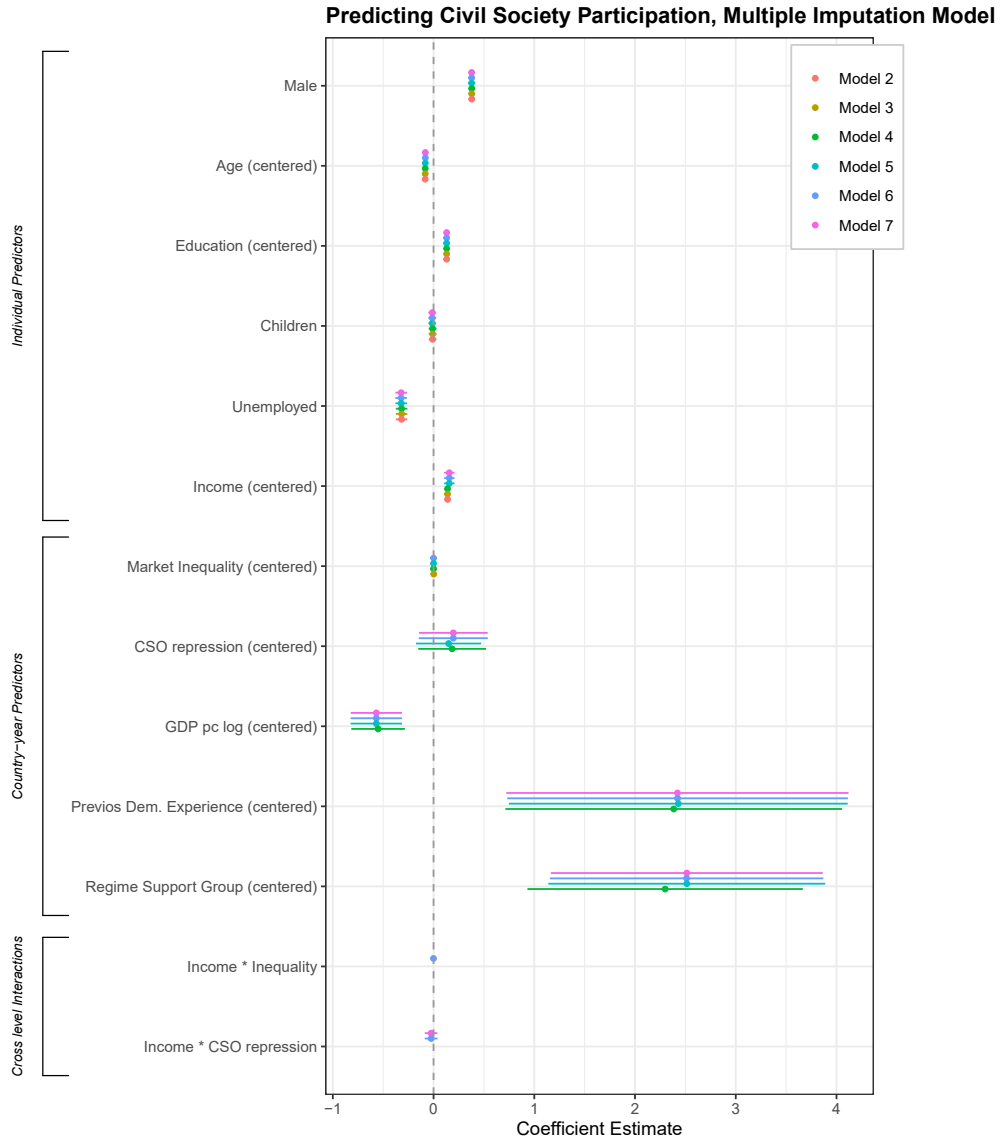


Figure C.46: Effect of Inequality on civil society participation (Dot-whisker plot).

Notes: The dots represent estimated change in the logged odds of civil society participation (dependent variable) occurring for a change of two standard deviations in the predictor variables. The whiskers show the 95% confidence intervals of these estimates.

Appendix D

Supplementary Appendix for *How do past repression and indoctrination affect redistributive preferences?*

The **replication data** for this article is available at Harvard Dataverse:

https://doi.org/10.7910/DVN/2DPD79

D.1 Geographic and temporal coverage

The inclusion of countries into the study was defined as follows: There are at least three surveys (data points) that cover at least 10 years of time. Table D.1 lists the number of observations per country which corresponds to the number of survey respondents that gave a non-missing response to the two survey items defined below.

Table D.2 lists the number of observations per survey-year, the regime type at the time under study, and the appropriate survey datasets, which corresponds to the number of survey respondents that gave a non-missing response to the following two questions: The first one asks respondents to place themselves on a scale based on the extent to which they agree more with the statement ''People should take more responsibility'' or ''The government should take more responsibility''. The second questions asked respondents to place themselves on a scale based on the extent to which they agree more with the statement ''Incomes should be made more equal'' or ''We need larger income differences as incentives''.

The empirical analyses of the article are based on 76 countries including democratic and autocratic countries and country-years from 703 different surveys (survey conducted in a country in a given year).

	Country	N
1	Albania	4940
2	Argentina	21294
3	Armenia	6038
4	Australia	13257
5	Austria	19548
6	Azerbaijan	4696
7	Bangladesh	3554

	Country	N
8	Belarus	10933
9	Belgium	21326
10	Bolivia	15076
11	Bosnia and Herzegovina	4336
12	Brazil	19300
13	Bulgaria	18288
14	Canada	9283
15	Chile	23617
16	Colombia	23071
17	Costa Rica	11445
18	Cyprus	9166
19	Czech Republic	27005
20	Denmark	18701
21	Dominican Republic	9138
22	Ecuador	16186
23	Egypt	8748
24	El Salvador	12393
25	Estonia	24431
26	Finland	22684
27	France	26557
28	Georgia	8262
29	Greece	13350
30	Guatemala	12169
31	Honduras	11255
32	Hungary	25297
33	Iceland	7056
34	India	11597
35	Indonesia	6109
36	Iraq	7258
37	Ireland	20463
38	Italy	15336
39	Japan	10450
40	Jordan	4729
41	Latvia	9322
42	Lithuania	17848
43	Malaysia	3797
44	Mexico	23687
45	Moldova	4438
46	Morocco	3390
47	Netherlands	25431
48	New Zealand	5819
49	Nicaragua	4637
50	Nigeria	7858
51	North Macedonia	4523

	Country	N
52	Norway	22755
53	Pakistan	4858
54	Panama	11492
55	Paraguay	12077
56	Peru	20064
57	Philippines	8359
58	Poland	27388
59	Portugal	20479
60	Romania	10884
61	Russia	33113
62	Slovakia	9544
63	Slovenia	29372
64	South Africa	18117
65	South Korea	8759
66	Spain	43842
67	Sweden	25574
68	Switzerland	22616
69	Taiwan	6433
70	Thailand	4201
71	Turkey	20526
72	Ukraine	19054
73	United Kingdom	31367
74	United States of America	17582
75	Uruguay	16594
76	Venezuela	17106

Table D.1: List of countries and number of respondents

	Country	Year	Dataset	N	Regime Type
1	Albania	1998	WVS Wave 3	989	Electoral Autocracy
2	Albania	2002	WVS Wave 4	998	Electoral Democracy
3	Albania	2008	EVS Wave 4	1524	Electoral Democracy
4	Albania	2018	EVS Wave 5	1429	Electoral Autocracy
5	Argentina	1991	WVS Wave 2	984	Electoral Democracy
6	Argentina	1995	WVS Wave 3	1067	Electoral Democracy
7	Argentina	1997	LB 1997	1171	Electoral Democracy
8	Argentina	1999	WVS Wave 4	1266	Electoral Democracy
9	Argentina	2001	LB 2001	1165	Electoral Democracy
10	Argentina	2002	LB 2002	1185	Electoral Democracy
11	Argentina	2006	WVS Wave 5	994	Electoral Democracy
12	Argentina	2007	LB 2017	2315	Electoral Democracy
13	Argentina	2009	LB 2009	2273	Electoral Democracy
14	Argentina	2010	LB 2010	1165	Electoral Democracy
15	Argentina	2011	LB 2011	1171	Electoral Democracy
16	Argentina	2013	WVS Wave 6	2083	Electoral Democracy
17	Argentina	2015	LB 2016	1150	Electoral Democracy
18	Argentina	2016	LB 2016	1158	Electoral Democracy
19	Argentina	2017	WVS Wave 7	991	Electoral Democracy
20	Argentina	2018	LB 2018	1156	Electoral Democracy

	Country	Year	Dataset	N	Regime Type
21	Armenia	1997	WVS Wave 3	1983	Electoral Autocracy
22	Armenia	2008	EVS Wave 4	1469	Electoral Autocracy
23	Armenia	2011	WVS Wave 6	1093	Electoral Autocracy
24	Armenia	2018	EVS Wave 5	1493	Electoral Autocracy
25	Australia	1987	ISSP 1987	1543	Liberal Democracy
26	Australia	1992	ISSP 1992	2041	Liberal Democracy
27	Australia	1995	WVS Wave 3	2029	Liberal Democracy
28	Australia	1999	ISSP 1999	1597	Liberal Democracy
29	Australia	2005	WVS Wave 5	1390	Liberal Democracy
30	Australia	2009	ISSP 2009	1421	Liberal Democracy
31	Australia	2012	WVS Wave 6	1449	Liberal Democracy
32	Australia	2018	WVS Wave 7	1787	Liberal Democracy
33	Austria	1987	ISSP 1987	858	Liberal Democracy
34	Austria	1990	EVS Wave 2	1283	Liberal Democracy
35	Austria	1992	ISSP 1992	906	Liberal Democracy
36	Austria	1999	ISSP 1999	2371	Liberal Democracy
37	Austria	2002	ESS Wave 1	2036	Liberal Democracy
38	Austria	2004	ESS Wave 2	2100	Liberal Democracy
39	Austria	2006	ESS Wave 3	2249	Liberal Democracy
40	Austria	2008	EVS Wave 4	1457	Liberal Democracy
41	Austria	2009	ISSP 2009	960	Liberal Democracy
42	Austria	2014	ESS Wave 7	1734	Liberal Democracy
43	Austria	2016	ESS Wave 8	1955	Liberal Democracy
44	Austria	2018	EVS Wave 5	1639	Liberal Democracy
45	Azerbaijan	1997	WVS Wave 3	1939	Electoral Autocracy
46	Azerbaijan	2011	WVS Wave 6	1002	Electoral Autocracy
47	Azerbaijan	2018	EVS Wave 5	1755	Electoral Autocracy
48	Bangladesh	1996	WVS Wave 3	1112	Electoral Democracy
49	Bangladesh	2002	WVS Wave 4	1278	Electoral Autocracy
50	Bangladesh	2018	WVS Wave 7	1164	Electoral Autocracy
51	Belarus	1990	WVS Wave 2	3680	Electoral Autocracy
52	Belarus	1996	WVS Wave 3	1829	Electoral Democracy
53	Belarus	2000	EVS Wave 3	910	Electoral Autocracy
54	Belarus	2008	EVS Wave 4	1455	Electoral Autocracy
55	Belarus	2011	WVS Wave 6	1519	Electoral Autocracy
56	Belarus	2018	EVS Wave 5	1540	Electoral Autocracy
57	Belgium	1990	EVS Wave 2	2692	Liberal Democracy
58	Belgium	1999	EVS Wave 3	1882	Liberal Democracy
59	Belgium	2002	ESS Wave 1	1776	Liberal Democracy
60	Belgium	2004	ESS Wave 2	1768	Liberal Democracy
61	Belgium	2006	ESS Wave 3	1794	Liberal Democracy
62	Belgium	2008	ESS Wave 4	1750	Liberal Democracy
63	Belgium	2009	ISSP 2009	2586	Liberal Democracy
64	Belgium	2010	ESS Wave 5	1700	Liberal Democracy
65	Belgium	2012	ESS Wave 6	1856	Liberal Democracy
66	Belgium	2014	ESS Wave 7	1762	Liberal Democracy
67	Belgium	2016	ESS Wave 8	1760	Liberal Democracy
68	Bolivia	1997	LB 1997	769	Electoral Democracy
69	Bolivia	2001	LB 2001	1057	Electoral Democracy
70	Bolivia	2002	LB 2002	1186	Electoral Democracy
71	Bolivia	2007	LB 2017	2297	Electoral Democracy
72	Bolivia	2009	LB 2009	1134	Electoral Democracy
73	Bolivia	2010	LB 2010	1101	Electoral Democracy
74	Bolivia	2011	LB 2011	1128	Electoral Democracy
75	Bolivia	2013	LB 2013	1072	Electoral Democracy
76	Bolivia	2015	LB 2016	1070	Electoral Democracy
77	Bolivia	2016	LB 2016	1099	Electoral Democracy
78	Bolivia	2017	WVS Wave 7	2050	Electoral Democracy
79	Bolivia	2018	LB 2018	1113	Electoral Democracy
80	Bosnia and Herzegovina	2001	WVS Wave 4	1172	Electoral Democracy
81	Bosnia and Herzegovina	2008	EVS Wave 4	1471	Electoral Democracy
82	Bosnia and Herzegovina	2019	EVS Wave 5	1693	Electoral Democracy
83	Brazil	1997	WVS Wave 3	2114	Electoral Democracy

	Country	Year	Dataset	N	Regime Type
84	Brazil	2001	LB 2001	946	Electoral Democracy
85	Brazil	2002	LB 2002	968	Electoral Democracy
86	Brazil	2006	WVS Wave 5	1495	Electoral Democracy
87	Brazil	2007	LB 2017	2344	Electoral Democracy
88	Brazil	2009	LB 2009	1173	Electoral Democracy
89	Brazil	2010	LB 2010	1150	Electoral Democracy
90	Brazil	2011	LB 2011	1184	Electoral Democracy
91	Brazil	2013	LB 2013	1155	Electoral Democracy
92	Brazil	2014	WVS Wave 6	1478	Electoral Democracy
93	Brazil	2015	LB 2016	1225	Electoral Democracy
94	Brazil	2016	LB 2016	1156	Electoral Democracy
95	Brazil	2018	WVS Wave 7	2912	Electoral Democracy
96	Bulgaria	1991	EVS Wave 2	995	Electoral Democracy
97	Bulgaria	1992	ISSP 1992	1123	Electoral Democracy
98	Bulgaria	1997	WVS Wave 3	1043	Electoral Democracy
99	Bulgaria	1999	ISSP 1999	2066	Electoral Democracy
100	Bulgaria	2006	WVS Wave 5	2316	Electoral Democracy
101	Bulgaria	2008	EVS Wave 4	3635	Electoral Democracy
102	Bulgaria	2009	ISSP 2009	954	Electoral Democracy
103	Bulgaria	2010	ESS Wave 5	2404	Electoral Democracy
104	Bulgaria	2012	ESS Wave 6	2225	Electoral Democracy
105	Bulgaria	2017	EVS Wave 5	1527	Electoral Democracy
106	Canada	1990	WVS Wave 2	3379	Liberal Democracy
107	Canada	1992	ISSP 1992	913	Liberal Democracy
108	Canada	1999	ISSP 1999	947	Liberal Democracy
109	Canada	2000	WVS Wave 4	1909	Liberal Democracy
110	Canada	2006	WVS Wave 5	2135	Liberal Democracy
111	Chile	1990	WVS Wave 2	1483	Electoral Democracy
112	Chile	1996	WVS Wave 3	995	Liberal Democracy
113	Chile	1997	LB 1997	1183	Liberal Democracy
114	Chile	1999	ISSP 1999	1470	Liberal Democracy
115	Chile	2000	WVS Wave 4	1197	Liberal Democracy
116	Chile	2001	LB 2001	1148	Liberal Democracy
117	Chile	2002	LB 2002	1163	Liberal Democracy
118	Chile	2006	WVS Wave 5	998	Liberal Democracy
119	Chile	2007	LB 2017	2333	Liberal Democracy
120	Chile	2009	LB 2009	2627	Liberal Democracy
121	Chile	2010	LB 2010	1175	Liberal Democracy
122	Chile	2011	LB 2011	1178	Liberal Democracy
123	Chile	2012	WVS Wave 6	991	Liberal Democracy
124	Chile	2013	LB 2013	1169	Liberal Democracy
125	Chile	2015	LB 2016	1159	Liberal Democracy
126	Chile	2016	LB 2016	1183	Liberal Democracy
127	Chile	2018	WVS Wave 7	2165	Liberal Democracy
128	Colombia	1997	LB 1997	1186	Electoral Democracy
129	Colombia	1998	WVS Wave 3	2995	Electoral Democracy
130	Colombia	2001	LB 2001	1162	Electoral Democracy
131	Colombia	2002	LB 2002	1129	Electoral Democracy
132	Colombia	2005	WVS Wave 5	3022	Electoral Democracy
133	Colombia	2007	LB 2017	2361	Electoral Democracy
134	Colombia	2009	LB 2009	1125	Electoral Democracy
135	Colombia	2010	LB 2010	1163	Electoral Democracy
136	Colombia	2011	LB 2011	1186	Electoral Democracy
137	Colombia	2012	WVS Wave 6	1507	Electoral Democracy
138	Colombia	2013	LB 2013	1182	Electoral Democracy
139	Colombia	2015	LB 2016	1181	Electoral Democracy
140	Colombia	2016	LB 2016	1174	Electoral Democracy
141	Colombia	2018	WVS Wave 7	2698	Electoral Democracy
142	Costa Rica	1997	LB 1997	972	Liberal Democracy
143	Costa Rica	2001	LB 2001	943	Liberal Democracy
144	Costa Rica	2002	LB 2002	900	Liberal Democracy
145	Costa Rica	2007	LB 2017	1919	Liberal Democracy
146	Costa Rica	2009	LB 2009	946	Liberal Democracy

	Country	Year	Dataset	N	Regime Type
147	Costa Rica	2010	LB 2010	966	Liberal Democracy
148	Costa Rica	2011	LB 2011	973	Liberal Democracy
149	Costa Rica	2013	LB 2013	933	Liberal Democracy
150	Costa Rica	2015	LB 2016	973	Liberal Democracy
151	Costa Rica	2016	LB 2016	955	Liberal Democracy
152	Costa Rica	2018	LB 2018	965	Liberal Democracy
153	Cyprus	1999	ISSP 1999	799	Electoral Democracy
154	Cyprus	2006	WVS Wave 5	1649	Liberal Democracy
155	Cyprus	2008	EVS Wave 4	2143	Liberal Democracy
156	Cyprus	2009	ISSP 2009	964	Liberal Democracy
157	Cyprus	2010	ESS Wave 5	847	Liberal Democracy
158	Cyprus	2011	WVS Wave 6	880	Liberal Democracy
159	Cyprus	2012	ESS Wave 6	909	Liberal Democracy
160	Cyprus	2019	WVS Wave 7	975	Liberal Democracy
161	Czech Republic	1991	WVS Wave 2	3002	Liberal Democracy
162	Czech Republic	1998	WVS Wave 3	1134	Liberal Democracy
163	Czech Republic	1999	ISSP 1999	3709	Liberal Democracy
164	Czech Republic	2002	ESS Wave 1	1222	Liberal Democracy
165	Czech Republic	2004	ESS Wave 2	2788	Liberal Democracy
166	Czech Republic	2008	EVS Wave 4	3732	Liberal Democracy
167	Czech Republic	2009	ISSP 2009	1183	Liberal Democracy
168	Czech Republic	2010	ESS Wave 5	2341	Liberal Democracy
169	Czech Republic	2012	ESS Wave 6	1886	Liberal Democracy
170	Czech Republic	2014	ESS Wave 7	2054	Liberal Democracy
171	Czech Republic	2016	ESS Wave 8	2224	Liberal Democracy
172	Czech Republic	2017	EVS Wave 5	1730	Liberal Democracy
173	Denmark	1990	EVS Wave 2	983	Liberal Democracy
174	Denmark	1999	EVS Wave 3	989	Liberal Democracy
175	Denmark	2002	ESS Wave 1	1385	Liberal Democracy
176	Denmark	2004	ESS Wave 2	1399	Liberal Democracy
177	Denmark	2006	ESS Wave 3	1461	Liberal Democracy
178	Denmark	2008	EVS Wave 4	3068	Liberal Democracy
179	Denmark	2009	ISSP 2009	1464	Liberal Democracy
180	Denmark	2010	ESS Wave 5	1536	Liberal Democracy
181	Denmark	2012	ESS Wave 6	1599	Liberal Democracy
182	Denmark	2014	ESS Wave 7	1472	Liberal Democracy
183	Denmark	2017	EVS Wave 5	3345	Liberal Democracy
184	Dominican Republic	1996	WVS Wave 3	412	Electoral Democracy
185	Dominican Republic	2007	LB 2017	1942	Electoral Democracy
186	Dominican Republic	2009	LB 2009	971	Electoral Democracy
187	Dominican Republic	2010	LB 2010	989	Electoral Democracy
188	Dominican Republic	2011	LB 2011	990	Electoral Democracy
189	Dominican Republic	2013	LB 2013	942	Electoral Democracy
190	Dominican Republic	2015	LB 2016	972	Electoral Democracy
191	Dominican Republic	2016	LB 2016	951	Electoral Democracy
192	Dominican Republic	2018	LB 2018	969	Electoral Democracy
193	Ecuador	1997	LB 1997	1125	Electoral Democracy
194	Ecuador	2001	LB 2001	1166	Electoral Democracy
195	Ecuador	2002	LB 2002	1184	Electoral Democracy
196	Ecuador	2007	LB 2017	2326	Electoral Democracy
197	Ecuador	2009	LB 2009	1143	Electoral Democracy
198	Ecuador	2010	LB 2010	1146	Electoral Democracy
199	Ecuador	2011	LB 2011	1155	Electoral Democracy
200	Ecuador	2013	WVS Wave 6	2335	Electoral Democracy
201	Ecuador	2015	LB 2016	1095	Electoral Democracy
202	Ecuador	2016	LB 2016	1155	Electoral Democracy
203	Ecuador	2018	WVS Wave 7	2356	Electoral Democracy
204	Egypt	2001	WVS Wave 4	2991	Electoral Autocracy
205	Egypt	2008	WVS Wave 5	3036	Electoral Autocracy
206	Egypt	2013	WVS Wave 6	1521	Closed Autocracy
207	Egypt	2018	WVS Wave 7	1200	Electoral Autocracy
208	El Salvador	1997	LB 1997	981	Electoral Autocracy
209	El Salvador	1999	WVS Wave 3	1219	Electoral Democracy

	Country	Year	Dataset	N	Regime Type
210	El Salvador	2001	LB 2001	911	Electoral Democracy
211	El Salvador	2002	LB 2002	865	Electoral Democracy
212	El Salvador	2007	LB 2017	1913	Electoral Democracy
213	El Salvador	2009	LB 2009	908	Electoral Democracy
214	El Salvador	2010	LB 2010	915	Electoral Democracy
215	El Salvador	2011	LB 2011	949	Electoral Democracy
216	El Salvador	2013	LB 2013	924	Electoral Democracy
217	El Salvador	2015	LB 2016	940	Electoral Democracy
218	El Salvador	2016	LB 2016	892	Electoral Democracy
219	El Salvador	2018	LB 2018	976	Electoral Democracy
220	Estonia	1990	EVS Wave 2	3972	Electoral Democracy
221	Estonia	1996	WVS Wave 3	1012	Electoral Democracy
222	Estonia	1999	EVS Wave 3	987	Liberal Democracy
223	Estonia	2004	ESS Wave 2	1926	Liberal Democracy
224	Estonia	2006	ESS Wave 3	1484	Liberal Democracy
225	Estonia	2008	EVS Wave 4	3140	Liberal Democracy
226	Estonia	2009	ISSP 2009	979	Liberal Democracy
227	Estonia	2010	ESS Wave 5	1765	Liberal Democracy
228	Estonia	2011	WVS Wave 6	1521	Liberal Democracy
229	Estonia	2012	ESS Wave 6	2348	Liberal Democracy
230	Estonia	2014	ESS Wave 7	2004	Liberal Democracy
231	Estonia	2016	ESS Wave 8	1994	Liberal Democracy
232	Estonia	2018	EVS Wave 5	1299	Liberal Democracy
233	Finland	1990	EVS Wave 2	573	Liberal Democracy
234	Finland	1996	WVS Wave 3	982	Liberal Democracy
235	Finland	2000	EVS Wave 3	1008	Liberal Democracy
236	Finland	2002	ESS Wave 1	1971	Liberal Democracy
237	Finland	2004	ESS Wave 2	2000	Liberal Democracy
238	Finland	2005	WVS Wave 5	1014	Liberal Democracy
239	Finland	2006	ESS Wave 3	1876	Liberal Democracy
240	Finland	2008	ESS Wave 4	2176	Liberal Democracy
241	Finland	2009	ISSP 2009	1923	Liberal Democracy
242	Finland	2010	ESS Wave 5	1858	Liberal Democracy
243	Finland	2012	ESS Wave 6	2173	Liberal Democracy
244	Finland	2014	ESS Wave 7	2070	Liberal Democracy
245	Finland	2016	ESS Wave 8	1907	Liberal Democracy
246	Finland	2017	EVS Wave 5	1153	Liberal Democracy
247	France	1990	EVS Wave 2	971	Liberal Democracy
248	France	1999	ISSP 1999	3481	Liberal Democracy
249	France	2002	ESS Wave 1	1487	Liberal Democracy
250	France	2004	ESS Wave 2	1799	Liberal Democracy
251	France	2006	WVS Wave 5	2979	Liberal Democracy
252	France	2008	EVS Wave 4	3560	Liberal Democracy
253	France	2009	ISSP 2009	2786	Liberal Democracy
254	France	2010	ESS Wave 5	1721	Liberal Democracy
255	France	2012	ESS Wave 6	1956	Liberal Democracy
256	France	2014	ESS Wave 7	1906	Liberal Democracy
257	France	2016	ESS Wave 8	2055	Liberal Democracy
258	France	2018	EVS Wave 5	1856	Liberal Democracy
259	Georgia	1996	WVS Wave 3	1973	Electoral Autocracy
260	Georgia	2008	EVS Wave 4	1465	Electoral Democracy
261	Georgia	2009	WVS Wave 5	1456	Electoral Democracy
262	Georgia	2014	WVS Wave 6	1190	Electoral Democracy
263	Georgia	2018	EVS Wave 5	2178	Electoral Democracy
264	Greece	1999	EVS Wave 3	1088	Liberal Democracy
265	Greece	2002	ESS Wave 1	2496	Liberal Democracy
266	Greece	2004	ESS Wave 2	2347	Liberal Democracy
267	Greece	2008	EVS Wave 4	3555	Liberal Democracy
268	Greece	2010	ESS Wave 5	2668	Liberal Democracy
269	Greece	2017	WVS Wave 7	1196	Liberal Democracy
270	Guatemala	1997	LB 1997	929	Electoral Autocracy
271	Guatemala	2001	LB 2001	938	Electoral Democracy
272	Guatemala	2002	LB 2002	909	Electoral Democracy

	Country	Year	Dataset	N	Regime Type
273	Guatemala	2004	WVS Wave 5	1000	Electoral Democracy
274	Guatemala	2007	LB 2017	1878	Electoral Democracy
275	Guatemala	2009	LB 2009	952	Electoral Democracy
276	Guatemala	2010	LB 2010	955	Electoral Democracy
277	Guatemala	2011	LB 2011	926	Electoral Democracy
278	Guatemala	2013	LB 2013	933	Electoral Democracy
279	Guatemala	2015	LB 2016	915	Electoral Democracy
280	Guatemala	2016	LB 2016	916	Electoral Democracy
281	Guatemala	2018	LB 2018	918	Electoral Democracy
282	Honduras	1997	LB 1997	941	Electoral Democracy
283	Honduras	2001	LB 2001	928	Electoral Democracy
284	Honduras	2002	LB 2002	899	Electoral Democracy
285	Honduras	2007	LB 2017	1884	Electoral Democracy
286	Honduras	2009	LB 2009	932	Electoral Autocracy
287	Honduras	2010	LB 2010	936	Electoral Autocracy
288	Honduras	2011	LB 2011	974	Electoral Autocracy
289	Honduras	2013	LB 2013	933	Electoral Autocracy
290	Honduras	2015	LB 2016	922	Electoral Autocracy
291	Honduras	2016	LB 2016	954	Electoral Autocracy
292	Honduras	2018	LB 2018	952	Electoral Autocracy
293	Hungary	1987	ISSP 1987	2435	Closed Autocracy
294	Hungary	1991	EVS Wave 2	952	Liberal Democracy
295	Hungary	1992	ISSP 1992	1224	Liberal Democracy
296	Hungary	1998	WVS Wave 3	641	Liberal Democracy
297	Hungary	1999	ISSP 1999	2153	Liberal Democracy
298	Hungary	2002	ESS Wave 1	1632	Liberal Democracy
299	Hungary	2004	ESS Wave 2	1470	Liberal Democracy
300	Hungary	2006	ESS Wave 3	1478	Electoral Democracy
301	Hungary	2008	EVS Wave 4	3022	Liberal Democracy
302	Hungary	2009	WVS Wave 5	2000	Liberal Democracy
303	Hungary	2010	ESS Wave 5	1550	Electoral Democracy
304	Hungary	2012	ESS Wave 6	1976	Electoral Democracy
305	Hungary	2014	ESS Wave 7	1671	Electoral Democracy
306	Hungary	2016	ESS Wave 8	1587	Electoral Democracy
307	Hungary	2018	EVS Wave 5	1506	Electoral Autocracy
308	Iceland	1990	EVS Wave 2	632	Liberal Democracy
309	Iceland	1999	EVS Wave 3	935	Liberal Democracy
310	Iceland	2004	ESS Wave 2	548	Liberal Democracy
311	Iceland	2009	ISSP 2009	1725	Liberal Democracy
312	Iceland	2012	ESS Wave 6	737	Liberal Democracy
313	Iceland	2016	ESS Wave 8	872	Liberal Democracy
314	Iceland	2017	EVS Wave 5	1607	Liberal Democracy
315	India	1990	WVS Wave 2	2396	Electoral Democracy
316	India	1995	WVS Wave 3	1874	Electoral Democracy
317	India	2001	WVS Wave 4	1744	Electoral Democracy
318	India	2006	WVS Wave 5	1786	Electoral Democracy
319	India	2012	WVS Wave 6	3797	Electoral Democracy
320	Indonesia	2001	WVS Wave 4	969	Electoral Democracy
321	Indonesia	2006	WVS Wave 5	1945	Electoral Democracy
322	Indonesia	2018	WVS Wave 7	3195	Electoral Democracy
323	Iraq	2004	WVS Wave 4	2321	Closed Autocracy
324	Iraq	2006	WVS Wave 5	2538	Electoral Autocracy
325	Iraq	2013	WVS Wave 6	1199	Electoral Autocracy
326	Iraq	2018	WVS Wave 7	1200	Electoral Autocracy
327	Ireland	1990	EVS Wave 2	980	Liberal Democracy
328	Ireland	1999	EVS Wave 3	970	Liberal Democracy
329	Ireland	2002	ESS Wave 1	1968	Liberal Democracy
330	Ireland	2004	ESS Wave 2	2202	Liberal Democracy
331	Ireland	2006	ESS Wave 3	1606	Liberal Democracy
332	Ireland	2008	EVS Wave 4	2711	Liberal Democracy
333	Ireland	2010	ESS Wave 5	2537	Liberal Democracy
334	Ireland	2012	ESS Wave 6	2535	Liberal Democracy
335	Ireland	2014	ESS Wave 7	2301	Liberal Democracy

	Country	Year	Dataset	N	Regime Type
336	Ireland	2016	ESS Wave 8	2653	Liberal Democracy
337	Italy	1987	ISSP 1987	1021	Liberal Democracy
338	Italy	1990	EVS Wave 2	1970	Liberal Democracy
339	Italy	1999	EVS Wave 3	1956	Liberal Democracy
340	Italy	2002	ESS Wave 1	1162	Liberal Democracy
341	Italy	2005	WVS Wave 5	1000	Liberal Democracy
342	Italy	2009	ISSP 2009	2508	Liberal Democracy
343	Italy	2012	ESS Wave 6	922	Liberal Democracy
344	Italy	2016	ESS Wave 8	2532	Liberal Democracy
345	Italy	2018	EVS Wave 5	2265	Liberal Democracy
346	Japan	1990	WVS Wave 2	921	Liberal Democracy
347	Japan	1995	WVS Wave 3	1016	Liberal Democracy
348	Japan	1999	ISSP 1999	1238	Liberal Democracy
349	Japan	2000	WVS Wave 4	1332	Liberal Democracy
350	Japan	2005	WVS Wave 5	1074	Liberal Democracy
351	Japan	2009	ISSP 2009	1199	Liberal Democracy
352	Japan	2010	WVS Wave 6	2348	Liberal Democracy
353	Japan	2019	WVS Wave 7	1322	Liberal Democracy
354	Jordan	2001	WVS Wave 4	1161	Closed Autocracy
355	Jordan	2007	WVS Wave 5	1165	Closed Autocracy
356	Jordan	2014	WVS Wave 6	1200	Closed Autocracy
357	Jordan	2018	WVS Wave 7	1203	Closed Autocracy
358	Latvia	1990	EVS Wave 2	3512	Electoral Democracy
359	Latvia	1996	WVS Wave 3	1196	Electoral Democracy
360	Latvia	1999	ISSP 1999	2093	Electoral Democracy
361	Latvia	2008	EVS Wave 4	1498	Electoral Democracy
362	Latvia	2009	ISSP 2009	1023	Liberal Democracy
363	Lithuania	1990	EVS Wave 2	3940	Electoral Democracy
364	Lithuania	1997	WVS Wave 3	1006	Liberal Democracy
365	Lithuania	1999	EVS Wave 3	1009	Liberal Democracy
366	Lithuania	2008	EVS Wave 4	1483	Liberal Democracy
367	Lithuania	2009	ISSP 2009	995	Liberal Democracy
368	Lithuania	2010	ESS Wave 5	1587	Liberal Democracy
369	Lithuania	2012	ESS Wave 6	2081	Liberal Democracy
370	Lithuania	2014	ESS Wave 7	2223	Liberal Democracy
371	Lithuania	2016	ESS Wave 8	2085	Electoral Democracy
372	Lithuania	2018	EVS Wave 5	1439	Electoral Democracy
373	Malaysia	2006	WVS Wave 5	1199	Electoral Autocracy
374	Malaysia	2012	WVS Wave 6	1294	Electoral Autocracy
375	Malaysia	2018	WVS Wave 7	1304	Electoral Autocracy
376	Mexico	1990	WVS Wave 2	1505	Electoral Autocracy
377	Mexico	1996	WVS Wave 3	1478	Electoral Democracy
378	Mexico	1997	LB 1997	1076	Electoral Democracy
379	Mexico	2000	WVS Wave 4	1445	Electoral Democracy
380	Mexico	2001	LB 2001	1241	Electoral Democracy
381	Mexico	2002	LB 2002	1200	Electoral Democracy
382	Mexico	2005	WVS Wave 5	1523	Electoral Democracy
383	Mexico	2007	LB 2017	2338	Electoral Democracy
384	Mexico	2009	LB 2009	1164	Electoral Democracy
385	Mexico	2010	LB 2010	1179	Electoral Democracy
386	Mexico	2011	LB 2011	1165	Electoral Democracy
387	Mexico	2012	WVS Wave 6	1995	Electoral Democracy
388	Mexico	2013	LB 2013	1138	Electoral Democracy
389	Mexico	2015	LB 2016	1172	Electoral Democracy
390	Mexico	2016	LB 2016	1176	Electoral Democracy
391	Mexico	2018	WVS Wave 7	2892	Electoral Democracy
392	Moldova	1996	WVS Wave 3	915	Electoral Democracy
393	Moldova	2002	WVS Wave 4	977	Electoral Democracy
394	Moldova	2006	WVS Wave 5	1029	Electoral Democracy
395	Moldova	2008	EVS Wave 4	1517	Electoral Democracy
396	Morocco	2001	WVS Wave 4	1219	Closed Autocracy
397	Morocco	2007	WVS Wave 5	1182	Closed Autocracy
398	Morocco	2011	WVS Wave 6	989	Closed Autocracy

	Country	Year	Dataset	N	Regime Type
399	Netherlands	1987	ISSP 1987	1574	Liberal Democracy
400	Netherlands	1990	EVS Wave 2	998	Liberal Democracy
401	Netherlands	1999	EVS Wave 3	998	Liberal Democracy
402	Netherlands	2002	ESS Wave 1	2339	Liberal Democracy
403	Netherlands	2004	ESS Wave 2	1860	Liberal Democracy
404	Netherlands	2006	WVS Wave 5	2912	Liberal Democracy
405	Netherlands	2008	EVS Wave 4	3314	Liberal Democracy
406	Netherlands	2010	ESS Wave 5	1815	Liberal Democracy
407	Netherlands	2012	WVS Wave 6	3677	Liberal Democracy
408	Netherlands	2014	ESS Wave 7	1901	Liberal Democracy
409	Netherlands	2016	ESS Wave 8	1671	Liberal Democracy
410	Netherlands	2017	EVS Wave 5	2372	Liberal Democracy
411	New Zealand	1992	ISSP 1992	1106	Liberal Democracy
412	New Zealand	1998	WVS Wave 3	1097	Liberal Democracy
413	New Zealand	1999	ISSP 1999	1017	Liberal Democracy
414	New Zealand	2004	WVS Wave 5	892	Liberal Democracy
415	New Zealand	2009	ISSP 2009	910	Liberal Democracy
416	New Zealand	2011	WVS Wave 6	797	Liberal Democracy
417	Nicaragua	1997	LB 1997	413	Electoral Democracy
418	Nicaragua	2001	LB 2001	327	Electoral Democracy
419	Nicaragua	2002	LB 2002	304	Electoral Democracy
420	Nicaragua	2007	LB 2017	616	Electoral Autocracy
421	Nicaragua	2009	LB 2009	317	Electoral Autocracy
422	Nicaragua	2010	LB 2010	350	Electoral Autocracy
423	Nicaragua	2011	LB 2011	367	Electoral Autocracy
424	Nicaragua	2013	LB 2013	440	Electoral Autocracy
425	Nicaragua	2015	LB 2016	489	Electoral Autocracy
426	Nicaragua	2016	LB 2016	509	Electoral Autocracy
427	Nicaragua	2018	LB 2018	505	Electoral Autocracy
428	Nigeria	1990	WVS Wave 2	957	Closed Autocracy
429	Nigeria	1995	WVS Wave 3	1913	Closed Autocracy
430	Nigeria	2000	WVS Wave 4	1997	Electoral Autocracy
431	Nigeria	2012	WVS Wave 6	1757	Electoral Autocracy
432	Nigeria	2018	WVS Wave 7	1234	Electoral Democracy
433	North Macedonia	1998	WVS Wave 3	964	Electoral Autocracy
434	North Macedonia	2001	WVS Wave 4	1026	Electoral Autocracy
435	North Macedonia	2008	EVS Wave 4	1470	Electoral Democracy
436	North Macedonia	2019	EVS Wave 5	1063	Electoral Democracy
437	Norway	1990	EVS Wave 2	1233	Liberal Democracy
438	Norway	1992	ISSP 1992	1523	Liberal Democracy
439	Norway	1996	WVS Wave 3	1123	Liberal Democracy
440	Norway	1999	ISSP 1999	1256	Liberal Democracy
441	Norway	2002	ESS Wave 1	2029	Liberal Democracy
442	Norway	2004	ESS Wave 2	1755	Liberal Democracy
443	Norway	2006	ESS Wave 3	1744	Liberal Democracy
444	Norway	2007	WVS Wave 5	1019	Liberal Democracy
445	Norway	2008	EVS Wave 4	2630	Liberal Democracy
446	Norway	2009	ISSP 2009	1209	Liberal Democracy
447	Norway	2010	ESS Wave 5	1540	Liberal Democracy
448	Norway	2012	ESS Wave 6	1617	Liberal Democracy
449	Norway	2014	ESS Wave 7	1424	Liberal Democracy
450	Norway	2016	ESS Wave 8	1535	Liberal Democracy
451	Norway	2018	EVS Wave 5	1118	Liberal Democracy
452	Pakistan	2001	WVS Wave 4	1673	Closed Autocracy
453	Pakistan	2012	WVS Wave 6	1199	Electoral Autocracy
454	Pakistan	2018	WVS Wave 7	1986	Electoral Autocracy
455	Panama	1997	LB 1997	994	Electoral Democracy
456	Panama	2001	LB 2001	896	Electoral Democracy
457	Panama	2002	LB 2002	975	Electoral Democracy
458	Panama	2007	LB 2017	1937	Electoral Democracy
459	Panama	2009	LB 2009	949	Electoral Democracy
460	Panama	2010	LB 2010	961	Electoral Democracy
461	Panama	2011	LB 2011	960	Electoral Democracy

	Country	Year	Dataset	N	Regime Type
462	Panama	2013	LB 2013	946	Electoral Democracy
463	Panama	2015	LB 2016	958	Electoral Democracy
464	Panama	2016	LB 2016	956	Electoral Democracy
465	Panama	2018	LB 2018	960	Electoral Democracy
466	Paraguay	1997	LB 1997	540	Electoral Democracy
467	Paraguay	2001	LB 2001	589	Electoral Democracy
468	Paraguay	2002	LB 2002	593	Electoral Democracy
469	Paraguay	2007	LB 2017	2293	Electoral Democracy
470	Paraguay	2009	LB 2009	1155	Electoral Democracy
471	Paraguay	2010	LB 2010	1138	Electoral Democracy
472	Paraguay	2011	LB 2011	1146	Electoral Democracy
473	Paraguay	2013	LB 2013	1167	Electoral Democracy
474	Paraguay	2015	LB 2016	1122	Electoral Democracy
475	Paraguay	2016	LB 2016	1180	Electoral Democracy
476	Paraguay	2018	LB 2018	1154	Electoral Democracy
477	Peru	1996	WVS Wave 3	1174	Electoral Autocracy
478	Peru	1997	LB 1997	1020	Electoral Autocracy
479	Peru	2001	WVS Wave 4	2476	Electoral Democracy
480	Peru	2002	LB 2002	1141	Electoral Democracy
481	Peru	2006	WVS Wave 5	1488	Electoral Democracy
482	Peru	2007	LB 2017	2295	Electoral Democracy
483	Peru	2009	LB 2009	1130	Electoral Democracy
484	Peru	2010	LB 2010	1121	Electoral Democracy
485	Peru	2011	LB 2011	1150	Electoral Democracy
486	Peru	2012	WVS Wave 6	1180	Electoral Democracy
487	Peru	2013	LB 2013	1117	Electoral Democracy
488	Peru	2015	LB 2016	1117	Electoral Democracy
489	Peru	2016	LB 2016	1135	Electoral Democracy
490	Peru	2018	WVS Wave 7	2520	Electoral Democracy
491	Philippines	1992	ISSP 1992	1192	Electoral Democracy
492	Philippines	1996	WVS Wave 3	1199	Electoral Democracy
493	Philippines	1999	ISSP 1999	1198	Electoral Democracy
494	Philippines	2001	WVS Wave 4	1199	Electoral Democracy
495	Philippines	2009	ISSP 2009	1171	Electoral Autocracy
496	Philippines	2012	WVS Wave 6	1200	Electoral Democracy
497	Philippines	2019	WVS Wave 7	1200	Electoral Autocracy
498	Poland	1987	ISSP 1987	1697	Closed Autocracy
499	Poland	1989	WVS Wave 2	844	Electoral Autocracy
500	Poland	1990	EVS Wave 2	892	Liberal Democracy
501	Poland	1992	ISSP 1992	1452	Liberal Democracy
502	Poland	1997	WVS Wave 3	1048	Liberal Democracy
503	Poland	1999	ISSP 1999	2037	Liberal Democracy
504	Poland	2002	ESS Wave 1	1968	Liberal Democracy
505	Poland	2004	ESS Wave 2	1636	Liberal Democracy
506	Poland	2005	WVS Wave 5	941	Liberal Democracy
507	Poland	2006	ESS Wave 3	1621	Liberal Democracy
508	Poland	2008	EVS Wave 4	3003	Liberal Democracy
509	Poland	2009	ISSP 2009	1231	Liberal Democracy
510	Poland	2010	ESS Wave 5	1677	Liberal Democracy
511	Poland	2012	WVS Wave 6	2775	Liberal Democracy
512	Poland	2014	ESS Wave 7	1562	Liberal Democracy
513	Poland	2016	ESS Wave 8	1659	Electoral Democracy
514	Poland	2017	EVS Wave 5	1345	Electoral Democracy
515	Portugal	1990	EVS Wave 2	1148	Liberal Democracy
516	Portugal	1999	ISSP 1999	2116	Liberal Democracy
517	Portugal	2002	ESS Wave 1	1459	Liberal Democracy
518	Portugal	2004	ESS Wave 2	1994	Liberal Democracy
519	Portugal	2006	ESS Wave 3	2152	Liberal Democracy
520	Portugal	2008	EVS Wave 4	3866	Liberal Democracy
521	Portugal	2009	ISSP 2009	978	Liberal Democracy
522	Portugal	2010	ESS Wave 5	2124	Liberal Democracy
523	Portugal	2012	ESS Wave 6	2136	Liberal Democracy
524	Portugal	2014	ESS Wave 7	1247	Liberal Democracy

	Country	Year	Dataset	N	Regime Type
525	Portugal	2016	ESS Wave 8	1259	Liberal Democracy
526	Romania	1993	EVS Wave 2	1086	Electoral Democracy
527	Romania	1998	WVS Wave 3	1209	Electoral Democracy
528	Romania	1999	EVS Wave 3	1123	Electoral Democracy
529	Romania	2005	WVS Wave 5	1741	Electoral Democracy
530	Romania	2008	EVS Wave 4	1466	Electoral Democracy
531	Romania	2012	WVS Wave 6	1484	Electoral Democracy
532	Romania	2018	WVS Wave 7	2775	Electoral Democracy
533	Russia	1990	WVS Wave 2	1865	Closed Autocracy
534	Russia	1992	ISSP 1992	1866	Electoral Democracy
535	Russia	1995	WVS Wave 3	2011	Electoral Autocracy
536	Russia	1999	ISSP 1999	4169	Electoral Autocracy
537	Russia	2006	WVS Wave 5	4332	Electoral Autocracy
538	Russia	2008	EVS Wave 4	3899	Electoral Autocracy
539	Russia	2009	ISSP 2009	1547	Electoral Autocracy
540	Russia	2010	ESS Wave 5	2560	Electoral Autocracy
541	Russia	2011	WVS Wave 6	2448	Electoral Autocracy
542	Russia	2012	ESS Wave 6	2431	Electoral Autocracy
543	Russia	2016	ESS Wave 8	2368	Electoral Autocracy
544	Russia	2017	WVS Wave 7	3617	Electoral Autocracy
545	Slovakia	1992	ISSP 1992	5538	Liberal Democracy
546	Slovakia	1998	WVS Wave 3	118	Electoral Democracy
547	Slovakia	1999	ISSP 1999	353	Liberal Democracy
548	Slovakia	2004	ESS Wave 2	401	Liberal Democracy
549	Slovakia	2006	ESS Wave 3	536	Liberal Democracy
550	Slovakia	2008	EVS Wave 4	582	Liberal Democracy
551	Slovakia	2009	ISSP 2009	593	Liberal Democracy
552	Slovakia	2010	ESS Wave 5	437	Liberal Democracy
553	Slovakia	2012	ESS Wave 6	506	Liberal Democracy
554	Slovakia	2017	EVS Wave 5	480	Electoral Democracy
555	Slovenia	1992	ISSP 1992	11076	Liberal Democracy
556	Slovenia	1995	WVS Wave 3	879	Liberal Democracy
557	Slovenia	1999	ISSP 1999	1818	Liberal Democracy
558	Slovenia	2002	ESS Wave 1	1378	Liberal Democracy
559	Slovenia	2004	ESS Wave 2	1305	Liberal Democracy
560	Slovenia	2005	WVS Wave 5	958	Liberal Democracy
561	Slovenia	2006	ESS Wave 3	1359	Liberal Democracy
562	Slovenia	2008	EVS Wave 4	2500	Liberal Democracy
563	Slovenia	2009	ISSP 2009	1049	Liberal Democracy
564	Slovenia	2010	ESS Wave 5	1316	Liberal Democracy
565	Slovenia	2011	WVS Wave 6	1015	Liberal Democracy
566	Slovenia	2012	ESS Wave 6	1199	Liberal Democracy
567	Slovenia	2014	ESS Wave 7	1173	Liberal Democracy
568	Slovenia	2016	ESS Wave 8	1280	Liberal Democracy
569	Slovenia	2017	EVS Wave 5	1067	Liberal Democracy
570	South Africa	1990	WVS Wave 2	2701	Closed Autocracy
571	South Africa	1996	WVS Wave 3	2903	Electoral Democracy
572	South Africa	2001	WVS Wave 4	2993	Liberal Democracy
573	South Africa	2006	WVS Wave 5	2966	Liberal Democracy
574	South Africa	2009	ISSP 2009	3043	Liberal Democracy
575	South Africa	2013	WVS Wave 6	3511	Electoral Democracy
576	South Korea	1990	WVS Wave 2	1165	Electoral Democracy
577	South Korea	1996	WVS Wave 3	1222	Liberal Democracy
578	South Korea	2001	WVS Wave 4	1190	Liberal Democracy
579	South Korea	2005	WVS Wave 5	1198	Liberal Democracy
580	South Korea	2009	ISSP 2009	1549	Liberal Democracy
581	South Korea	2010	WVS Wave 6	1191	Liberal Democracy
582	South Korea	2018	WVS Wave 7	1244	Electoral Democracy
583	Spain	1990	WVS Wave 2	3961	Liberal Democracy
584	Spain	1995	WVS Wave 3	1194	Liberal Democracy
585	Spain	1997	LB 1997	2314	Liberal Democracy
586	Spain	1999	ISSP 1999	2327	Liberal Democracy
587	Spain	2000	WVS Wave 4	1197	Liberal Democracy

	Country	Year	Dataset	N	Regime Type
588	Spain	2001	LB 2001	2271	Liberal Democracy
589	Spain	2002	ESS Wave 1	1596	Liberal Democracy
590	Spain	2004	ESS Wave 2	1586	Liberal Democracy
591	Spain	2006	ESS Wave 3	1847	Liberal Democracy
592	Spain	2007	WVS Wave 5	3547	Liberal Democracy
593	Spain	2008	EVS Wave 4	3945	Liberal Democracy
594	Spain	2009	LB 2009	3520	Liberal Democracy
595	Spain	2010	LB 2010	4209	Liberal Democracy
596	Spain	2011	WVS Wave 6	1177	Liberal Democracy
597	Spain	2012	ESS Wave 6	1824	Liberal Democracy
598	Spain	2013	LB 2013	2343	Liberal Democracy
599	Spain	2014	ESS Wave 7	1874	Liberal Democracy
600	Spain	2016	ESS Wave 8	1908	Liberal Democracy
601	Spain	2017	EVS Wave 5	1202	Liberal Democracy
602	Sweden	1990	EVS Wave 2	982	Liberal Democracy
603	Sweden	1992	ISSP 1992	734	Liberal Democracy
604	Sweden	1996	WVS Wave 3	1006	Liberal Democracy
605	Sweden	1999	WVS Wave 4	3129	Liberal Democracy
606	Sweden	2002	ESS Wave 1	1941	Liberal Democracy
607	Sweden	2004	ESS Wave 2	1915	Liberal Democracy
608	Sweden	2006	WVS Wave 5	2886	Liberal Democracy
609	Sweden	2008	ESS Wave 4	1804	Liberal Democracy
610	Sweden	2009	ISSP 2009	2240	Liberal Democracy
611	Sweden	2010	ESS Wave 5	1470	Liberal Democracy
612	Sweden	2011	WVS Wave 6	1195	Liberal Democracy
613	Sweden	2012	ESS Wave 6	1820	Liberal Democracy
614	Sweden	2014	ESS Wave 7	1751	Liberal Democracy
615	Sweden	2016	ESS Wave 8	1518	Liberal Democracy
616	Sweden	2017	EVS Wave 5	1183	Liberal Democracy
617	Switzerland	1987	ISSP 1987	913	Liberal Democracy
618	Switzerland	1996	WVS Wave 3	1194	Liberal Democracy
619	Switzerland	2002	ESS Wave 1	2000	Liberal Democracy
620	Switzerland	2004	ESS Wave 2	2104	Liberal Democracy
621	Switzerland	2006	ESS Wave 3	1785	Liberal Democracy
622	Switzerland	2007	WVS Wave 5	1238	Liberal Democracy
623	Switzerland	2008	EVS Wave 4	3051	Liberal Democracy
624	Switzerland	2009	ISSP 2009	1215	Liberal Democracy
625	Switzerland	2010	ESS Wave 5	1486	Liberal Democracy
626	Switzerland	2012	ESS Wave 6	1468	Liberal Democracy
627	Switzerland	2014	ESS Wave 7	1511	Liberal Democracy
628	Switzerland	2016	ESS Wave 8	1499	Liberal Democracy
629	Switzerland	2017	EVS Wave 5	3152	Liberal Democracy
630	Taiwan	1998	WVS Wave 3	772	Electoral Democracy
631	Taiwan	2006	WVS Wave 5	1225	Liberal Democracy
632	Taiwan	2009	ISSP 2009	2020	Liberal Democracy
633	Taiwan	2012	WVS Wave 6	1194	Liberal Democracy
634	Taiwan	2019	WVS Wave 7	1222	Liberal Democracy
635	Thailand	2007	WVS Wave 5	1517	Closed Autocracy
636	Thailand	2013	WVS Wave 6	1195	Electoral Autocracy
637	Thailand	2018	WVS Wave 7	1489	Closed Autocracy
638	Turkey	1990	WVS Wave 2	999	Electoral Democracy
639	Turkey	1996	WVS Wave 3	1874	Electoral Democracy
640	Turkey	2001	WVS Wave 4	4569	Electoral Democracy
641	Turkey	2004	ESS Wave 2	1758	Electoral Democracy
642	Turkey	2007	WVS Wave 5	1325	Electoral Democracy
643	Turkey	2008	ESS Wave 4	2328	Electoral Democracy
644	Turkey	2009	ISSP 2009	3712	Electoral Democracy
645	Turkey	2011	WVS Wave 6	1572	Electoral Democracy
646	Turkey	2018	WVS Wave 7	2389	Electoral Autocracy
647	Ukraine	1996	WVS Wave 3	2570	Electoral Democracy
648	Ukraine	1999	EVS Wave 3	1135	Electoral Autocracy
649	Ukraine	2004	ESS Wave 2	1889	Electoral Autocracy
650	Ukraine	2006	WVS Wave 5	2871	Electoral Democracy

	Country	Year	Dataset	N	Regime Type
651	Ukraine	2008	EVS Wave 4	3197	Electoral Democracy
652	Ukraine	2009	ISSP 2009	1964	Electoral Democracy
653	Ukraine	2010	ESS Wave 5	1840	Electoral Democracy
654	Ukraine	2011	WVS Wave 6	1485	Electoral Democracy
655	Ukraine	2012	ESS Wave 6	2103	Electoral Autocracy
656	United Kingdom	1987	ISSP 1987	1157	Liberal Democracy
657	United Kingdom	1990	EVS Wave 2	1712	Liberal Democracy
658	United Kingdom	1992	ISSP 1992	1021	Liberal Democracy
659	United Kingdom	1998	WVS Wave 3	1056	Liberal Democracy
660	United Kingdom	1999	ISSP 1999	3476	Liberal Democracy
661	United Kingdom	2002	ESS Wave 1	2002	Liberal Democracy
662	United Kingdom	2004	ESS Wave 2	1859	Liberal Democracy
663	United Kingdom	2005	WVS Wave 5	1036	Liberal Democracy
664	United Kingdom	2006	ESS Wave 3	2354	Liberal Democracy
665	United Kingdom	2008	EVS Wave 4	2792	Liberal Democracy
666	United Kingdom	2009	ISSP 2009	2467	Liberal Democracy
667	United Kingdom	2010	ESS Wave 5	2335	Liberal Democracy
668	United Kingdom	2012	ESS Wave 6	2199	Liberal Democracy
669	United Kingdom	2014	ESS Wave 7	2220	Liberal Democracy
670	United Kingdom	2016	ESS Wave 8	1910	Liberal Democracy
671	United Kingdom	2018	EVS Wave 5	1771	Liberal Democracy
672	United States of America	1987	ISSP 1987	1460	Liberal Democracy
673	United States of America	1990	WVS Wave 2	3483	Liberal Democracy
674	United States of America	1992	ISSP 1992	1232	Liberal Democracy
675	United States of America	1995	WVS Wave 3	1477	Liberal Democracy
676	United States of America	1999	WVS Wave 4	2399	Liberal Democracy
677	United States of America	2006	WVS Wave 5	1222	Liberal Democracy
678	United States of America	2009	ISSP 2009	1545	Liberal Democracy
679	United States of America	2011	WVS Wave 6	2207	Liberal Democracy
680	United States of America	2017	WVS Wave 7	2557	Liberal Democracy
681	Uruguay	1996	WVS Wave 3	974	Liberal Democracy
682	Uruguay	1997	LB 1997	1142	Liberal Democracy
683	Uruguay	2001	LB 2001	1150	Liberal Democracy
684	Uruguay	2002	LB 2002	1156	Liberal Democracy
685	Uruguay	2006	WVS Wave 5	967	Liberal Democracy
686	Uruguay	2007	LB 2017	2300	Liberal Democracy
687	Uruguay	2009	LB 2009	1115	Liberal Democracy
688	Uruguay	2010	LB 2010	1128	Liberal Democracy
689	Uruguay	2011	WVS Wave 6	2098	Liberal Democracy
690	Uruguay	2013	LB 2013	1138	Liberal Democracy
691	Uruguay	2015	LB 2016	1146	Liberal Democracy
692	Uruguay	2016	LB 2016	1146	Liberal Democracy
693	Uruguay	2018	LB 2018	1134	Liberal Democracy
694	Venezuela	1996	WVS Wave 3	1155	Electoral Democracy
695	Venezuela	1997	LB 1997	1144	Electoral Democracy
696	Venezuela	2000	WVS Wave 4	1200	Electoral Democracy
697	Venezuela	2001	LB 2001	1155	Electoral Democracy
698	Venezuela	2002	LB 2002	1123	Electoral Democracy
699	Venezuela	2007	LB 2017	2318	Electoral Autocracy
700	Venezuela	2009	LB 2009	2040	Electoral Autocracy
701	Venezuela	2010	LB 2010	1147	Electoral Autocracy
702	Venezuela	2011	LB 2011	1131	Electoral Autocracy
703	Venezuela	2013	LB 2013	1165	Electoral Autocracy
704	Venezuela	2015	LB 2016	1163	Electoral Autocracy
705	Venezuela	2016	LB 2016	1184	Electoral Autocracy
706	Venezuela	2018	LB 2018	1181	Electoral Autocracy

Table D.2: List of surveys, countries, years and number of respondents

D.2 Former Soviet Union, Socialist Federal Republic of Yugoslavia and socialization under communism

Country-units according to V-Dem:

https://www.v-dem.net/media/filer_public/66/b4/66b42d26-1792-487e-a800-d8f8fa203429/countryunit.pdf

- Armenia: 1936 - 1991 Soviet Socialist Republic = Socialization under former Soviet Union (USSR): ISO3N of Russia between 1936 and 1991
- Azerbaijan: 1936 - 1991 Soviet Socialist Republic = Socialization under former Soviet Union (USSR): ISO3N of Russia between 1936 and 1991
- Belarus: 1944 - 1991 Soviet Socialist Republic = Socialization under former Soviet Union (USSR): ISO3N of Russia between 1944 and 1991
- Bosnia Herzegovina: 1945 - 1992 Socialist Federal Republic of Yugoslavia = Socialization under former Socialist Federal Republic of Yugoslavia: ISO3N of Serbia between 1945 and 1992
- Estonia: 1944 - 1991 Soviet Socialist Republic = Socialization under former Soviet Union (USSR): ISO3N of Russia between 1944 and 1991
- Georgia: 1936 - 1991 Soviet Socialist Republic = Socialization under former Soviet Union (USSR): ISO3N of Russia between 1936 and 1991
- Latvia: 1944 - 1991 Soviet Socialist Republic = Socialization under former Soviet Union (USSR): ISO3N of Russia between 1944 and 1991
- Lithuania: 1944 - 1991 Soviet Socialist Republic = Socialization under former Soviet Union (USSR): ISO3N of Russia between 1944 and 1991
- Moldova: 1944 - 1991 Soviet Socialist Republic = Socialization under former Soviet Union (USSR): ISO3N of Russia between 1944 and 1991
- North Macedonia: 1912 - 1992 Socialist Federal Republic of Yugoslavia = Socialization under former Socialist Federal Republic of Yugoslavia: ISO3N of Serbia between 1912 and 1992
- Slovakia: 1945 - 1992 Czech-Slovakia = Socialization under Czech-Slovakia: ISO3N of Czech-Republic between 1945 and 1992
- Slovenia: 1945 - 1992 Socialist Federal Republic of Yugoslavia = Socialization under former Socialist Federal Republic of Yugoslavia: ISO3N of Serbia between 1945 and 1992
- Ukraine: 1944 - 1991 Soviet Socialist Republic = Socialization under former Soviet Union (USSR): ISO3N of Russia between 1944 and 1991

D.3 List of individual-level datasets

- World Value Survey (WVS), 1990-2020
  - 6 waves (1990-1994; 1995-1998; 1999-2004; 2005-2009; 2010-2014; 2017-2020)
- International Social Survey Programme
  - 4 waves (1987; 1992; 1999; 2009)
- European Values Survey
  - 4 waves (1990; 1999; 2008; 2017)
- European Social Survey
  - 9 waves (2002; 2004; 2006; 2008; 2010; 2012; 2014; 2016; 2018)
- Latinobarometer
  - 12 waves (1997; 2001; 2002; 2007; 2009; 2010; 2011; 2013; 2015; 2016; 2017; 2018)

D.4 Calculating predictions (marginalplots) after MI regress

I use the MIMRGNS add-on for STATA (see Klein, 2014b). The MIMRGNS module calculates predictions after mi estimte in STATA. However, calculating the predictions for multiple imputated datasets has also some potential pitfalls.

First, MIMRGNS runs predictions on each imputed datasets, so it does not calculate the margins based on the final mi estimates. ''It might be argued that marginal effects for multiply imputed datasets should be obtained based on the final estimates.'' (Klein, 2014a). However, by applying Rubin's rules to the results obtained from margins assumes asymptotic normality. For the linear predictions in my HAPC models this assumption may be appropriate.

Second, the plotted confidence intervals are based on inappropriate degrees of freedom (see also http://www.haghish.com/statistics/stata-blog/stata-programming/download/mimrgns.html). However, in my setting, due to the vast number of individual respondents in the dataset, this may be no important problem. In addition, the robustness tests without multiple imputation show comparable confidence intervals. The differences will typically be too small to notice in a figure.

Overall, the MIMRGNS module for computing predictions seems to be an appropriate approach to calculate data for marginalplots.

D.5 Coding of dependent variable(s)

The variable **Government Responsibility** was recoded to 0 ''People should take more responsibility'' to 100 ''The government should take more responsibility''. The variable **Income Equality** was recoded to 0 ''Incomes should be made more equal'' to 100 ''Incomes should be made more equal''.

Table D.3: Government Responsibility

Dataset	**# Categories**	**Question Wording**
WVS	10	"Now I'd like you to tell me your views on various issues. How would you place your views on scale? 1 means you agree completely with the statement on the left; 10 means you agree completely with the statement on the right; and if your views fall somewhere in between, you can choose any number in between. (1 - People should take more responsibility to provide for themselves; 1 - The government should take more responsibility to ensure that everyone is provided for;"
ISSP	5-R	"To what extent do you agree or disagree with the following statements? It is the responsibility of the government to reduce the differences in income between people with high incomes and those with low incomes."
EVS	10	"On this card you see a number of opposite views on various issues. How would you place your views on this scale? (1: individual responsibility to 10: state responsibility)"
ESS	5-R	"Using this card, please say to what extent you agree or disagree with each of the following statements. The government should take measures to reduce differences in income levels"

Notes: Variables that are reversed in their order have an -R behind the number of categories.

Table D.4: Demand for Income Equality

Dataset	# Categories	Question Wording
WVS	10-R	"Now I'd like you to tell me your views on various issues. How would you place your views on scale? 1 means you agree completely with the statement on the left; 10 means you agree completely with the statement on the right; and if your views fall somewhere in between, you can choose any number in between. (1- Incomes more equal; 10 -Larger income differences)"
ISSP	5-R	"To what extent do you agree or disagree with the following statements? Differences in income in [Rs country] are too large. (1- Strongly agree, 5 - Strongly Disagree.)"
EVS	10-R	"On this card you see a number of opposite views on various issues. How would you place your views on this scale? (1: incomes more equal to 10: incentives to individual efforts)"
LB	4	"How fair do you think income distribution is in (country)? (1- Very Unfair, 4 - very unfair)"

Notes: Variables that are reversed in their order have an -R behind the number of categories.

D.6 Coding and harmonizing of individual-level variables

D.6.1 Gender

Variable name: sex (0: male, 1 : female)

Source variables and dataset:

- World Value Survey (WVS)
  - X001
- International Social Survey Programme
  - sex (different variables names in different waves, renamed to sex by author and harmonized.)
- European Values Survey
  - x001

- European Social Survey
  - gndr
- Latinobarometer
  - sex (different variables names in different waves, renamed to sex by author and harmonized.)

D.6.2 Age

Variable name: age (continuous)

Source variables and dataset:

- World Value Survey (WVS)
  - X003
- International Social Survey Programme
  - age (different variables names in different waves, renamed to age by author and harmonized.)
- European Values Survey
  - x003
- European Social Survey
  - agea
- Latinobarometer
  - age (different variables names in different waves, renamed to age by author and harmonized.)

D.6.3 Education

Variable name: Education

- 1: primary or less
- 2: secondary
- 3: post-secondary

Source variables and dataset:

- World Value Survey (WVS)
  - X025 (categorical variable transformed 3-item scale)
- International Social Survey Programme
  - education (different variables names in different waves, renamed to education by author and harmonized; (categorical variable transformed 3-item scale))
- European Values Survey

  - x025 (categorical variable transformed 3-item scale)
- European Social Survey
  - eisced (categorical variable transformed 3-item scale)
- Latinobarometer
  - education (different variables names in different waves, renamed to education by author and harmonized, continuous variable that asks for educations years, Primary or less: 6 years of schooling or less; Secondary: 7-12 years of schooling; Post-secondary: 13+ years of schooling)

D.6.4 Employment status

Variable name: employment (0 working; 1 unemployed)

Source variables and dataset:

- World Value Survey (WVS)
  - X028
- International Social Survey Programme
  - employment_status (different variables names in different waves, renamed to employment_status by author and harmonized.)
- European Values Survey
  - x028
- European Social Survey
  - mainact
- Latinobarometer
  - employment_status (different variables names in different waves, renamed to employment_status by author and harmonized.)

D.6.5 Children

Variable name: children (0 no children; 1 children)

Source variables and dataset:

- World Value Survey (WVS)
  - X011
- International Social Survey Programme
  - no information on this variable
- European Values Survey
  - x011

- European Social Survey
  - chldhm
- Latinobarometer
  - no information on this variable

D.6.6 Income

Variable name: Income (Income_deciles / Income_quintiles)

Source variables and dataset:

- World Value Survey (WVS)
  - X047
- International Social Survey Programme
  - income_deciles / income_quintiles (different variables names in different waves, renamed to employment_status by author and harmonized.)
- European Values Survey
  - x047
- European Social Survey
  - hinctnt (2002-2006, 10-item scale) / hintctnta (2008-2014, 5-item scale)
- Latinobarometer
  - not availabe in Latinobarometer

D.7 ID variables

D.7.1 Year

Variable name: Year (continuous)

Source variables and dataset:

- World Value Survey (WVS)
  - S020
- International Social Survey Programme
  - information was gained from the survey year
- European Values Survey
  - s020
- European Social Survey
  - information was gained from the survey year

- Latinobarometer
  - information was gained from the survey year

D.7.2 Country name

Variable name: Country (factor)

Source variables and dataset:

harmonized by *countrycodes*-package in R provided by (Arel-Bundock, 2020)

D.8 Macro-level variables

The main macro-level variables are taken from V-Dem (Coppedge et al., 2020b) that is based on expert surveys. Conditional on the concrete question, experts were asked to give a score that indicates his/her assessment of the survey question for a given country-year. By using a Bayesian Item Response Theory (Pemstein et al., 2020), V-Dem account for potential measurement errors and adjust for experts varying assessments of country-years. The V-Dem measurement model thus includes uncertainty estimates as well as point estimates. In this research, the paper uses the point estimates of the V-Dem measurement model. In the following pages, I report the categories that coders had available during coding. By using the measurement model, these ordinal categories are transformed to continuous variables.

D.8.1 Physical violence index - [repression] (v2x_clphy)

Question: To what extent is physical integrity respected?

Clarification: Physical integrity is understood as freedom from political killings and torture by the government. Among the set of civil liberties, these liberal rights are the most relevant for political competition and accountability. The index is based on indicators that reflect violence committed by government agents and that are not directly referring to elections.

Scale: Interval, from low to high (0-1).

Source(s): v2cltort v2clkill

Aggregation: We estimate the index by averaging two indicators: freedom from torture (v2cltort) and freedom from political killings (v2clkill).

D.8.2 Ideology - [political indoctrination] (v2exl_legitideol)

Question: To what extent does the current government promote a specific ideology or societal model (an officially codified set of beliefs used to justify a particular set of social, political, and economic relations; for example, socialism, nationalism, religious traditionalism, etc.) in order to justify the regime in place?

Responses:

- 0: Not at all.
- 1: To a small extent.
- 2: To some extent but it is not the most important component.
- 3: To a large extent but not exclusively.
- 4: Almost exclusively.

Scale: Ordinal, converted to interval by the measurement model.

D.8.3 Electoral Democracy Index (v2x_polyarchy)

Question: To what extent is the ideal of electoral democracy in its fullest sense achieved?

Clarification: The electoral principle of democracy seeks to embody the core value of making rulers responsive to citizens, achieved through electoral competition for the electorate's approval under circumstances when suffrage is extensive; political and civil society organizations can operate freely; elections are clean and not marred by fraud or systematic irregularities; and elections affect the composition of the chief executive of the country. In between elections, there is freedom of expression and an independent media capable of presenting alternative views on matters of political relevance. In the V-Dem conceptual scheme, electoral democracy is understood as an essential element of any other conception of representative democracy — liberal, participatory, deliberative, egalitarian, or some other.

Scale: Interval, from low to high (0-1).

Source(s): v2x_freexp_altinf v2x_frassoc_thick v2x_suffr v2xel_frefair v2x_elecoff

D.8.4 GDP per capita (e_migdppcln)

Question: What is the GDP per capita, transformed by the natural logarithm?

Source(s): The Maddison Project Database (2018)

Years: 1789-2019

D.8.5 Autocracy (v2x_regime)

Question: How can the political regime overall be classified considering the competitiveness of access to power (polyarchy) as well as liberal principles?

Responses:

- 0: Closed autocracy: No multiparty elections for the chief executive or the legislature.
- 1: Electoral autocracy: De-jure multiparty elections for the chief executive and the legislature, but failing to achieve that elections are free and fair, or de-facto multiparty, or a minimum level of Dahl's institutional prerequisites of polyarchy as measured by V-Dem's Electoral Democracy Index (v2x_polyarchy).
- 2: Electoral democracy: De-facto free and fair multiparty elections and a minimum level of Dahl's institutional prerequisites for polyarchy as measured by V- Dem's

Electoral Democracy Index (v2x_polyarchy), but either access to justice, or transparent law enforcement, or liberal principles of respect for personal liberties, rule of law, and judicial as well as legislative constraints on the executive not satisfied as measured by V-Dem's Liberal Component Index (v2x_liberal).

- 3: Liberal democracy: De-facto free and fair multiparty elections and a minimum level of Dahl's institutional prerequisites for polyarchy as measured by V- Dem's Electoral Democracy Index (v2x_polyarchy) are guaranteed as well as access to justice, transparent law enforcement and the liberal principles of respect for personal liberties, rule of law, and judicial as well as legislative constraints on the executive satisfied as measured by V-Dem's Liberal Component Index (v2x_liberal).

Scale: Ordinal.

Source(s): v2x_elecreg v2xlg_elecreg v2xex_elecreg v2elmulpar_osp_ex

v2elmulpar_osp_leg v2elmulpar_osp v2elfrfair_osp v2elfrfair_osp_leg

v2elfrfair_osp_ex v2expathhg v2expathhs v2ex_legconhos v2ex_hosw

v2x_polyarchy v2x_liberal v2clacjstm_osp v2clacjstw_osp

v2cltrnslw_osp v2exaphogp

Aggregation: Electoral democracies score above 2 on the indicators for multi-party (v2elmulpar_osp) and free and fair elections (v2elfrfair_osp), as well as above 0.5 on the Electoral Democracy Index (v2x_polyarchy). Liberal democracy meets the criteria for Electoral democracy but also satisfy the liberal dimensions by a score above 0.8 on the V-Dem Liberal Component index (v2x_liberal), as well as a score above 3 on transparent law enforcement (v2cltrnslw_osp), access to justice for men (v2clacjstm_osp) and women (v2clacjstw_osp). Electoral autocracies fail to meet one or more of the above-mentioned criteria of electoral democracies, but subject the chief executive and the legislature to de-jure multiparty elections as indicated by a score above 1 on the V-Dem multiparty elections indicator (v2elmulpar_osp_leg/_ex). Closed autocracies do not satisfy the latter criterion.

D.9 Additional robustness tests

D.9.1 Main models with additional macro-level control variables

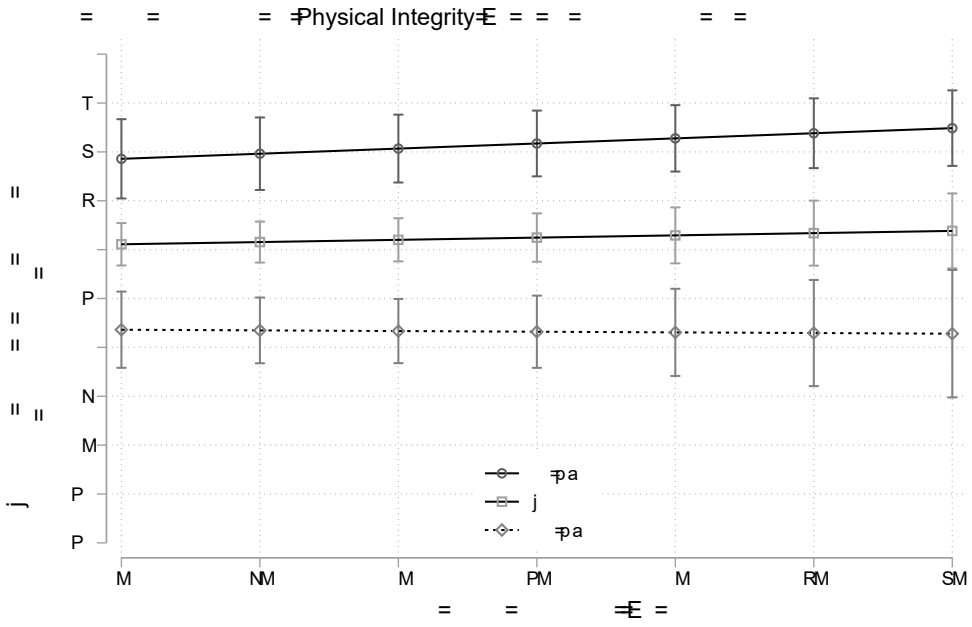


Figure D.1: Predicted redistribution preferences by regime socialization: time under autocracy and Physical Integrity at C

The prediction is based on a linear HAPC model. Full results shown in M1 in Table D.5. HAPC = hierarchical age–period–cohort.

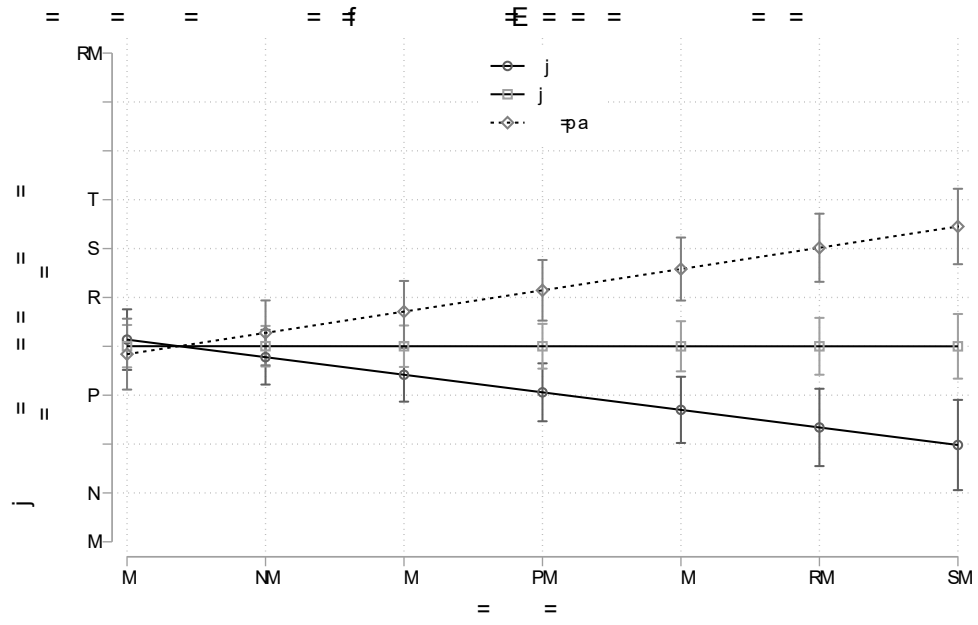


Figure D.2: Predicted redistribution preferences by regime socialization: time under autocracy and indoctrination at C

The prediction is based on a linear HAPC model. Full results shown in M2 in Table D.5. HAPC = hierarchical age–period–cohort.

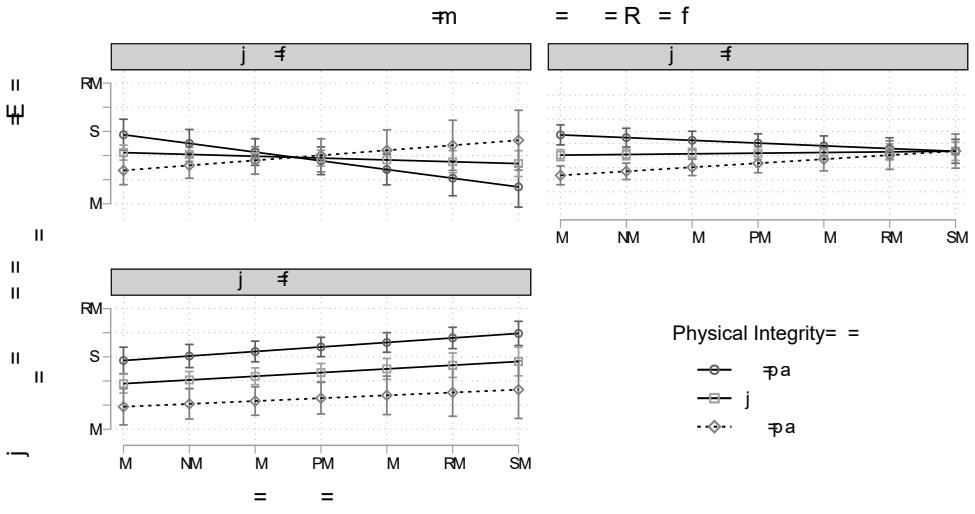


Figure D.3: Marginal effects of time under autocracy on redistribution preferences by Physical Integrity at C and indoctrination at C.

The prediction is based on a linear HAPC model. Full results shown in M3 in Table D.5. HAPC = hierarchical age–period–cohort.

	Model 1	Model 2	Model 3
Age	0.0474***	0.0465***	0.0471***
	(0.00426)	(0.00422)	(0.00424)
Exposure to Autocracy	0.00456	-4.93e-05	0.00544
	(0.00642)	(0.00545)	(0.00631)
Socialization Context (at c)			
Physical Integrity	-2.854***		-2.738***
	(0.555)		(0.554)
Exposure to Autocracy * Physical Integrity	-0.00965		0.0458***
	(0.0139)		(0.0159)
Indoctrination		-0.0477	-0.0750
		(0.0839)	(0.0867)
Exposure to Autocracy * Indoctrination		0.0127***	0.00733***
		(0.00192)	(0.00272)
Indoctrination * Physical Integrity			-0.114
			(0.222)
Exposure to Autocracy * Indoctrination * Physical Integrity			-0.0167**
			(0.00736)
Electoral Democracy Index	3.488***	1.262***	2.922***
	(0.514)	(0.439)	(0.600)
GDP per capita	0.375***	0.370***	0.454***
	(0.118)	(0.117)	(0.117)
Current Context (at t)			
Electoral Democracy Index	-1.803**	-1.793**	-1.793**
	(0.748)	(0.748)	(0.748)
GDP per capita	8.694***	8.615***	8.638***
	(1.978)	(1.978)	(1.978)
GINI	0.374***	0.376***	0.375***
	(0.0882)	(0.0882)	(0.0882)
Population (log)	0.735***	0.693***	0.633***
	(0.0685)	(0.0735)	(0.0742)
Individual-level controls			
Female	0.900***	0.899***	0.899***
	(0.0374)	(0.0374)	(0.0374)
Education (ref: *primary*)			
Secondary	-1.761***	-1.767***	-1.764***
	(0.0506)	(0.0506)	(0.0506)
Post-Secondary	-3.677***	-3.680***	-3.677***
	(0.0570)	(0.0570)	(0.0570)
Unemployed	1.512***	1.514***	1.517***
	(0.0644)	(0.0644)	(0.0644)
Country FE	Yes	Yes	Yes
Data FE (ref: *WVS*)			
EVS	-4.905***	-4.906***	-4.906***
	(0.171)	(0.171)	(0.171)
ESS	-15.01***	-15.02***	-15.02***
	(0.172)	(0.172)	(0.172)
ISSP	25.28***	25.27***	25.27***
	(0.198)	(0.198)	(0.198)
Latinobarometer	-14.57***	-14.55***	-14.56***
	(0.233)	(0.233)	(0.233)
Intercept	44.17***	44.55***	44.49***
	(1.735)	(1.735)	(1.735)
Variance Component			
Cohort	1.592***	1.591***	1.591***
	(0.0292)	(0.0292)	(0.0292)
Period	2.929***	2.929***	2.929***
	(0.000704)	(0.000704)	(0.000704)
Observations	1,012,329	1,012,329	1,012,329
Number of groups	76	76	76
AIC			

$^{***}p < 0.01$, $^{*}*p < 0.05$, $^{*}p < 0.1$

Table D.5: HAPC regression analysis with additional macro-level control variables

D.9.2 Dependent variable: government responsibility

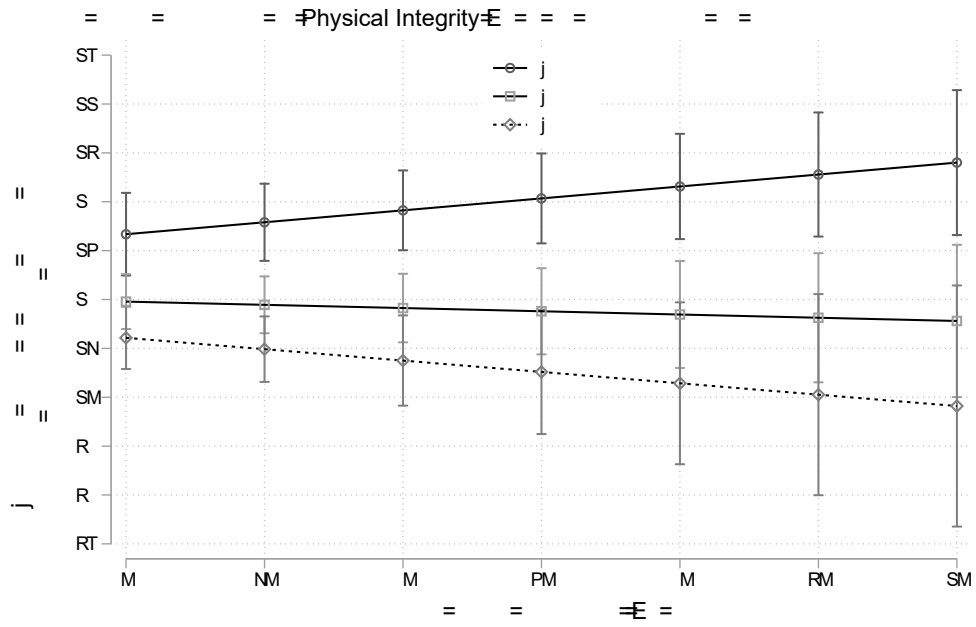


Figure D.4: Predicted redistribution preferences by regime socialization: time under autocracy and Physical Integrity at C

The prediction is based on a linear HAPC model. Full results shown in M1 in Table D.6. HAPC = hierarchical age–period–cohort.

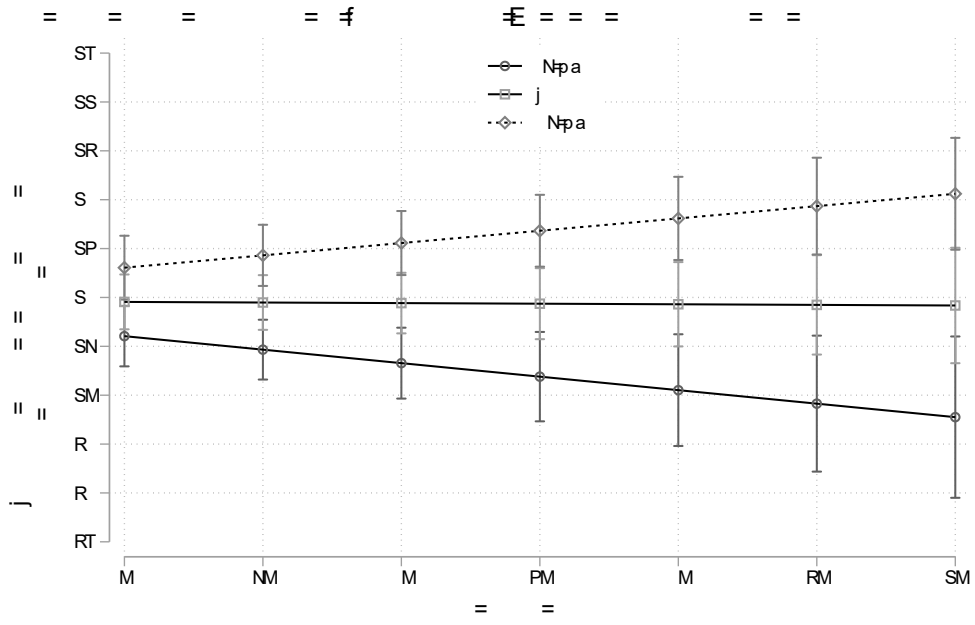


Figure D.5: Predicted redistribution preferences by regime socialization: time under autocracy and Indoctrination at C

The prediction is based on a linear HAPC model. Full results shown in M2 in Table D.6. HAPC = hierarchical age–period–cohort.

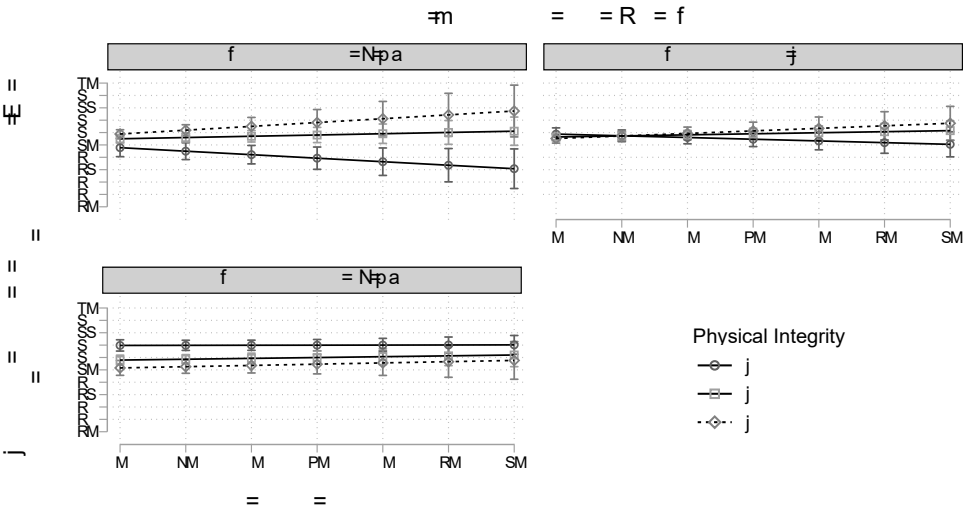


Figure D.6: Marginal effects of time under autocracy on redistribution preferences by Physical Integrity at C and indoctrination at C.

The prediction is based on a linear HAPC model. Full results shown in M3 in Table D.6. HAPC = hierarchical age–period–cohort.

	Model 1	Model 2	Model 3
Age	0.0248***	0.0259***	0.0240***
	(0.00518)	(0.00495)	(0.00509)
Exposure to Autocracy	-0.00660	-0.00121	0.0171
	(0.0131)	(0.00973)	(0.0134)
Socialization Context (at c)			
Physical Integrity	-2.222***		-0.750
	(0.502)		(0.654)
Exposure to Autocracy * Physical Integrity	-0.0500		0.0720*
	(0.0308)		(0.0391)
Indoctrination		0.364***	0.153
		(0.0793)	(0.110)
Exposure to Autocracy * Indoctrination		0.0137***	-0.00177
		(0.00390)	(0.00660)
Indoctrination * Physical Integrity			-1.593***
			(0.295)
Exposure to Autocracy * Indoctrination * Physical Integrity			-0.0272
			(0.0174)
Current Context (at t)			
Electoral Democracy	-0.223	-0.186	-0.232
	(0.994)	(0.994)	(0.994)
GDP per capita	1.639	1.557	1.673
	(1.779)	(1.778)	(1.778)
Individual-level controls			
Female	1.809***	1.808***	1.808***
	(0.0609)	(0.0609)	(0.0609)
Education (ref: *primary*)			
Secondary	-1.990***	-2.002***	-1.997***
	(0.0860)	(0.0860)	(0.0861)
Post-Secondary	-4.782***	-4.791***	-4.786***
	(0.0947)	(0.0947)	(0.0947)
Unemployed	1.991***	1.992***	1.997***
	(0.105)	(0.105)	(0.105)
Country FE	Yes	Yes	Yes
Data FE (ref: *WVS*)			
EVS	-10.30***	-10.29***	-10.30***
	(0.252)	(0.252)	(0.252)
ESS	17.14***	17.14***	17.13***
	(0.259)	(0.259)	(0.259)
ISSP	19.85***	19.84***	19.84***
	(0.310)	(0.310)	(0.310)
Intercept	53.38***	53.95***	53.91***
	(2.492)	(2.490)	(2.489)
Variance Component			
Cohort	1.766***	1.766***	1.766***
	(0.0320)	(0.0320)	(0.0320)
Period	3.338***	3.338***	3.338***
	(0.000759)	(0.000759)	(0.000759)
Observations	868,494	868,494	868,494
Number of groups	66	66	66
AIC			

$^{***}p < 0.01$, $^{*}*p < 0.05$, $^{*}p < 0.1$

Table D.6: HAPC regression analysis DV government responsibility

D.9.3 Dependent variable: demand for income equality

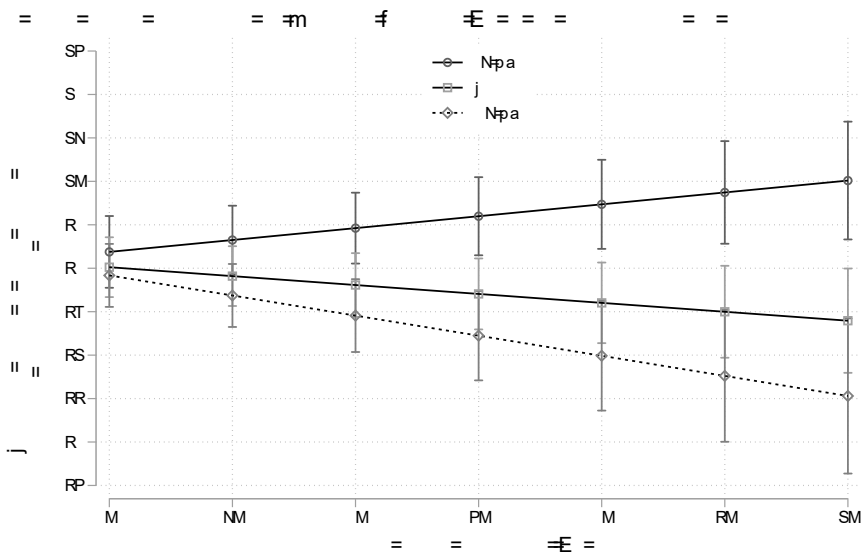


Figure D.7: Predicted redistribution preferences by regime socialization: time under autocracy and Physical Integrity at C

The prediction is based on a linear HAPC model. Full results shown in M1 in Table D.7. HAPC = hierarchical age–period–cohort.

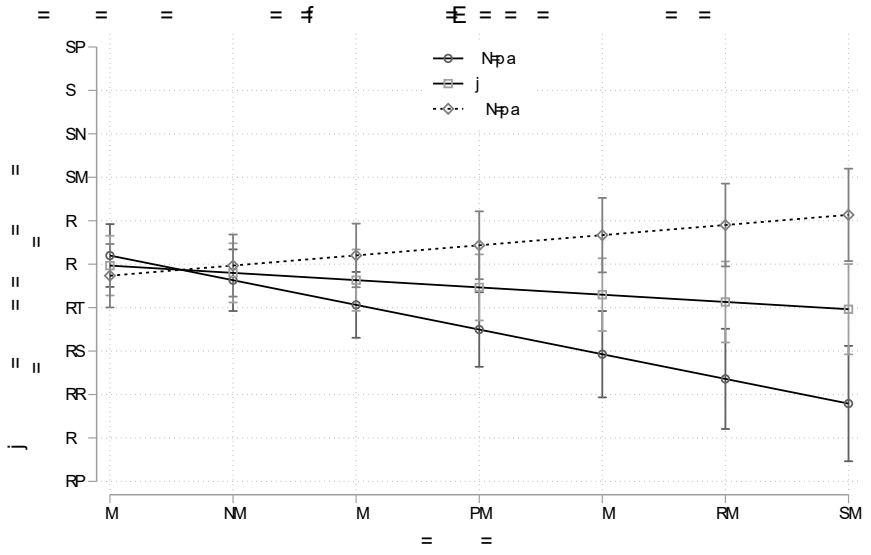


Figure D.8: Predicted redistribution preferences by regime socialization: time under autocracy and Indoctrination at C

The prediction is based on a linear HAPC model. Full results shown in M2 in Table D.7. HAPC = hierarchical age–period–cohort.

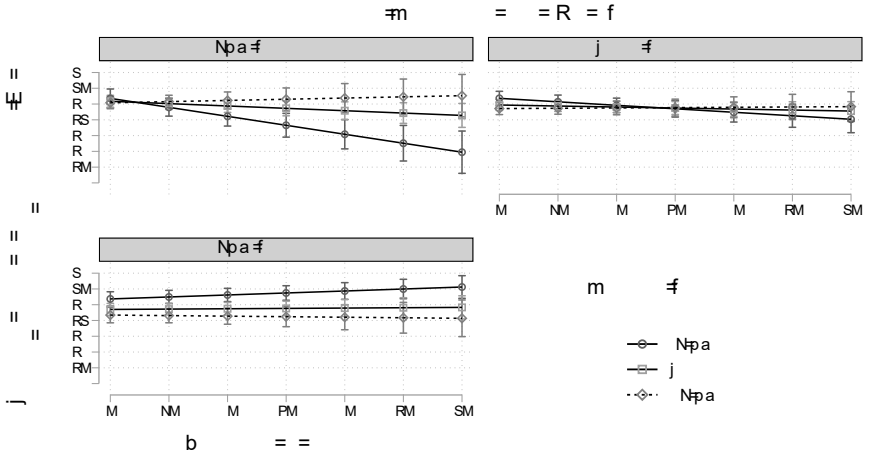


Figure D.9: Marginal effects of time under autocracy on redistribution preferences by Physical Integrity at C and indoctrination at C.

The prediction is based on a linear HAPC model. Full results shown in M3 in Table D.7. HAPC = hierarchical age–period–cohort.

	Model 1	Model 2	Model 3
Age	0.0508***	0.0560***	0.0508***
	(0.00452)	(0.00431)	(0.00447)
Exposure to Autocracy	-0.0205**	-0.0167**	-0.0128
	(0.00917)	(0.00757)	(0.00915)
Socialization Context (at c)			
Physical Integrity	-0.567		-1.366***
	(0.366)		(0.452)
Physical Integrity * Exposure to Autocracy	-0.0772***		0.0507*
	(0.0233)		(0.0283)
Indoctrination		-0.121*	-0.247***
		(0.0623)	(0.0780)
Indoctrination * Exposure to Autocracy		0.0208***	0.00891**
		(0.00301)	(0.00433)
Physical Integrity * Indoctrination			-0.404*
			(0.227)
Physical Integrity * Indoctrination * Exposure to Autocracy			-0.0438***
			(0.0134)
Current Context (at t)			
Electoral Democracy	-1.039	-0.966	-1.025
	(1.056)	(1.056)	(1.056)
GDP per capita	3.364*	3.188	3.332*
	(1.954)	(1.953)	(1.954)
Individual-level controls			
Female	0.616***	0.616***	0.617***
	(0.0636)	(0.0636)	(0.0636)
Education (ref: *primary*)			
Secondary	-1.931***	-1.943***	-1.936***
	(0.0820)	(0.0820)	(0.0820)
Post-Secondary	-3.777***	-3.784***	-3.777***
	(0.0934)	(0.0934)	(0.0934)
Unemployed	2.236***	2.239***	2.246***
	(0.121)	(0.121)	(0.121)
Country FE	Yes	Yes	Yes
Data FE (ref: *WVS*)			
EVS	1.444***	1.442***	1.443***
	(0.301)	(0.301)	(0.301)
ISSP	33.07***	33.08***	33.08***
	(0.325)	(0.325)	(0.325)
Latinobarometer	22.14***	22.14***	22.14***
	(0.290)	(0.290)	(0.290)
Intercept	47.13***	47.03***	47.14***
	(1.981)	(1.980)	(1.980)
Variance Component			
Cohort	2.039***	2.038***	2.039***
	(0.0305)	(0.0305)	(0.0305)
Period	3.331***	3.331***	3.331***
	(0.000793)	(0.000793)	(0.000793)
Observations	796,519	796,519	796,519
Number of groups	75	75	75
AIC			

$^{***}p < 0.01$, $^{*}*p < 0.05$, $^{*}p < 0.1$

Table D.7: HAPC regression analysis DV government responsibility

D.9.4 Models with list-wise deletion of NA's

	Country	Year	Dataset	N	Regime Type
1	Albania	1998	WVS Wave 3	853	Electoral Autocracy
2	Albania	2002	WVS Wave 4	977	Electoral Democracy
3	Albania	2008	EVS Wave 4	1474	Electoral Democracy
4	Albania	2018	EVS Wave 5	1132	Electoral Autocracy
5	Argentina	1995	WVS Wave 3	1067	Electoral Democracy
6	Argentina	1997	LB 1997	1111	Electoral Democracy
7	Argentina	1999	WVS Wave 4	1244	Electoral Democracy
8	Argentina	2001	LB 2001	1102	Electoral Democracy
9	Argentina	2002	LB 2002	1128	Electoral Democracy
10	Argentina	2006	WVS Wave 5	983	Electoral Democracy
11	Argentina	2007	LB 2017	2191	Electoral Democracy
12	Argentina	2009	LB 2009	2073	Electoral Democracy
13	Argentina	2010	LB 2010	1101	Electoral Democracy
14	Argentina	2011	LB 2011	1108	Electoral Democracy
15	Argentina	2013	LB 2013	1039	Electoral Democracy
16	Argentina	2015	LB 2016	1084	Electoral Democracy
17	Argentina	2016	LB 2016	1097	Electoral Democracy
18	Argentina	2017	WVS Wave 7	949	Electoral Democracy
19	Argentina	2018	LB 2018	1084	Electoral Democracy
20	Armenia	1997	WVS Wave 3	1982	Electoral Autocracy
21	Armenia	2008	EVS Wave 4	1454	Electoral Autocracy
22	Armenia	2011	WVS Wave 6	1087	Electoral Autocracy
23	Armenia	2018	EVS Wave 5	933	Electoral Autocracy
24	Australia	1987	ISSP 1987	1066	Liberal Democracy
25	Australia	1992	ISSP 1992	1924	Liberal Democracy
26	Australia	1995	WVS Wave 3	1987	Liberal Democracy
27	Australia	1999	ISSP 1999	1006	Liberal Democracy
28	Australia	2005	WVS Wave 5	1339	Liberal Democracy
29	Australia	2009	ISSP 2009	1251	Liberal Democracy
30	Australia	2012	WVS Wave 6	1024	Liberal Democracy
31	Australia	2018	WVS Wave 7	1696	Liberal Democracy
32	Austria	1987	ISSP 1987	496	Liberal Democracy
33	Austria	1999	ISSP 1999	2259	Liberal Democracy
34	Austria	2008	EVS Wave 4	1456	Liberal Democracy
35	Austria	2009	ISSP 2009	947	Liberal Democracy
36	Austria	2014	ESS Wave 7	136	Liberal Democracy
37	Austria	2016	ESS Wave 8	146	Liberal Democracy
38	Austria	2018	EVS Wave 5	977	Liberal Democracy
39	Azerbaijan	1997	WVS Wave 3	1939	Electoral Autocracy
40	Azerbaijan	2011	WVS Wave 6	998	Electoral Autocracy
41	Azerbaijan	2018	EVS Wave 5	1159	Electoral Autocracy
42	Bangladesh	1996	WVS Wave 3	992	Electoral Democracy
43	Bangladesh	2002	WVS Wave 4	1060	Electoral Autocracy
44	Bangladesh	2018	WVS Wave 7	1163	Electoral Autocracy
45	Belarus	1996	WVS Wave 3	1795	Electoral Democracy
46	Belarus	2000	EVS Wave 3	910	Electoral Autocracy
47	Belarus	2008	EVS Wave 4	1455	Electoral Autocracy
48	Belarus	2011	WVS Wave 6	1513	Electoral Autocracy
49	Belarus	2018	EVS Wave 5	956	Electoral Autocracy
50	Belgium	1999	EVS Wave 3	1805	Liberal Democracy
51	Belgium	2002	ESS Wave 1	320	Liberal Democracy
52	Belgium	2004	ESS Wave 2	256	Liberal Democracy
53	Belgium	2006	ESS Wave 3	270	Liberal Democracy
54	Belgium	2008	ESS Wave 4	229	Liberal Democracy
55	Belgium	2009	ISSP 2009	2569	Liberal Democracy
56	Belgium	2010	ESS Wave 5	327	Liberal Democracy
57	Belgium	2012	ESS Wave 6	379	Liberal Democracy
58	Belgium	2014	ESS Wave 7	266	Liberal Democracy
59	Belgium	2016	ESS Wave 8	524	Liberal Democracy
60	Bolivia	1997	LB 1997	744	Electoral Democracy
61	Bolivia	2001	LB 2001	1029	Electoral Democracy

	Country	Year	Dataset	N	Regime Type
62	Bolivia	2002	LB 2002	1149	Electoral Democracy
63	Bolivia	2007	LB 2017	2251	Electoral Democracy
64	Bolivia	2009	LB 2009	1113	Electoral Democracy
65	Bolivia	2010	LB 2010	1058	Electoral Democracy
66	Bolivia	2011	LB 2011	1116	Electoral Democracy
67	Bolivia	2013	LB 2013	1043	Electoral Democracy
68	Bolivia	2015	LB 2016	1030	Electoral Democracy
69	Bolivia	2016	LB 2016	1064	Electoral Democracy
70	Bolivia	2017	WVS Wave 7	2023	Electoral Democracy
71	Bolivia	2018	LB 2018	1079	Electoral Democracy
72	Bosnia and Herzegovina	2001	WVS Wave 4	1170	Electoral Democracy
73	Bosnia and Herzegovina	2008	EVS Wave 4	1421	Electoral Democracy
74	Bosnia and Herzegovina	2019	EVS Wave 5	948	Electoral Democracy
75	Brazil	1997	WVS Wave 3	1387	Electoral Democracy
76	Brazil	2001	LB 2001	924	Electoral Democracy
77	Brazil	2002	LB 2002	924	Electoral Democracy
78	Brazil	2006	WVS Wave 5	1444	Electoral Democracy
79	Brazil	2007	LB 2017	2129	Electoral Democracy
80	Brazil	2009	LB 2009	1124	Electoral Democracy
81	Brazil	2010	LB 2010	1103	Electoral Democracy
82	Brazil	2011	LB 2011	1143	Electoral Democracy
83	Brazil	2013	LB 2013	1120	Electoral Democracy
84	Brazil	2014	WVS Wave 6	1461	Electoral Democracy
85	Brazil	2015	LB 2016	1111	Electoral Democracy
86	Brazil	2016	LB 2016	1112	Electoral Democracy
87	Brazil	2018	WVS Wave 7	2805	Electoral Democracy
88	Bulgaria	1992	ISSP 1992	1110	Electoral Democracy
89	Bulgaria	1997	WVS Wave 3	1040	Electoral Democracy
90	Bulgaria	1999	ISSP 1999	1902	Electoral Democracy
91	Bulgaria	2006	WVS Wave 5	954	Electoral Democracy
92	Bulgaria	2008	EVS Wave 4	1453	Electoral Democracy
93	Bulgaria	2009	ISSP 2009	942	Electoral Democracy
94	Bulgaria	2010	ESS Wave 5	1617	Electoral Democracy
95	Bulgaria	2012	ESS Wave 6	1568	Electoral Democracy
96	Bulgaria	2017	EVS Wave 5	847	Electoral Democracy
97	Chile	1996	WVS Wave 3	984	Liberal Democracy
98	Chile	1997	LB 1997	1117	Liberal Democracy
99	Chile	1999	ISSP 1999	1374	Liberal Democracy
100	Chile	2000	WVS Wave 4	1182	Liberal Democracy
101	Chile	2001	LB 2001	1109	Liberal Democracy
102	Chile	2002	LB 2002	1109	Liberal Democracy
103	Chile	2006	WVS Wave 5	981	Liberal Democracy
104	Chile	2007	LB 2017	2243	Liberal Democracy
105	Chile	2009	LB 2009	2527	Liberal Democracy
106	Chile	2010	LB 2010	1132	Liberal Democracy
107	Chile	2011	LB 2011	1128	Liberal Democracy
108	Chile	2012	WVS Wave 6	971	Liberal Democracy
109	Chile	2013	LB 2013	1123	Liberal Democracy
110	Chile	2015	LB 2016	1111	Liberal Democracy
111	Chile	2016	LB 2016	1142	Liberal Democracy
112	Chile	2018	WVS Wave 7	2143	Liberal Democracy
113	Colombia	1997	LB 1997	1124	Electoral Democracy
114	Colombia	1998	WVS Wave 3	2993	Electoral Democracy
115	Colombia	2001	LB 2001	1067	Electoral Democracy
116	Colombia	2002	LB 2002	1054	Electoral Democracy
117	Colombia	2005	WVS Wave 5	2864	Electoral Democracy
118	Colombia	2007	LB 2017	2260	Electoral Democracy
119	Colombia	2009	LB 2009	1074	Electoral Democracy
120	Colombia	2010	LB 2010	1124	Electoral Democracy
121	Colombia	2011	LB 2011	1154	Electoral Democracy
122	Colombia	2012	WVS Wave 6	1446	Electoral Democracy
123	Colombia	2013	LB 2013	1166	Electoral Democracy
124	Colombia	2015	LB 2016	1159	Electoral Democracy

	Country	Year	Dataset	N	Regime Type
125	Colombia	2016	LB 2016	1148	Electoral Democracy
126	Colombia	2018	WVS Wave 7	2629	Electoral Democracy
127	Costa Rica	1997	LB 1997	804	Liberal Democracy
128	Costa Rica	2001	LB 2001	851	Liberal Democracy
129	Costa Rica	2002	LB 2002	853	Liberal Democracy
130	Costa Rica	2007	LB 2017	1725	Liberal Democracy
131	Costa Rica	2009	LB 2009	883	Liberal Democracy
132	Costa Rica	2010	LB 2010	906	Liberal Democracy
133	Costa Rica	2011	LB 2011	902	Liberal Democracy
134	Costa Rica	2013	LB 2013	871	Liberal Democracy
135	Costa Rica	2015	LB 2016	967	Liberal Democracy
136	Costa Rica	2016	LB 2016	910	Liberal Democracy
137	Costa Rica	2018	LB 2018	919	Liberal Democracy
138	Cyprus	1999	ISSP 1999	536	Electoral Democracy
139	Cyprus	2006	WVS Wave 5	894	Liberal Democracy
140	Cyprus	2008	EVS Wave 4	1169	Liberal Democracy
141	Cyprus	2009	ISSP 2009	958	Liberal Democracy
142	Cyprus	2010	ESS Wave 5	80	Liberal Democracy
143	Cyprus	2011	WVS Wave 6	876	Liberal Democracy
144	Cyprus	2012	ESS Wave 6	160	Liberal Democracy
145	Cyprus	2019	WVS Wave 7	934	Liberal Democracy
146	Czech Republic	1998	WVS Wave 3	1091	Liberal Democracy
147	Czech Republic	1999	ISSP 1999	3534	Liberal Democracy
148	Czech Republic	2002	ESS Wave 1	142	Liberal Democracy
149	Czech Republic	2004	ESS Wave 2	529	Liberal Democracy
150	Czech Republic	2008	EVS Wave 4	1947	Liberal Democracy
151	Czech Republic	2009	ISSP 2009	1179	Liberal Democracy
152	Czech Republic	2010	ESS Wave 5	152	Liberal Democracy
153	Czech Republic	2012	ESS Wave 6	128	Liberal Democracy
154	Czech Republic	2014	ESS Wave 7	105	Liberal Democracy
155	Czech Republic	2016	ESS Wave 8	150	Liberal Democracy
156	Czech Republic	2017	EVS Wave 5	1036	Liberal Democracy
157	Denmark	1999	EVS Wave 3	989	Liberal Democracy
158	Denmark	2002	ESS Wave 1	1375	Liberal Democracy
159	Denmark	2004	ESS Wave 2	323	Liberal Democracy
160	Denmark	2006	ESS Wave 3	467	Liberal Democracy
161	Denmark	2008	EVS Wave 4	1936	Liberal Democracy
162	Denmark	2009	ISSP 2009	1404	Liberal Democracy
163	Denmark	2010	ESS Wave 5	467	Liberal Democracy
164	Denmark	2012	ESS Wave 6	641	Liberal Democracy
165	Denmark	2014	ESS Wave 7	520	Liberal Democracy
166	Denmark	2017	EVS Wave 5	2291	Liberal Democracy
167	Dominican Republic	1996	WVS Wave 3	378	Electoral Democracy
168	Dominican Republic	2007	LB 2017	1893	Electoral Democracy
169	Dominican Republic	2009	LB 2009	960	Electoral Democracy
170	Dominican Republic	2010	LB 2010	962	Electoral Democracy
171	Dominican Republic	2011	LB 2011	960	Electoral Democracy
172	Dominican Republic	2013	LB 2013	903	Electoral Democracy
173	Dominican Republic	2015	LB 2016	965	Electoral Democracy
174	Dominican Republic	2016	LB 2016	924	Electoral Democracy
175	Dominican Republic	2018	LB 2018	957	Electoral Democracy
176	Ecuador	1997	LB 1997	1006	Electoral Democracy
177	Ecuador	2001	LB 2001	1134	Electoral Democracy
178	Ecuador	2002	LB 2002	1085	Electoral Democracy
179	Ecuador	2007	LB 2017	2233	Electoral Democracy
180	Ecuador	2009	LB 2009	1098	Electoral Democracy
181	Ecuador	2010	LB 2010	1129	Electoral Democracy
182	Ecuador	2011	LB 2011	1117	Electoral Democracy
183	Ecuador	2013	WVS Wave 6	2251	Electoral Democracy
184	Ecuador	2015	LB 2016	1032	Electoral Democracy
185	Ecuador	2016	LB 2016	1092	Electoral Democracy
186	Ecuador	2018	WVS Wave 7	2291	Electoral Democracy
187	Egypt	2001	WVS Wave 4	2308	Electoral Autocracy

	Country	Year	Dataset	N	Regime Type
188	Egypt	2008	WVS Wave 5	2158	Electoral Autocracy
189	Egypt	2013	WVS Wave 6	1056	Closed Autocracy
190	Egypt	2018	WVS Wave 7	1199	Electoral Autocracy
191	El Salvador	1997	LB 1997	781	Electoral Autocracy
192	El Salvador	1999	WVS Wave 3	1213	Electoral Democracy
193	El Salvador	2001	LB 2001	824	Electoral Democracy
194	El Salvador	2002	LB 2002	788	Electoral Democracy
195	El Salvador	2007	LB 2017	1493	Electoral Democracy
196	El Salvador	2009	LB 2009	770	Electoral Democracy
197	El Salvador	2010	LB 2010	809	Electoral Democracy
198	El Salvador	2011	LB 2011	836	Electoral Democracy
199	El Salvador	2013	LB 2013	813	Electoral Democracy
200	El Salvador	2015	LB 2016	840	Electoral Democracy
201	El Salvador	2016	LB 2016	720	Electoral Democracy
202	El Salvador	2018	LB 2018	664	Electoral Democracy
203	Estonia	1996	WVS Wave 3	1008	Electoral Democracy
204	Estonia	1999	EVS Wave 3	986	Liberal Democracy
205	Estonia	2004	ESS Wave 2	171	Liberal Democracy
206	Estonia	2006	ESS Wave 3	151	Liberal Democracy
207	Estonia	2008	EVS Wave 4	1710	Liberal Democracy
208	Estonia	2009	ISSP 2009	971	Liberal Democracy
209	Estonia	2010	ESS Wave 5	165	Liberal Democracy
210	Estonia	2011	WVS Wave 6	1521	Liberal Democracy
211	Estonia	2012	ESS Wave 6	178	Liberal Democracy
212	Estonia	2014	ESS Wave 7	162	Liberal Democracy
213	Estonia	2016	ESS Wave 8	200	Liberal Democracy
214	Estonia	2018	EVS Wave 5	651	Liberal Democracy
215	Finland	1996	WVS Wave 3	973	Liberal Democracy
216	Finland	2000	EVS Wave 3	968	Liberal Democracy
217	Finland	2005	WVS Wave 5	1004	Liberal Democracy
218	Finland	2009	ISSP 2009	1860	Liberal Democracy
219	Finland	2010	ESS Wave 5	75	Liberal Democracy
220	Finland	2012	ESS Wave 6	104	Liberal Democracy
221	Finland	2014	ESS Wave 7	119	Liberal Democracy
222	Finland	2016	ESS Wave 8	122	Liberal Democracy
223	Finland	2017	EVS Wave 5	752	Liberal Democracy
224	France	1999	ISSP 1999	2867	Liberal Democracy
225	France	2006	WVS Wave 5	2970	Liberal Democracy
226	France	2008	EVS Wave 4	3550	Liberal Democracy
227	France	2009	ISSP 2009	2704	Liberal Democracy
228	France	2010	ESS Wave 5	93	Liberal Democracy
229	France	2012	ESS Wave 6	112	Liberal Democracy
230	France	2014	ESS Wave 7	52	Liberal Democracy
231	France	2016	ESS Wave 8	79	Liberal Democracy
232	France	2018	EVS Wave 5	952	Liberal Democracy
233	Georgia	2008	EVS Wave 4	1465	Electoral Democracy
234	Georgia	2009	WVS Wave 5	1456	Electoral Democracy
235	Georgia	2014	WVS Wave 6	1189	Electoral Democracy
236	Georgia	2018	EVS Wave 5	1364	Electoral Democracy
237	Greece	1999	EVS Wave 3	1081	Liberal Democracy
238	Greece	2008	EVS Wave 4	1494	Liberal Democracy
239	Greece	2010	ESS Wave 5	212	Liberal Democracy
240	Greece	2017	WVS Wave 7	1181	Liberal Democracy
241	Guatemala	1997	LB 1997	518	Electoral Autocracy
242	Guatemala	2001	LB 2001	850	Electoral Democracy
243	Guatemala	2002	LB 2002	824	Electoral Democracy
244	Guatemala	2004	WVS Wave 5	962	Electoral Democracy
245	Guatemala	2007	LB 2017	1776	Electoral Democracy
246	Guatemala	2009	LB 2009	902	Electoral Democracy
247	Guatemala	2010	LB 2010	905	Electoral Democracy
248	Guatemala	2011	LB 2011	881	Electoral Democracy
249	Guatemala	2013	LB 2013	910	Electoral Democracy
250	Guatemala	2015	LB 2016	910	Electoral Democracy

	Country	Year	Dataset	N	Regime Type
251	Guatemala	2016	LB 2016	870	Electoral Democracy
252	Guatemala	2018	LB 2018	887	Electoral Democracy
253	Honduras	1997	LB 1997	838	Electoral Democracy
254	Honduras	2001	LB 2001	848	Electoral Democracy
255	Honduras	2002	LB 2002	852	Electoral Democracy
256	Honduras	2007	LB 2017	1831	Electoral Democracy
257	Honduras	2009	LB 2009	908	Electoral Autocracy
258	Honduras	2010	LB 2010	914	Electoral Autocracy
259	Honduras	2011	LB 2011	949	Electoral Autocracy
260	Honduras	2013	LB 2013	911	Electoral Autocracy
261	Honduras	2015	LB 2016	875	Electoral Autocracy
262	Honduras	2016	LB 2016	925	Electoral Autocracy
263	Honduras	2018	LB 2018	929	Electoral Autocracy
264	Hungary	1987	ISSP 1987	1581	Closed Autocracy
265	Hungary	1998	WVS Wave 3	628	Liberal Democracy
266	Hungary	1999	ISSP 1999	2073	Liberal Democracy
267	Hungary	2002	ESS Wave 1	613	Liberal Democracy
268	Hungary	2004	ESS Wave 2	388	Liberal Democracy
269	Hungary	2006	ESS Wave 3	509	Electoral Democracy
270	Hungary	2008	EVS Wave 4	1974	Liberal Democracy
271	Hungary	2009	WVS Wave 5	1957	Liberal Democracy
272	Hungary	2010	ESS Wave 5	427	Electoral Democracy
273	Hungary	2012	ESS Wave 6	587	Electoral Democracy
274	Hungary	2014	ESS Wave 7	383	Electoral Democracy
275	Hungary	2016	ESS Wave 8	35	Electoral Democracy
276	Hungary	2018	EVS Wave 5	714	Electoral Autocracy
277	Iceland	1999	EVS Wave 3	903	Liberal Democracy
278	Iceland	2004	ESS Wave 2	243	Liberal Democracy
279	Iceland	2009	ISSP 2009	1686	Liberal Democracy
280	Iceland	2012	ESS Wave 6	488	Liberal Democracy
281	Iceland	2016	ESS Wave 8	517	Liberal Democracy
282	Iceland	2017	EVS Wave 5	1166	Liberal Democracy
283	India	1990	WVS Wave 2	2189	Electoral Democracy
284	India	1995	WVS Wave 3	1855	Electoral Democracy
285	India	2001	WVS Wave 4	1289	Electoral Democracy
286	India	2006	WVS Wave 5	1158	Electoral Democracy
287	India	2012	WVS Wave 6	2887	Electoral Democracy
288	Indonesia	2001	WVS Wave 4	933	Electoral Democracy
289	Indonesia	2006	WVS Wave 5	1923	Electoral Democracy
290	Indonesia	2018	WVS Wave 7	3169	Electoral Democracy
291	Iraq	2004	WVS Wave 4	1896	Closed Autocracy
292	Iraq	2006	WVS Wave 5	2115	Electoral Autocracy
293	Iraq	2013	WVS Wave 6	1074	Electoral Autocracy
294	Iraq	2018	WVS Wave 7	1174	Electoral Autocracy
295	Ireland	1999	EVS Wave 3	937	Liberal Democracy
296	Ireland	2008	EVS Wave 4	939	Liberal Democracy
297	Ireland	2010	ESS Wave 5	89	Liberal Democracy
298	Ireland	2012	ESS Wave 6	152	Liberal Democracy
299	Ireland	2014	ESS Wave 7	127	Liberal Democracy
300	Ireland	2016	ESS Wave 8	132	Liberal Democracy
301	Italy	1987	ISSP 1987	557	Liberal Democracy
302	Italy	1999	EVS Wave 3	1951	Liberal Democracy
303	Italy	2005	WVS Wave 5	977	Liberal Democracy
304	Italy	2009	ISSP 2009	2412	Liberal Democracy
305	Italy	2012	ESS Wave 6	49	Liberal Democracy
306	Italy	2016	ESS Wave 8	52	Liberal Democracy
307	Italy	2018	EVS Wave 5	1345	Liberal Democracy
308	Japan	1999	ISSP 1999	1000	Liberal Democracy
309	Japan	2000	WVS Wave 4	1185	Liberal Democracy
310	Japan	2005	WVS Wave 5	1016	Liberal Democracy
311	Japan	2009	ISSP 2009	1135	Liberal Democracy
312	Japan	2010	WVS Wave 6	2211	Liberal Democracy
313	Japan	2019	WVS Wave 7	1287	Liberal Democracy

	Country	Year	Dataset	N	Regime Type
314	Jordan	2001	WVS Wave 4	1058	Closed Autocracy
315	Jordan	2014	WVS Wave 6	1140	Closed Autocracy
316	Jordan	2018	WVS Wave 7	1201	Closed Autocracy
317	Latvia	1996	WVS Wave 3	1158	Electoral Democracy
318	Latvia	1999	ISSP 1999	1886	Electoral Democracy
319	Latvia	2008	EVS Wave 4	1491	Electoral Democracy
320	Latvia	2009	ISSP 2009	1007	Liberal Democracy
321	Lithuania	1997	WVS Wave 3	967	Liberal Democracy
322	Lithuania	1999	EVS Wave 3	1003	Liberal Democracy
323	Lithuania	2008	EVS Wave 4	1466	Liberal Democracy
324	Lithuania	2009	ISSP 2009	959	Liberal Democracy
325	Lithuania	2010	ESS Wave 5	188	Liberal Democracy
326	Lithuania	2012	ESS Wave 6	175	Liberal Democracy
327	Lithuania	2014	ESS Wave 7	166	Liberal Democracy
328	Lithuania	2016	ESS Wave 8	125	Electoral Democracy
329	Lithuania	2018	EVS Wave 5	774	Electoral Democracy
330	Malaysia	2006	WVS Wave 5	1178	Electoral Autocracy
331	Malaysia	2012	WVS Wave 6	1240	Electoral Autocracy
332	Malaysia	2018	WVS Wave 7	1304	Electoral Autocracy
333	Mexico	1996	WVS Wave 3	1433	Electoral Democracy
334	Mexico	1997	LB 1997	856	Electoral Democracy
335	Mexico	2000	WVS Wave 4	1336	Electoral Democracy
336	Mexico	2001	LB 2001	990	Electoral Democracy
337	Mexico	2002	LB 2002	961	Electoral Democracy
338	Mexico	2005	WVS Wave 5	1444	Electoral Democracy
339	Mexico	2007	LB 2017	1844	Electoral Democracy
340	Mexico	2009	LB 2009	923	Electoral Democracy
341	Mexico	2010	LB 2010	888	Electoral Democracy
342	Mexico	2011	LB 2011	898	Electoral Democracy
343	Mexico	2012	WVS Wave 6	1920	Electoral Democracy
344	Mexico	2013	LB 2013	904	Electoral Democracy
345	Mexico	2015	LB 2016	887	Electoral Democracy
346	Mexico	2016	LB 2016	916	Electoral Democracy
347	Mexico	2018	WVS Wave 7	2534	Electoral Democracy
348	Moldova	1996	WVS Wave 3	912	Electoral Democracy
349	Moldova	2002	WVS Wave 4	970	Electoral Democracy
350	Moldova	2006	WVS Wave 5	1014	Electoral Democracy
351	Moldova	2008	EVS Wave 4	1510	Electoral Democracy
352	Morocco	2001	WVS Wave 4	589	Closed Autocracy
353	Morocco	2007	WVS Wave 5	494	Closed Autocracy
354	Morocco	2011	WVS Wave 6	454	Closed Autocracy
355	Netherlands	1987	ISSP 1987	762	Liberal Democracy
356	Netherlands	1999	EVS Wave 3	993	Liberal Democracy
357	Netherlands	2002	ESS Wave 1	915	Liberal Democracy
358	Netherlands	2004	ESS Wave 2	656	Liberal Democracy
359	Netherlands	2006	WVS Wave 5	1582	Liberal Democracy
360	Netherlands	2008	EVS Wave 4	2032	Liberal Democracy
361	Netherlands	2010	ESS Wave 5	447	Liberal Democracy
362	Netherlands	2012	WVS Wave 6	2316	Liberal Democracy
363	Netherlands	2014	ESS Wave 7	260	Liberal Democracy
364	Netherlands	2016	ESS Wave 8	186	Liberal Democracy
365	Netherlands	2017	EVS Wave 5	1415	Liberal Democracy
366	New Zealand	1998	WVS Wave 3	1057	Liberal Democracy
367	New Zealand	1999	ISSP 1999	848	Liberal Democracy
368	New Zealand	2004	WVS Wave 5	843	Liberal Democracy
369	New Zealand	2009	ISSP 2009	771	Liberal Democracy
370	New Zealand	2011	WVS Wave 6	748	Liberal Democracy
371	Nicaragua	1997	LB 1997	344	Electoral Democracy
372	Nicaragua	2001	LB 2001	304	Electoral Democracy
373	Nicaragua	2002	LB 2002	296	Electoral Democracy
374	Nicaragua	2007	LB 2017	568	Electoral Autocracy
375	Nicaragua	2009	LB 2009	294	Electoral Autocracy
376	Nicaragua	2010	LB 2010	321	Electoral Autocracy

	Country	Year	Dataset	N	Regime Type
377	Nicaragua	2011	LB 2011	345	Electoral Autocracy
378	Nicaragua	2013	LB 2013	403	Electoral Autocracy
379	Nicaragua	2015	LB 2016	466	Electoral Autocracy
380	Nicaragua	2016	LB 2016	472	Electoral Autocracy
381	Nicaragua	2018	LB 2018	463	Electoral Autocracy
382	Nigeria	1990	WVS Wave 2	896	Closed Autocracy
383	Nigeria	1995	WVS Wave 3	1886	Closed Autocracy
384	Nigeria	2000	WVS Wave 4	1736	Electoral Autocracy
385	Nigeria	2012	WVS Wave 6	1598	Electoral Autocracy
386	Nigeria	2018	WVS Wave 7	1217	Electoral Democracy
387	North Macedonia	1998	WVS Wave 3	952	Electoral Autocracy
388	North Macedonia	2001	WVS Wave 4	1012	Electoral Autocracy
389	North Macedonia	2008	EVS Wave 4	1440	Electoral Democracy
390	North Macedonia	2019	EVS Wave 5	655	Electoral Democracy
391	Norway	1996	WVS Wave 3	1119	Liberal Democracy
392	Norway	1999	ISSP 1999	884	Liberal Democracy
393	Norway	2002	ESS Wave 1	599	Liberal Democracy
394	Norway	2004	ESS Wave 2	544	Liberal Democracy
395	Norway	2006	ESS Wave 3	473	Liberal Democracy
396	Norway	2007	WVS Wave 5	1010	Liberal Democracy
397	Norway	2008	EVS Wave 4	1489	Liberal Democracy
398	Norway	2009	ISSP 2009	1171	Liberal Democracy
399	Norway	2010	ESS Wave 5	337	Liberal Democracy
400	Norway	2012	ESS Wave 6	400	Liberal Democracy
401	Norway	2014	ESS Wave 7	335	Liberal Democracy
402	Norway	2016	ESS Wave 8	357	Liberal Democracy
403	Norway	2018	EVS Wave 5	743	Liberal Democracy
404	Pakistan	2001	WVS Wave 4	1167	Closed Autocracy
405	Pakistan	2012	WVS Wave 6	928	Electoral Autocracy
406	Pakistan	2018	WVS Wave 7	1985	Electoral Autocracy
407	Panama	1997	LB 1997	894	Electoral Democracy
408	Panama	2001	LB 2001	818	Electoral Democracy
409	Panama	2002	LB 2002	885	Electoral Democracy
410	Panama	2007	LB 2017	1841	Electoral Democracy
411	Panama	2009	LB 2009	875	Electoral Democracy
412	Panama	2010	LB 2010	882	Electoral Democracy
413	Panama	2011	LB 2011	874	Electoral Democracy
414	Panama	2013	LB 2013	893	Electoral Democracy
415	Panama	2015	LB 2016	940	Electoral Democracy
416	Panama	2016	LB 2016	936	Electoral Democracy
417	Panama	2018	LB 2018	927	Electoral Democracy
418	Paraguay	1997	LB 1997	479	Electoral Democracy
419	Paraguay	2001	LB 2001	528	Electoral Democracy
420	Paraguay	2002	LB 2002	541	Electoral Democracy
421	Paraguay	2007	LB 2017	2111	Electoral Democracy
422	Paraguay	2009	LB 2009	1042	Electoral Democracy
423	Paraguay	2010	LB 2010	1059	Electoral Democracy
424	Paraguay	2011	LB 2011	1070	Electoral Democracy
425	Paraguay	2013	LB 2013	1077	Electoral Democracy
426	Paraguay	2015	LB 2016	1089	Electoral Democracy
427	Paraguay	2016	LB 2016	1084	Electoral Democracy
428	Paraguay	2018	LB 2018	1101	Electoral Democracy
429	Peru	1996	WVS Wave 3	1172	Electoral Autocracy
430	Peru	1997	LB 1997	924	Electoral Autocracy
431	Peru	2001	WVS Wave 4	2430	Electoral Democracy
432	Peru	2002	LB 2002	1095	Electoral Democracy
433	Peru	2006	WVS Wave 5	1436	Electoral Democracy
434	Peru	2007	LB 2017	2236	Electoral Democracy
435	Peru	2009	LB 2009	1093	Electoral Democracy
436	Peru	2010	LB 2010	1088	Electoral Democracy
437	Peru	2011	LB 2011	1124	Electoral Democracy
438	Peru	2012	WVS Wave 6	1155	Electoral Democracy
439	Peru	2013	LB 2013	1100	Electoral Democracy

	Country	Year	Dataset	N	Regime Type
440	Peru	2015	LB 2016	1078	Electoral Democracy
441	Peru	2016	LB 2016	1114	Electoral Democracy
442	Peru	2018	WVS Wave 7	2491	Electoral Democracy
443	Philippines	1996	WVS Wave 3	1194	Electoral Democracy
444	Philippines	1999	ISSP 1999	992	Electoral Democracy
445	Philippines	2001	WVS Wave 4	1182	Electoral Democracy
446	Philippines	2009	ISSP 2009	1149	Electoral Autocracy
447	Philippines	2012	WVS Wave 6	1174	Electoral Democracy
448	Philippines	2019	WVS Wave 7	1200	Electoral Autocracy
449	Poland	1992	ISSP 1992	1452	Liberal Democracy
450	Poland	1999	ISSP 1999	1932	Liberal Democracy
451	Poland	2002	ESS Wave 1	566	Liberal Democracy
452	Poland	2004	ESS Wave 2	374	Liberal Democracy
453	Poland	2005	WVS Wave 5	940	Liberal Democracy
454	Poland	2006	ESS Wave 3	384	Liberal Democracy
455	Poland	2008	EVS Wave 4	1736	Liberal Democracy
456	Poland	2009	ISSP 2009	1229	Liberal Democracy
457	Poland	2010	ESS Wave 5	358	Liberal Democracy
458	Poland	2012	WVS Wave 6	1310	Liberal Democracy
459	Poland	2014	ESS Wave 7	236	Liberal Democracy
460	Poland	2016	ESS Wave 8	271	Electoral Democracy
461	Poland	2017	EVS Wave 5	922	Electoral Democracy
462	Portugal	1999	ISSP 1999	2040	Liberal Democracy
463	Portugal	2008	EVS Wave 4	1616	Liberal Democracy
464	Portugal	2009	ISSP 2009	919	Liberal Democracy
465	Portugal	2010	ESS Wave 5	63	Liberal Democracy
466	Portugal	2012	ESS Wave 6	85	Liberal Democracy
467	Portugal	2014	ESS Wave 7	141	Liberal Democracy
468	Portugal	2016	ESS Wave 8	245	Liberal Democracy
469	Romania	1998	WVS Wave 3	1201	Electoral Democracy
470	Romania	1999	EVS Wave 3	1110	Electoral Democracy
471	Romania	2005	WVS Wave 5	1667	Electoral Democracy
472	Romania	2008	EVS Wave 4	1425	Electoral Democracy
473	Romania	2012	WVS Wave 6	1446	Electoral Democracy
474	Romania	2018	WVS Wave 7	2105	Electoral Democracy
475	Russia	1995	WVS Wave 3	2011	Electoral Autocracy
476	Russia	1999	ISSP 1999	3926	Electoral Autocracy
477	Russia	2006	WVS Wave 5	2410	Electoral Autocracy
478	Russia	2008	EVS Wave 4	1713	Electoral Autocracy
479	Russia	2009	ISSP 2009	1547	Electoral Autocracy
480	Russia	2010	ESS Wave 5	349	Electoral Autocracy
481	Russia	2011	WVS Wave 6	2409	Electoral Autocracy
482	Russia	2012	ESS Wave 6	336	Electoral Autocracy
483	Russia	2016	ESS Wave 8	285	Electoral Autocracy
484	Russia	2017	WVS Wave 7	2664	Electoral Autocracy
485	Slovakia	1998	WVS Wave 3	113	Electoral Democracy
486	Slovakia	1999	ISSP 1999	348	Liberal Democracy
487	Slovakia	2004	ESS Wave 2	62	Liberal Democracy
488	Slovakia	2006	ESS Wave 3	69	Liberal Democracy
489	Slovakia	2008	EVS Wave 4	265	Liberal Democracy
490	Slovakia	2009	ISSP 2009	570	Liberal Democracy
491	Slovakia	2010	ESS Wave 5	71	Liberal Democracy
492	Slovakia	2012	ESS Wave 6	64	Liberal Democracy
493	Slovakia	2017	EVS Wave 5	257	Electoral Democracy
494	Slovenia	1995	WVS Wave 3	873	Liberal Democracy
495	Slovenia	1999	ISSP 1999	1656	Liberal Democracy
496	Slovenia	2002	ESS Wave 1	511	Liberal Democracy
497	Slovenia	2004	ESS Wave 2	369	Liberal Democracy
498	Slovenia	2005	WVS Wave 5	947	Liberal Democracy
499	Slovenia	2006	ESS Wave 3	489	Liberal Democracy
500	Slovenia	2008	EVS Wave 4	1709	Liberal Democracy
501	Slovenia	2009	ISSP 2009	994	Liberal Democracy
502	Slovenia	2010	ESS Wave 5	410	Liberal Democracy

	Country	Year	Dataset	N	Regime Type
503	Slovenia	2011	WVS Wave 6	1001	Liberal Democracy
504	Slovenia	2012	ESS Wave 6	243	Liberal Democracy
505	Slovenia	2014	ESS Wave 7	267	Liberal Democracy
506	Slovenia	2016	ESS Wave 8	531	Liberal Democracy
507	Slovenia	2017	EVS Wave 5	726	Liberal Democracy
508	South Africa	1990	WVS Wave 2	2598	Closed Autocracy
509	South Africa	1996	WVS Wave 3	2892	Electoral Democracy
510	South Africa	2001	WVS Wave 4	2852	Liberal Democracy
511	South Africa	2006	WVS Wave 5	2805	Liberal Democracy
512	South Africa	2009	ISSP 2009	2138	Liberal Democracy
513	South Africa	2013	WVS Wave 6	3408	Electoral Democracy
514	South Korea	1996	WVS Wave 3	1219	Liberal Democracy
515	South Korea	2001	WVS Wave 4	1182	Liberal Democracy
516	South Korea	2005	WVS Wave 5	1183	Liberal Democracy
517	South Korea	2009	ISSP 2009	1496	Liberal Democracy
518	South Korea	2010	WVS Wave 6	1182	Liberal Democracy
519	South Korea	2018	WVS Wave 7	1244	Electoral Democracy
520	Spain	1995	WVS Wave 3	1191	Liberal Democracy
521	Spain	1997	LB 1997	2191	Liberal Democracy
522	Spain	1999	ISSP 1999	2226	Liberal Democracy
523	Spain	2000	WVS Wave 4	1135	Liberal Democracy
524	Spain	2001	LB 2001	1945	Liberal Democracy
525	Spain	2002	ESS Wave 1	384	Liberal Democracy
526	Spain	2004	ESS Wave 2	49	Liberal Democracy
527	Spain	2006	ESS Wave 3	82	Liberal Democracy
528	Spain	2007	WVS Wave 5	3480	Liberal Democracy
529	Spain	2008	EVS Wave 4	1548	Liberal Democracy
530	Spain	2009	LB 2009	3462	Liberal Democracy
531	Spain	2010	LB 2010	2319	Liberal Democracy
532	Spain	2011	WVS Wave 6	1159	Liberal Democracy
533	Spain	2012	ESS Wave 6	158	Liberal Democracy
534	Spain	2014	ESS Wave 7	362	Liberal Democracy
535	Spain	2016	ESS Wave 8	433	Liberal Democracy
536	Spain	2017	EVS Wave 5	643	Liberal Democracy
537	Sweden	1996	WVS Wave 3	994	Liberal Democracy
538	Sweden	1999	WVS Wave 4	2901	Liberal Democracy
539	Sweden	2006	WVS Wave 5	992	Liberal Democracy
540	Sweden	2009	ISSP 2009	2154	Liberal Democracy
541	Sweden	2010	ESS Wave 5	72	Liberal Democracy
542	Sweden	2011	WVS Wave 6	1166	Liberal Democracy
543	Sweden	2012	ESS Wave 6	174	Liberal Democracy
544	Sweden	2014	ESS Wave 7	234	Liberal Democracy
545	Sweden	2016	ESS Wave 8	121	Liberal Democracy
546	Sweden	2017	EVS Wave 5	755	Liberal Democracy
547	Switzerland	1987	ISSP 1987	663	Liberal Democracy
548	Switzerland	1996	WVS Wave 3	1161	Liberal Democracy
549	Switzerland	2002	ESS Wave 1	644	Liberal Democracy
550	Switzerland	2004	ESS Wave 2	317	Liberal Democracy
551	Switzerland	2006	ESS Wave 3	362	Liberal Democracy
552	Switzerland	2007	WVS Wave 5	1227	Liberal Democracy
553	Switzerland	2008	EVS Wave 4	1605	Liberal Democracy
554	Switzerland	2009	ISSP 2009	1202	Liberal Democracy
555	Switzerland	2010	ESS Wave 5	283	Liberal Democracy
556	Switzerland	2012	ESS Wave 6	275	Liberal Democracy
557	Switzerland	2014	ESS Wave 7	225	Liberal Democracy
558	Switzerland	2016	ESS Wave 8	172	Liberal Democracy
559	Switzerland	2017	EVS Wave 5	2063	Liberal Democracy
560	Taiwan	1998	WVS Wave 3	770	Electoral Democracy
561	Taiwan	2006	WVS Wave 5	1150	Liberal Democracy
562	Taiwan	2009	ISSP 2009	1932	Liberal Democracy
563	Taiwan	2012	WVS Wave 6	1156	Liberal Democracy
564	Taiwan	2019	WVS Wave 7	1221	Liberal Democracy
565	Thailand	2007	WVS Wave 5	1400	Closed Autocracy

	Country	Year	Dataset	N	Regime Type
566	Thailand	2013	WVS Wave 6	1106	Electoral Autocracy
567	Thailand	2018	WVS Wave 7	1460	Closed Autocracy
568	Turkey	1990	WVS Wave 2	785	Electoral Democracy
569	Turkey	1996	WVS Wave 3	1830	Electoral Democracy
570	Turkey	2001	WVS Wave 4	3958	Electoral Democracy
571	Turkey	2007	WVS Wave 5	1222	Electoral Democracy
572	Turkey	2009	ISSP 2009	3500	Electoral Democracy
573	Turkey	2011	WVS Wave 6	1484	Electoral Democracy
574	Turkey	2018	WVS Wave 7	2371	Electoral Autocracy
575	Ukraine	1996	WVS Wave 3	2562	Electoral Democracy
576	Ukraine	1999	EVS Wave 3	1134	Electoral Autocracy
577	Ukraine	2006	WVS Wave 5	956	Electoral Democracy
578	Ukraine	2008	EVS Wave 4	1789	Electoral Democracy
579	Ukraine	2009	ISSP 2009	1948	Electoral Democracy
580	Ukraine	2010	ESS Wave 5	291	Electoral Democracy
581	Ukraine	2011	WVS Wave 6	1485	Electoral Democracy
582	Ukraine	2012	ESS Wave 6	341	Electoral Autocracy
583	United Kingdom	1987	ISSP 1987	770	Liberal Democracy
584	United Kingdom	1998	WVS Wave 3	907	Liberal Democracy
585	United Kingdom	1999	ISSP 1999	2508	Liberal Democracy
586	United Kingdom	2005	WVS Wave 5	990	Liberal Democracy
587	United Kingdom	2008	EVS Wave 4	459	Liberal Democracy
588	United Kingdom	2009	ISSP 2009	2108	Liberal Democracy
589	United Kingdom	2010	ESS Wave 5	111	Liberal Democracy
590	United Kingdom	2012	ESS Wave 6	119	Liberal Democracy
591	United Kingdom	2014	ESS Wave 7	265	Liberal Democracy
592	United Kingdom	2016	ESS Wave 8	240	Liberal Democracy
593	United Kingdom	2018	EVS Wave 5	896	Liberal Democracy
594	United States of America	1987	ISSP 1987	1014	Liberal Democracy
595	United States of America	1995	WVS Wave 3	1441	Liberal Democracy
596	United States of America	1999	WVS Wave 4	2098	Liberal Democracy
597	United States of America	2006	WVS Wave 5	1222	Liberal Democracy
598	United States of America	2009	ISSP 2009	1525	Liberal Democracy
599	United States of America	2011	WVS Wave 6	2177	Liberal Democracy
600	United States of America	2017	WVS Wave 7	2141	Liberal Democracy
601	Uruguay	1996	WVS Wave 3	973	Liberal Democracy
602	Uruguay	1997	LB 1997	1054	Liberal Democracy
603	Uruguay	2001	LB 2001	1059	Liberal Democracy
604	Uruguay	2002	LB 2002	1040	Liberal Democracy
605	Uruguay	2006	WVS Wave 5	950	Liberal Democracy
606	Uruguay	2007	LB 2017	2062	Liberal Democracy
607	Uruguay	2009	LB 2009	981	Liberal Democracy
608	Uruguay	2010	LB 2010	1034	Liberal Democracy
609	Uruguay	2011	WVS Wave 6	1985	Liberal Democracy
610	Uruguay	2013	LB 2013	1023	Liberal Democracy
611	Uruguay	2015	LB 2016	1044	Liberal Democracy
612	Uruguay	2016	LB 2016	1029	Liberal Democracy
613	Uruguay	2018	LB 2018	976	Liberal Democracy
614	Venezuela	1996	WVS Wave 3	1148	Electoral Democracy
615	Venezuela	1997	LB 1997	1009	Electoral Democracy
616	Venezuela	2000	WVS Wave 4	1177	Electoral Democracy
617	Venezuela	2001	LB 2001	1041	Electoral Democracy
618	Venezuela	2002	LB 2002	978	Electoral Democracy
619	Venezuela	2007	LB 2017	2097	Electoral Autocracy
620	Venezuela	2009	LB 2009	1862	Electoral Autocracy
621	Venezuela	2010	LB 2010	1055	Electoral Autocracy
622	Venezuela	2011	LB 2011	1045	Electoral Autocracy
623	Venezuela	2013	LB 2013	1068	Electoral Autocracy
624	Venezuela	2015	LB 2016	1065	Electoral Autocracy
625	Venezuela	2016	LB 2016	1084	Electoral Autocracy
626	Venezuela	2018	LB 2018	1099	Electoral Autocracy

Table D.8: List of surveys, countries, years and number of respondents

	Country	N
1	Albania	4436
2	Argentina	18361
3	Armenia	5456
4	Australia	11293
5	Austria	6417
6	Azerbaijan	4096
7	Bangladesh	3215
8	Belarus	6629
9	Belgium	6945
10	Bolivia	14699
11	Bosnia and Herzegovina	3539
12	Brazil	17787
13	Bulgaria	11433
14	Chile	21376
15	Colombia	22262
16	Costa Rica	10591
17	Cyprus	5607
18	Czech Republic	9993
19	Denmark	10413
20	Dominican Republic	8902
21	Ecuador	15468
22	Egypt	6721
23	El Salvador	10551
24	Estonia	7874
25	Finland	5977
26	France	13379
27	Georgia	5474
28	Greece	3968
29	Guatemala	11195
30	Honduras	10780
31	Hungary	11869
32	Iceland	5003
33	India	9378
34	Indonesia	6025
35	Iraq	6259
36	Ireland	2376
37	Italy	7343
38	Japan	7834
39	Jordan	3399
40	Latvia	5542
41	Lithuania	5823
42	Malaysia	3722
43	Mexico	18734
44	Moldova	4406

	Country	N
45	Morocco	1537
46	Netherlands	11564
47	New Zealand	4267
48	Nicaragua	4276
49	Nigeria	7333
50	North Macedonia	4059
51	Norway	9461
52	Pakistan	4080
53	Panama	10765
54	Paraguay	11181
55	Peru	19536
56	Philippines	6891
57	Poland	11710
58	Portugal	5109
59	Romania	8954
60	Russia	17650
61	Slovakia	1819
62	Slovenia	10726
63	South Africa	16693
64	South Korea	7506
65	Spain	22767
66	Sweden	9563
67	Switzerland	10199
68	Taiwan	6229
69	Thailand	3966
70	Turkey	15150
71	Ukraine	10506
72	United Kingdom	9373
73	United States of America	11618
74	Uruguay	15210
75	Venezuela	15728

Table D.9: List of countries and number of respondents

	Model 1	Model 2	Model 3
Age	0.0336***	0.0345***	0.0317***
	(0.00432)	(0.00407)	(0.00420)
Exposure to Autocracy	-0.0348***	-0.0303***	-0.0227***
	(0.00886)	(0.00723)	(0.00872)
Socialization Context (at c)			
Physical Integrity	-1.162***		-0.462
	(0.362)		(0.438)
Physical Integrity * Exposure to Autocracy	-0.0618***		0.0513*
	(0.0221)		(0.0272)
Indoctrination		0.188***	0.116
		(0.0605)	(0.0756)

	Model 1	Model 2	Model 3
Indoctrination * Exposure to Autocracy		0.0162***	0.00307
		(0.00287)	(0.00419)
Physical Integrity * Indoctrination			-0.988***
			(0.217)
Physical Integrity * Indoctrination * Exposure to Autocracy			-0.0347***
			(0.0126)
Current Context (at t)			
Electoral Democracy	3.904	4.031	4.015
	(3.133)	(3.133)	(3.134)
GDP per capita	6.899***	6.743***	6.978***
	(2.111)	(2.110)	(2.112)
Individual-level controls			
Female	0.417***	0.416***	0.417***
	(0.0493)	(0.0493)	(0.0493)
Education (ref: *primary*)			
Secondary	-1.975***	-1.987***	-1.983***
	(0.0661)	(0.0661)	(0.0661)
Post-Secondary	-3.791***	-3.799***	-3.795***
	(0.0769)	(0.0769)	(0.0769)
Unemployed	2.163***	2.166***	2.173***
	(0.0949)	(0.0949)	(0.0949)
Country FE	Yes	Yes	Yes
Data FE (ref: *WVS*)			
EVS	-9.066***	-9.063***	-9.063***
	(0.249)	(0.249)	(0.249)
ESS	-18.08***	-18.09***	-18.09***
	(0.290)	(0.290)	(0.290)
ISSP	23.69***	23.69***	23.68***
	(0.255)	(0.255)	(0.255)
Latinobarometer	-15.21***	-15.20***	-15.21***
	(0.224)	(0.224)	(0.224)
Intercept	50.96***	51.13***	51.26***
	(1.397)	(1.394)	(1.392)
Variance Component			
Cohort	1.613***	1.614***	1.614***
	(0.0291)	(0.0291)	(0.0291)
Period	3.006***	3.006***	3.006***
	(0.000848)	(0.000848)	(0.000848)
Observations	697,976	697,976	697,976
Number of groups	75	75	75
AIC			

$^{***}p < 0.01$, $^{*}{}_{*}p < 0.05$, $^{*}p < 0.1$

Table D.10: HAPC regression analysis, listwise deletion

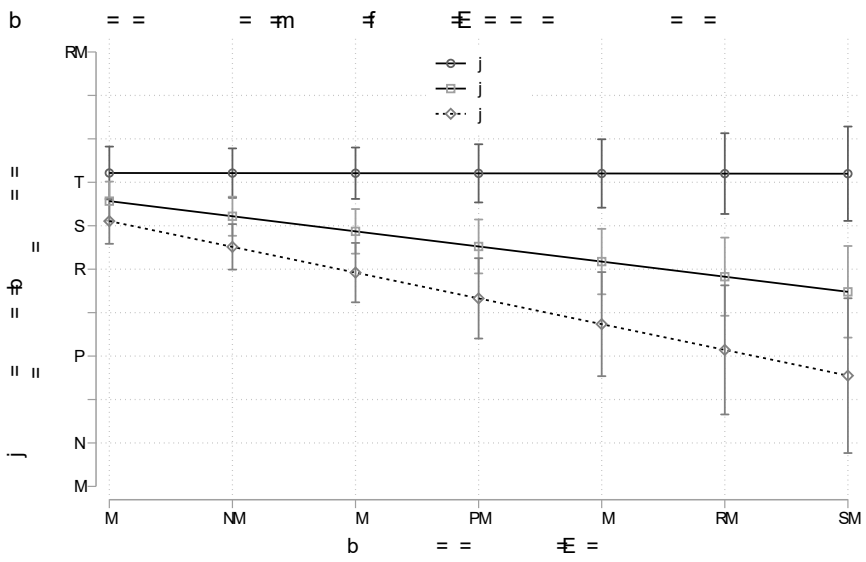


Figure D.10: Predicted redistribution preferences by regime socialization: time under autocracy and Physical Integrity at C

The prediction is based on a linear HAPC model. Full results shown in M1 in Table D.10. HAPC = hierarchical age–period–cohort.

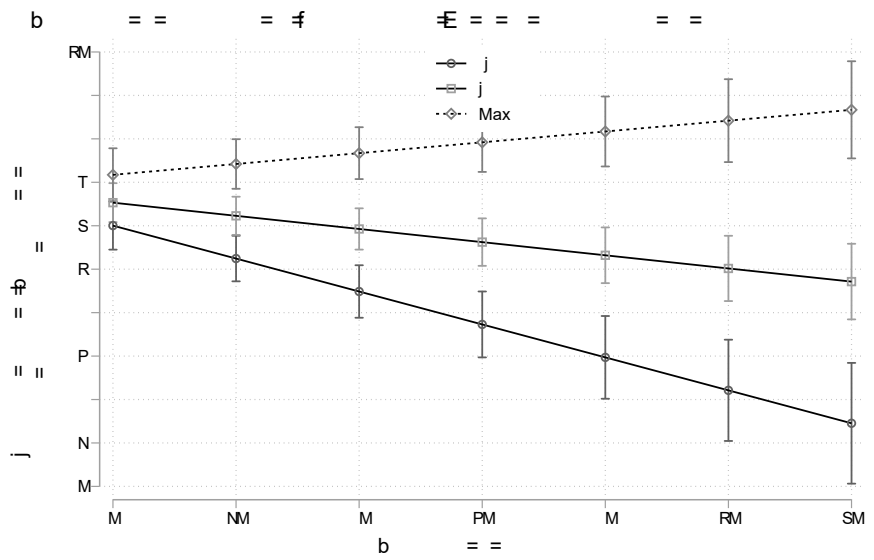


Figure D.11: Predicted redistribution preferences by regime socialization: time under autocracy and indoctrination at C

The prediction is based on a linear HAPC model. Full results shown in M2 in Table D.10. HAPC = hierarchical age–period–cohort.

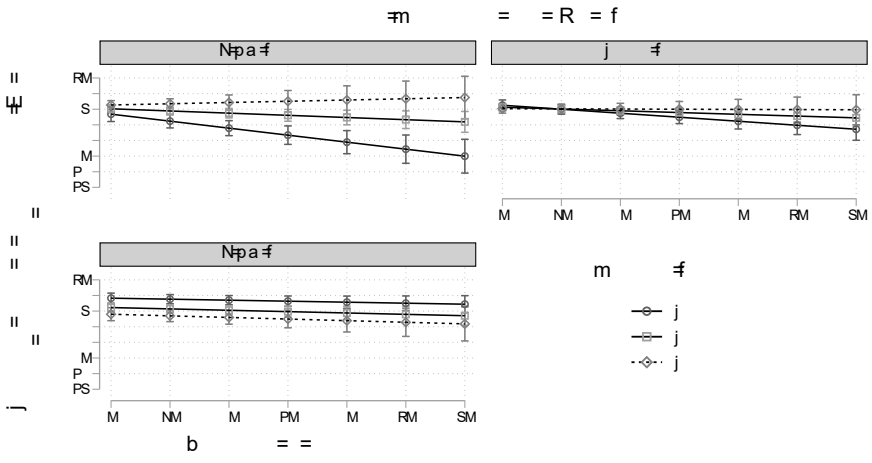


Figure D.12: Marginal effects of time under autocracy on redistribution preferences by Physical Integrity at C and indoctrination at C.

The prediction is based on a linear HAPC model. Full results shown in M3 in Table D.10. HAPC = hierarchical age–period–cohort.

D.9.5 Socialization under repression: mechanisms

	Model 1
Age	0.0341***
	(0.00334)
Exposure to Autocracy	-0.0247***
	(0.00777)
Socialization Context (at c)	
Physical Integrity	-0.928***
	(0.309)
Physical Integrity * Exposure to Autocracy	-0.0466**
	(0.0204)
Physical Integrity * Electoral Democracy	4.085***
	(1.187)
Electoral Democracy * Physical Integrity * Exposure to Autocracy	-0.0920
	(0.0616)
Current Context (at t)	
Electoral Democracy	-0.219
	(0.765)
Electoral Democracy * Exposure to Autocracy	-0.00172
	(0.0205)
GDP per capita	2.673**
	(1.342)
Individual-level controls	
Female	0.892***
	(0.0363)
Education (ref: *primary*)	
Secondary	-1.767***
	(0.0491)
Post-Secondary	-3.676***
	(0.0554)
Unemployed	1.513***
	(0.0644)
Country FE	Yes
Data FE (ref: *WVS*)	
EVS	-4.797***
	(0.161)
ESS	-14.95***
	(0.168)
ISSP	24.88***
	(0.189)
Latinobarometer	-15.42***
	(0.188)
Intercept	50.17***
	(1.360)
Variance Component	
Cohort	1.638***
	(0.0273)
Period	2.947***
	(0.000666)
Observations	1,131,248
Number of groups	76

$^{***}p < 0.01$, $^{*}*p < 0.05$, $^{*}p < 0.1$

Table D.11: HAPC regression analysis: repression mechanisms

D.9.6 Socialization under different ideologies: mechanisms

	Nationalist Ideology	Communist Ideology	Conservative Ideology
Age	0.0346***	0.0343***	0.0348***
	(0.00304)	(0.00300)	(0.00314)
Socialization Context (at c)			
Exposure to Autocracy	-0.0263***	-0.0285***	-0.0237***
	(0.00706)	(0.00584)	(0.00624)
Indoctrination	0.112**	0.0101	0.0848
	(0.0547)	(0.0741)	(0.0545)
Indoctrination * Exposure to Autocracy	0.0231***	-0.00266	0.0161***
	(0.00276)	(0.00346)	(0.00253)
Nationalist Ideology	-0.652***		
	(0.146)		
Nationalist Ideology * Exposure to Autocracy	0.0152*		
	(0.00836)		
Nationalist Ideology * Indoctrination	0.0185		
	(0.105)		
Nationalist Ideology * Indoctrination * Exposure to Autocracy	-0.0275***		
	(0.00496)		
Communist Ideology		-0.142	
		(0.194)	
Communist Ideology * Exposure to Autocracy		0.00337	
		(0.0158)	
Communist Ideology * Indoctrination		0.254***	
		(0.0943)	
Communist Ideology * Indoctrination * Exposure to Autocracy		0.0289***	
		(0.00636)	
Conservative Ideology			-0.223
			(0.198)
Conservative Ideology * Exposure to Autocracy			-0.00640
			(0.0105)
Conservative Ideology * Indoctrination			0.0641
			(0.143)
Conservative Ideology * Indoctrination * Exposure to Autocracy			-0.00760
			(0.00678)
Current Context (at t)			
Electoral Democracy	-1.084	-1.088	-1.091
	(0.696)	(0.696)	(0.697)
GDP per capita	3.268**	3.276**	3.283**
	(1.279)	(1.279)	(1.280)
Individual-level controls			
Female	0.891***	0.891***	0.891***
	(0.0363)	(0.0363)	(0.0363)
Education (ref: *primary*)			
Secondary	-1.742***	-1.744***	-1.736***
	(0.0492)	(0.0492)	(0.0492)
Post-Secondary	-3.667***	-3.667***	-3.661***
	(0.0554)	(0.0554)	(0.0554)
Unemployed	1.536***	1.537***	1.535***
	(0.0644)	(0.0644)	(0.0644)
Country FE	Yes	Yes	Yes
Data FE (ref: *WVS*)			
EVS	-4.799***	-4.804***	-4.797***
	(0.161)	(0.161)	(0.161)
ESS	-14.96***	-14.97***	-14.96***
	(0.168)	(0.168)	(0.168)
ISSP	24.87***	24.86***	24.87***
	(0.189)	(0.189)	(0.189)

	Nationalist Ideology	Communist Ideology	Conservative Ideology
Latinobarometer	-15.41***	-15.42***	-15.42***
	(0.188)	(0.188)	(0.188)
Intercept	50.80***	50.68***	50.36***
	(1.351)	(1.349)	(1.355)
Variance Component			
Cohort	1.636***	1.636***	1.637***
	(0.0273)	(0.0273)	(0.0273)
Period	2.947***	2.947***	2.947***
	(0.000665)	(0.000665)	(0.000665)
Observations	1,131,248	1,131,248	1,131,248
Number of groups	76	76	76

$^{***}p < 0.01$, $^{*}*p < 0.05$, $^{*}p < 0.1$

Table D.12: HAPC regression analysis: indoctrination mechanisms

Erklärung

Ich versichere, dass ich diese Arbeit selbstständig verfasst und keine anderen als die angegebenen Quellen und Hilfsmittel benutzt habe.

Heidelberg, 26. März 2021 .....

Lars Pelke