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**Economic Inequality and the Quality of
Democratic Institutions: Research and
Empirical Study of European countries**

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1 INTRODUCTION

The research of economic inequality, and its relationship to democratisation is an area which attracted many scholars and social scientists over the past decades. It is a quite expanded discussion with many competing theoretical schools of thought and the target of enormous empirical scrutiny. Though, As Acemoglu and Robinson (2015) put it, the “social science literature on this topic is far from a consensus or a near-consensus” (Acemoglu and Robinson, 2015, pp. 1953).

This thesis tries to navigate in the vastness of scientific articles and books on the matter, however, the focus of this work is slightly different. The research question goes as the following:

Does economic inequality influence the quality or development of democratic institutions in politically and economically well-developed European countries?

This research question is in line with the stream of scientific interest on the topic, while it does, however, differ in key aspects. The mainstream research topic is looking at economic inequality, theoretically argue how it influences democratisation, and then defining how democratic institutions will affect economic inequality. In contrast, the focus of this thesis is to see if economic inequality keeps influencing the development and the quality of democratic institutions.

While the topic is different, it is important to understand the theoretical fundamentals of the broader context and the connection of this thesis’ concept to the mainstream literature and empirical research; any and all theory should fit in with the existing scientific discussion. For that reason, it is a deliberate effort in this thesis to draw on different disciplines; economics, political economy, and political science, to search for a theoretical answer to the research question and discuss the matter in depth.

This thesis sets out to analyse the most prominent schools of thought in the broader literature and see if the topic delimitation fits into the conceptual framework of respective theories. The

most important thing to note is that I do not evaluate and use the theories based on how well they fit with the topic delimitation in this research. Instead, the evaluation is based on their applicability, descriptiveness, considering also the attitude of the general scientific world towards them.

The first theory this paper analyses is the median voter theorem by Meltzer and Richard (1981). This theory provides a simple, yet comprehensive depiction of the relationship between economic inequality and redistribution. The core of the theory is that each individual defines an interest in redistribution based on economic considerations. When ordering the individuals based on their economic resources, the median voter is going to be the person deciding the level of redistribution in a given society.

The median voter theorem has been the target of much empirical scrutiny, and the results are mixed. Hence, it is important to examine the expansion of the theorem, the redistributivist thesis, championed by, among other scholars, Acemoglu and Robinson. Acemoglu and Robinson (2006) connects redistribution and democratisation in their theory. Economic inequality serves only as an underlying cause for interest in redistribution. The higher economic inequality, the bigger the public's interest is in redistribution. The incumbent elite evaluates the severity of the redistributive preferences and see if a potential revolution to upset the political status quo would happen. If such a threat is real, democratisation is likely to happen, decreasing economic inequality afterwards. The redistributivist thesis, though expanding on the median voter theorem, still does not produce a scientific consensus with much empirical support for and against it. Thus, the adjustment of the theoretical framework is needed.

Such an adjustment is the political Kuznets-hypothesis. Kuznets (1955) provide a wide-ranging article establishing the fundamentals of the relationship between economic development and economic inequality. He concludes that an inverted U-shaped curve represents this connection, inequality first increasing in early stages of economic development, then shows a downward trend reaching higher stages of economic progress. Kuznets highlights, that despite the model being centred around economic factors, politics can also have a distinct influence on the trajectory of economic inequality. Building on that notion, Chong (2004), among others,

interpreted the concept and established the political Kuznets-hypothesis; the relationship of economic inequality and democracy is also best captured by an inverted U-shaped curve. It is clear that the Kuznets-theory provides much more room for the analysis of the research question of this thesis, as politics are expected to have distinct and significant influence, and economic inequality is tied to democratic developments. However, the broad empirical scrutiny of the Kuznets-curve has only confirmed the upward (left) side of the curve, without a consensus on the downward (right) side. Hence, the conceptual context is needed to be refined further.

Ansell and Samuels (2014) present the elite-competition approach to democratisation. This school of thought is much less popular compared to the ones discussed before, but it is more descriptive of the empirical results and real-life observations. The essence of the approach is that democratisation happens because there is a rising elite accumulating economic resources. This rising group is interested to protect their wealth against state expropriation instituted by the incumbent elite, and push for the extension of the franchise, primarily to codify and enforce property rights. This approach explains the first part of the political Kuznets-curve accurately, as the rising elite's improving position demonstrate the increase in inequality. However, it contends that economic inequality would decrease, as the decision-making elite has no interest in redistribution and the improvement of the democratic institutions, their primary interest is to maintain their political and economic power.

The elite-competition approach provides the theoretical framework and the fundamentals to analyse if economic inequality influences the quality of democratic institutions. The anticipation of this thesis is that such an influence exists; the higher economic inequality is, the lower the quality of democratic institutions is expected to be. This anticipation is captured with a layered approach in the two hypotheses of this paper: Hypothesis 1 anticipates a significant negative relationship between economic inequality and the quality of democratic institutions, while Hypothesis 2 is formulated around the interest in the mechanisms of such a relationship proposing that the "functioning of government" might be the most affected from a comprehensive group of institution categories.

To analyse and test the theory of this thesis empirically, the theoretical concepts must be operationalised. I decided to use well-known and scrutinised data sources to obtain the operational proxies to avoid the potential errors in generating an original dataset myself. The sources are the World Bank Database, Eurostat, Freedom House, and the Economist Intelligence Unit. For the variables, the Freedom in the World Index by Freedom House and the Democracy Index by the Economist Intelligence Unit are used as dependent variables and indicators of the quality of democratic institutions. The Gini Index and the 80/20 Income Share Index are used as proxies for economic inequality, while control variables represent technological and economic development in the models.

The results of the empirical analysis do not confirm the theory put forth in this thesis; no statistically significant connection between economic inequality and the quality of democratic institutions can be identified based on the models. Additional model specifications and robustness checks also show a lack of support for either hypotheses.

There could be multiple causes of such a disconnect between the quantitative findings and the theory from both a methodological, or theoretical perspective. Considering methodology, it is either the model, or the data could be the source of the issue. I do not differ from the mainstream modelling technique used in scientific papers with similar focus, and despite the limitations of the data, the variables represent the theoretical concepts quite well. Therefore, it is possible, but unlikely that the issue is methodological. It is much more probable that the theory is imperfectly specified. Among other scholars, Gimpelson and Traisman (2015) argue that there is way too much emphasis placed on actual levels of economic inequality; if even skilled professionals have difficulties in gathering the data, the authors say it is improbable that the general public has reliable understanding of economic inequality. Therefore, the theory of this thesis should be expanded upon in a potential future research project to substitute indicators of actual economic inequality with the perceptions of the concept, revisiting the anticipated connection of economic inequality and the quality of democratic institutions before a balanced, well-informed overall judgement is formulated.

The thesis proceeds as follows. Section 2 outlines the theoretical framework and presents the theoretical arguments. Section 3 provides the specifications of the empirical tests. Section 4 continues with the empirical testing of the hypotheses and the theory, including the robustness of the results. Section 5 evaluates the overall performance of the theory and the implications of the empirical findings. Section 6 concludes.

2 THEORY

2.1 THE REDISTRIBUTIVIST THESIS: THE MEDIAN VOTER THEOREM AND THE REDISTRIBUTIVIST THEORY BY ACEMOGLU AND ROBINSON

2.1.1 Understanding the median voter theorem

Meltzer and Richard (1981) introduced an economic toolbox to understand political developments, namely, to identify underlying factors of why countries democratise, using standardised political and economic environment.¹

The authors show that preferred tax rates can be ordered by productivity of individuals, the higher the productivity, the lower the preferred tax rate is. Now applying the concept that the tax rate in a majoritarian rule is decided by the citizens participating in the franchise, it is clear that the expansion or contraction of the franchise has an influence on the applied tax rates. Nonetheless, it is always the median voter of the franchised group who serves as the deciding individual. The key here is that the choice of the median voter can be predicted quite easily; ordering all of the citizens of the given country by income: if the median income falls to the left of the mean income, the median voter is likely to favour higher taxes. The opposite also holds true; with the median income to the right of the mean, less taxes are being favoured by the franchised group. This highlights an anticipated direct connection between economic inequality and political institutions.

¹ Economic assumptions: well-functioning markets, full information, large number of individuals with a strictly concave utility function comprising of utility from consumption and leisure. There is no capital and no uncertainty on the market, and there is no savings. Political assumption is that the government's only responsibility is instituting taxation and redistributing the taxes. The model differentiates between dictatorship and majoritarian rule. For more details, see Meltzer and Richard (1981).

Meltzer and Richard (1983) progress to test their model to see if it has explanatory power on the observed increase of government² over the years. Their empirical test focuses on the USA and the change in the size of the US government, omitting war years. Their results seem very robust in two ways. They seem to provide adequate evidence that the size of the government increases with income, and that the growth rate depends on the level of median income. This underlines their median voter theorem for democratisation, with explanatory powers of 74-83% in their econometric models.

Despite the seemingly robust findings of their empirical research and the theoretically sound logic of their model, many scholars have questioned the validity of both the theory, and the empirical research. One of the core challenges to the Meltzer-Richard model and empirical test is that they conducted it only on US time-series data, however, when expanded to other countries, the model fails to produce similarly convincing results. Perotti (1996), Bassett et al. (1999), and Milanovic (2000) have all tried to replicate the empirical findings applying slightly different definitions for inequality and the size of government, but have all derived differing conclusions not supporting the theorem. Alesina and Rodrick (1994) and Persson and Tabellini (1994) conducted cross-country analysis to determine the effectiveness of the median voter theorem in different countries but have had little success and the evidence were mixed. Borge and Rattsø (2003) tested the model in a more complex situation, expanding the utility function to include three variables, they did this using Norwegian local government's data on taxes and redistribution. The results critique the Meltzer-Richard model's usefulness in heterogenous political systems and show that the model basically does not hold in Norway. Bredemeier (2010) in a more recent paper puts forward an alternative test of the median voter theorem.³ This does not, however, lead to a different conclusion on the model's applicability as he also concludes that results are mixed and there is no direct support for the model.

² Meltzer and Richard (1983) equated the size of the government with the share of aggregate income allocated by the government but neglected the distribution of the budget to avoid unnecessary noise in the empirical analysis.

³ Bredemeier (2010) assesses the prediction of the model in a political environment where the following variables are introduced in the definition; imperfect information, possibility of upward mobility, and rising income polarisation.

The Meltzer-Richard model establishes a particular connection between economic inequality and political institutions. However, the relationship discussed in the model only focuses on tying taxation to economic inequality. In this thesis, democracy is understood to be more than simply institutionalised redistribution, which then leads to the point that the median voter theorem does not provide ground for a more nuanced relationship between economic inequality and democratic institutions.

2.1.2 Understanding the redistributivist theory of democratisation

The apparent limited descriptiveness and the criticism of the Meltzer-Richard model implies that the median voter theorem is not an overarching fundamental theorem to explain the democratic process or redistributive practices in countries, despite it being one of the most frequently cited mainstream theory in this field. Many schools of thought, however, have been using the median voter model and its concept and expanded on it, one of the most influential is the redistributivist theory of democratisation championed by – among others – Acemoglu and Robinson.

Acemoglu and Robinson (2006) describes that their model to research and tie redistribution and democratisation is economic, in that they anticipate individual citizens to have clearly defined preference structure and primarily act based on their individual needs and wants. They elaborate that this does not mean the absence of ideological differences among individuals, but the individual political regime preferences are more likely to derive from the economic and social consequences and performances of possible regimes, observed through the individuals' preference structure. This is very much in line with the Meltzer-Richard median voter theorem, as essentially it points to the same conclusion when all preferences considered.

What this translates to is that the economic model anticipates a strong connection between individuals' preference structures and economic situations, and it expects that this economic situation has a definitive influence on the political environment and progress. However, the issue is that if all fundamental anticipations and proposals of these models are accepted, the result seems to propose a rather stationary political outcome.

In a different article, Acemoglu and Robinson (2015) state that the median voter theorem serves well as a central concept, but it is not enough in itself to explain the complex political progress:

“we review the standard Meltzer-Richard model and point out why the relationship between democracy, redistribution, and inequality may be more complex than the standard model might suggest”
(Acemoglu and Robinson, 2015, pp. 1887)

They propose several key features the standard model can be expanded with. First, it is possible that a democracy may be captured or constrained by the incumbent elite. The enfranchisement of lower income class citizens leads to more political power to the poor, but the incumbent elite may engage in actions to offset such loss of power and regain/maintain control (e.x. influencing the platforms of political parties via lobbying, controlling local law enforcement or promoting non-state armed actors and engage in repression, capital flight, etc.). The authors propose that such situation is only possible if the cost of such investments is lower than the costs society would impose upon them after the expansion of the franchise. On the other hand, this poses a threat to the enfranchised society not to alter the system too much or risk the above possibilities. This can lead to captured, or dysfunctional democratic systems as the foundations for how the democratic institutions work are usually prepared by the previously enfranchised elite only. Or in some cases, the above investment can effectively block democratisation beforehand, rather than capturing it post its establishment.

Second, enfranchisement usually provides greater market opportunities to the formerly disenfranchised, which in some cases are inequality increasing. It is a possible scenario that under an autocratic system, citizens are forced into very similar jobs and industries, effectively making them more-or less homogenous in terms of wealth and income. However, once the system falls and democratisation happens, such a situation would provide opportunity to many from the homogenous group to try their luck elsewhere and engage in entrepreneurship or make a career in other industries, basically the society starts to diverge the low-income, manual labour type jobs and progresses towards a more diverse set of economic activities with more dispersed pay-outs. This effectively leads to an increase in inequality among the formerly disenfranchised,

which also translates to an increase in overall economic inequality, if this effect offsets the decrease in economic inequality following the rich not profiteering from closing out the majority of the citizens from the well-paying economy.

Thirdly, Acemoglu and Robinson highlight the possibility that democratisation does not reach the disenfranchised groups equally, and the middle class starts to use the newfound power to redistribute to itself, a concept that is called the ‘middle class bias’. This effect can produce multiple results though, depending on the relative economic situation of the middle class to the rich, and that of the poor; if the middle class is relatively very poor compared to the rich, inequality is likely to decrease following redistributive actions, while if the middle class is relatively much richer than the poor, inequality tends to increase when introducing redistribution.

2.1.3 Implications of the redistributivist theory of democratisation

To summarise the argument, Meltzer and Richard provide a model of democratisation based on where the median voter’s respective income falls when ordering all citizens on that metric. If the median voter is to the left of the mean, democratisation is expected to happen, and vice versa. Acemoglu and Robinson expands on the idea and say that democratisation is purely a redistributive game based on citizens economic preferences, with the argument that transitions are most likely at the mid-levels of economic inequality.

Looking at both schools, there are similarities in their overall implications. Combining the two concepts, I derive two major points: firstly, they establish a strong causal connection between economic inequality and the initial improvement of democratic institutions and democratisation. Secondly, as Acemoglu and Robinson (2015) expand the model, they propose that economic power may transfer to political influence.

These theories are quite influential in the mainstream economic literature, however not compatible with the focus of this thesis. The goal of the research is to see if there is any influence exerted by economic inequality on the quality of democratic institutions, especially *after* democratisation. The redistributivist approach provides several points and hints, that the

research has legitimate ground, but the approach seems to be too restraint to be used discussing the topic in more detail.

I am not calling into question the relevance of the theories to shape the discussion on the topic, as there are an abundance of papers and empirical evidence supporting the theory that the increase in economic inequality is somehow related to democratisation. However, there are equally numerous works debating the redistributivist thesis saying that it is not particularly effective at describing real-world events, and the findings are even more debatable after democratisation happens.

In the literature, the most questions towards the applicability and the descriptiveness of these theories come from two separate perspectives: 1) they challenge the redistributive theory of democracy: they call into question the understanding of democracy as merely an institution with the only function to redistribute to lower-income citizens from the wealthy, and 2) they call into question the fundamental assumptions the theories lie upon.

First and foremost, there is as much work challenging the idea of the Acemoglu and Robinson hypothesis that democracy reduces economic inequality as that of supportive about it. Quoting Timmons (2010, pp. 13): “Is democracy really a distributional game?” He puts forward complex empirical modelling of the relationship between democracy and economic inequality using the then most up-to-date dataset available, the World Income Distribution Database (WIID, Version 2, 2007). His conclusions are rather stark for the redistributivist theories; he derives no systematic or statistically significant relationship between democracy and economic inequality, regardless of the actual econometric method being used in the analysis. Engelhardt and Wagner (2014) provides analysis, which debates the redistributive hypothesis of the Acemoglu and Robinson and the Meltzer-Richard theories. The author’s empirical results show an interesting turn, they conclude that there is a statistically significant negative relationship between actual levels of economic inequality and social spending – redistribution – meaning that contrary to the mainstream idea, their results suggest that lower economic inequalities foster more redistribution. Houle (2009) provides yet another article challenging the

descriptiveness of the discussed theories. His empirical research finds that there seems to be no relationship between democratisation and economic inequality.

Secondly, the assumptions of the theories are debated. Many scholars suppose economic rationality and situational awareness, so that citizens can A) understand their respective socio-economic background, B) have an accurate understanding of everyone else's, and C) rationally derive preferences on redistribution. Niehues (2014) argues that there is essentially no relationship between actual distribution of incomes and how people perceive that distribution, while redistributive preferences are strongly correlated with the perception of income inequality. Engelhardt and Wagner (2014) argues quite similarly saying that the logical steps of the Meltzer-Richard model are too restrictive in the assumption of rationality. They conclude that there is evidence backing that people hold quite inaccurate beliefs on the level of inequality, they tend to see themselves richer than they actually are, and consequently favour less redistribution as their status would suggest based on pure rationality. Gimpelson and Treisman (2015) provides yet another exhaustive paper on the misperception of inequality. They provide evidence that citizens perception of inequality is flawed on every single level: they do not have an accurate perception on their actual economic resources, they do not presume their relative economic level, and they have no idea about the actual levels of overall inequality, nor on its trajectory. As they highlight: "If people do not know how high inequality, we [scientists] should not expect actual inequality to predict preferences and behavior." (Gimpelson and Treisman, 2015, pp. 18). Last, but not least, Timmons (2010, pp. 14) puts forward the idea that "the relationship between democracy and inequality is not just a question of whether or how, but when".

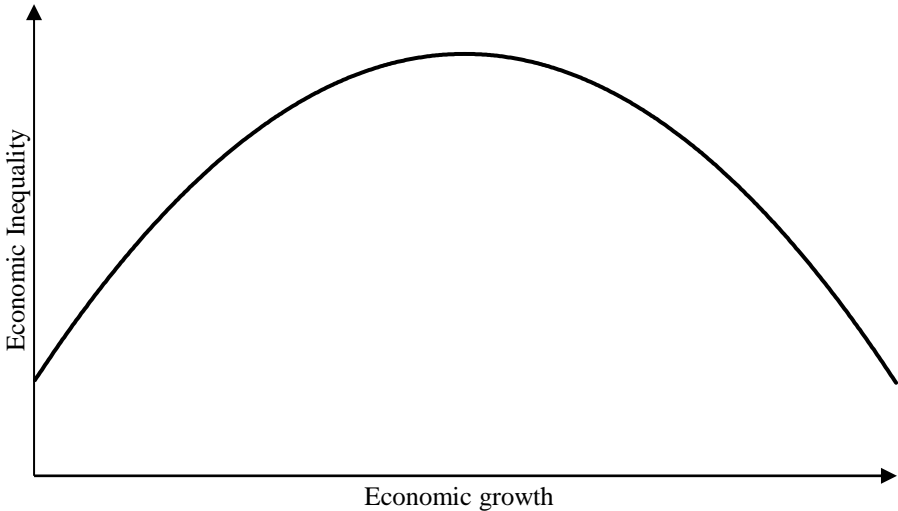
All in all, while the median voter theorem and Acemoglu and Robinson's expansion is useful to have an understanding of an ideal situation from economics point of view, due to the two-way discussion around it, to get closer to answering the research question of this thesis, there is a need to use a different theoretical concept to explore the link between economic inequality and democratic developments further, and arrive at the question of a potential two-way relationship.

2.2 THE KUZNETS-CURVE THEORY

As there is much criticism of the redistributivist theory of democratisation, exploring the idea of a possible two-way relationship of economic inequality and democratic developments more deeply generates the need to find a different theoretical understanding of the original relationship. Such theory should explain how democracy influences economic inequality, but also provide room for a potential expansion so that the two different perspectives of the same relationship may fit better together. Besides the redistributivist thesis, the other highly influential one in the realm of political economy to understand the connection between economic inequality and democratisation is the Kuznets-curve illustrated in Figure 1 below.

The core of the Kuznets-theory is to establish and examine connection between economic inequality and economic growth, implying an inverted U-shaped connection between the two. However, there is always the question of politics, whether it can have an influence on the situation, whether such influence can be shown empirically, or even if political developments are what truly define the development of economic inequality. Nevertheless, below I explore the theory itself as well as how this concept is being utilised in the broader literature, including the inequality-democracy understanding, and finally how this theory can be relevant to the research topic at hand.

Figure 1: Illustration of the Kuznets-curve



2.2.1 Understanding the Kuznets-curve

The Kuznets-curve is a theoretical concept created by Simon Kuznets (1955) as an understanding of a hypothetical relationship between economic growth and economic inequality. The fundamental thought is that economic growth provides more resources to be divided among citizens, and the concept tries to define what underlying factors make a difference in this distribution. This concept has later become an influential theory amongst economists and social scientists researching the connection.

Let's start with exploring the question of what this concept is. Kuznets depicts the relationship as a puzzle for that there are several factors thought to be influencing the connection:

Concentration of savings in the upper-income brackets: savings in the upper classes are net positive, while below the 80-90th percentile, net savings are usually zero or close to zero. This is a reinforcing spiral in that savings are the drive for investment, and henceforth the income yielding assets are thought to be concentrating in the very same income brackets as do savings. This mechanism only reinforces and increases income inequality as below the top decile people are not likely to be able to gain such assets at such a high concentration.

Shift in industrial structure away from agriculture. The second part of the puzzle, strengthening the increasing inequality side is the shift in the economic landscape of countries when they reach a certain development. Shift away from agricultural production to more industrial and service-oriented economies is a commonly seen phenomenon in developed countries. This industrialisation and the following urbanisation create two distinct group of people, the urban and the rural population. There are two main observation with these two groupings, incomes in the urban population tend to be higher on average, while the distribution of incomes in the rural population is seen as narrower. This means that urbanisation, so the increasing number of people living in urban environment should therefore increase the level of inequality everything else being stable.

Kuznets highlights, however, that initial screening of data shows income inequality decreasing over the long-term, so there must be some counteracting effects to influence the equation.

Among other factors, the most important for this thesis is what he calls governmental, political, or legislative interference. This can come from different angles with usually one core purpose, to diminish the self-accumulating nature of savings. This can be done using several actions ultimately targeting the value of the savings over time; maintaining a certain degree of inflation so the value attained to the savings is decreasing, or putting restrictions on the yield those income yielding assets produce, for example; maintaining a low interest rate environment. Furthermore, taxation is also used for the same reason to some extent: progressive income taxes, inheritance taxes, etc.

Such 'interference' can be captured as the following. In an autocratic environment, all the political power is held by a limited number of people in societies, the very same people who happen to have all the wealth and income in that society. They are making political decisions, with the option of disregarding the interests of the disenfranchised groups. When more and more people become enfranchised and receives the opportunity to participate in politics and to vote, a growing number of people starts to influence political decision-making. This leads to a more and more democratic establishment where the decisions are becoming less reliant on the interests of the top and start to increasingly take the majority's interests into consideration; establishing the institutions through which redistribution can happen, and legitimising unequal, progressive taxes and the aforementioned yield constraining actions.

To conclude, Kuznets' theory implies an inverted U-shape curve as the connection between economic inequality and democratic developments and growth, as depicted in Figure 1 above.

2.2.2 The Kuznets-curve in the broader literature

Having established the theory, it is also important to elaborate on its place in the mainstream political economy, focusing on the applicability of the Kuznets-curve when discussing the relationship between economic inequality and democratic developments. Kuznets' theory became a much cited and frequently used concept, but not in a clear-cut way as several work argues for such an inverted U-shaped curve, while others question the idea.

Acemoglu and Robinson (2002) takes on the Kuznets-curve in a comprehensive article. First and foremost, they distinguish three possible development paths for countries, the democratisation with the Kuznets-curve, an autocratic disaster, and an East Asian miracle path. In this, they also point out that historical differences may very well affect the occurrence of the inverted U-curve. Moreover, compared to many scholars including Kuznets himself, they argue that the perceived curve is not due to economic development and other economy-related factors, but rather the consequence of political changes in the observed countries. The fundamental concept of the authors is that economic inequality is increasing before democratic institutions are in place. They do not present the causes of such an increase, though this is in line with Kuznets' thoughts, anticipating that without democratic institutions, there is no limitation on the first two inequality increasing factors of the original theory.

Acemoglu and Robinson then say that the increasing inequality also increases the chance of a drastic change, a political revolution, and henceforth increases the risk and potential costs of keeping the status quo as it is. This consequently forces the elite to extend the franchise and democratise. Having some political power, the lower income citizens then institute redistributive measures. This is thought to have created the other side of the Kuznets-curve, lowering inequality. The implications of this article are supportive of the research question of this thesis, but only to a limited extent. Acemoglu and Robinson provide evidence that inequality influences democratic developments, but such an influence turns after democratisation and politics gaining more impact over economic inequality.

Chong (2004) investigates the Kuznets-curve from a political perspective, focusing on direct connection between economic inequality and political development. He does not introduce new theoretical understanding of the concept; his primary purpose is to create the empirical model to test the existence of it. The model controls for several social and economic development indicators with the aim to highlight and isolate the perceived connection between economic inequality and democracy. Chong reaches two main findings: 1) he concludes that an inverted U-shape relationship can be established and is statistically significant at normal significance levels between economic inequality and democratic indicators, and 2) he also finds evidence

supporting the persistence of economic inequality, meaning that the current level of inequality is partially shaped by past inequality, suggesting a path dependence. However, the author disputes the idea from other scholars that such a path dependence creates bias in the occurrence of the Kuznets-curve, saying that both effects are present, and have distinct influence on current levels of economic inequality.

2.2.3 Implications of the Kuznets-curve

The political understanding of the Kuznets-hypothesis of an inverted U-shaped relationship between economic inequality and democratisation is a powerfully simple, but comprehensive theory. Empirical evidence, however, suggests that it is systematically inconclusive. Many scholars provide empirical support for the first part of the political Kuznets-curve, saying that the increasing level of inequality brings about political transition. As Ansell and Samuels (2014) put it: “We agree that the right-hand side of the Kuznets-curve has less empirical support than the left-hand (upward) side.” (Ansell and Samuels, 2014, pp.18), but then they highlight that the rising level of economic inequality in developed democracies calls into question whether democracy and redistribution go hand in hand, which claim they contest. To synthesise the argumentation, scholars in general tend to accept that the rising level of economic inequality brings about political tension and consequent democratic transitional process. What they usually contest in the political understanding of the Kuznets-hypothesis is that the redistributive and inequality decreasing features democracy thought to have do not show in empirical studies to be that significant (see e.x. Lee, 2005; Houle, 2009; Ansell and Samuels 2010, 2014; Haggard and Kaufmann, 2012; Hollyer et al. 2015).

It seems that the Kuznets-hypothesis is more descriptive of the actual situation compared to the redistributivist theory of democratisation. Moreover, it is centred around the relationship how democratisation affect economic inequality, yet, it provides ample room for the legitimacy of the question of this thesis about researching possible influence the other way around. Kuznets (1955) himself highlights in his original concept even before the political Kuznets-curve hypothesis that political mechanisms and decision making can very much have an influence on this projected relationship. Still, as real-life levels of redistribution and welfare spending are

generally below expectations, and economic inequality not appearing to decline significantly in democracies, there is a tension around the applicability of the full Kuznets-theory.

There are several possible explanations for why this is the case. Among others works, Bénabou's (2000) theory on multiple social contracts discussing the possibility of multiple inequality-redistribution equilibrium when introducing an insurance function for redistribution provides a possible explanation. Furthermore, Bénabou and Ok (2001) introduce the concept of the 'prospect of upward mobility', which has since become an influential argument in understanding the lower actual redistribution levels compared to what is projected by the economic models. Lind (2005) using game-theory argumentation also highlights that simply the multi-dimensional nature of politics today may not lead to a Nash-equilibrium of taxation.

Furthermore, there are several observational arguments too. Bonica et al. (2013) show that voter turnout is significantly skewed towards higher-income citizens. They continue saying that since political parties are expected to respond to voters, the interest of the wealthy – who are proportionally better represented – in lower taxes are likely to appear in government decisions. And finally, there is the argument whether actual income inequality matters at all. As invoked earlier, drawing on contemporary literature on the perception of inequality, among others, the works of Engelhardt and Wagner (2014) and Niehues (2014) provide convincing arguments that not the actual levels of economic inequality, but rather its perception is what drives preferences on redistributive decisions and related to democratic developments.

Besides the above arguments, as only the left-hand side of the Kuznets-curve gained extensive empirical backing, it is important to highlight, that some change needs to occur at the top in order not to descend on the right-hand side of the curve. This suggests that the relationship between economic inequality and democratic developments may become two-way, and roughly offsetting. Such concept would include the strengths of the political Kuznets hypothesis, while being in line with the argument that people's perceptions might matter more than expected in mainstream economic and political economic literature.

All in all, the political Kuznets-hypothesis of an inverted U-shape relationship between economic inequality and democratisation or democratic developments provides significantly

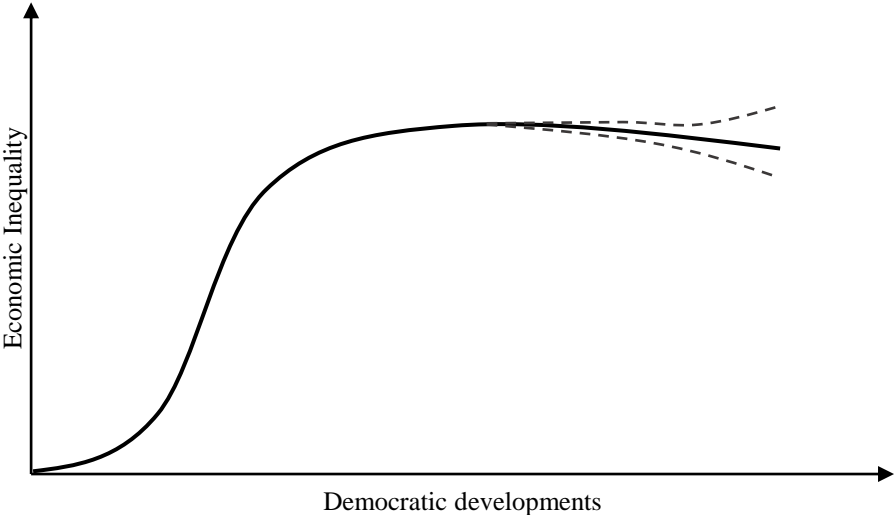
more room in exploring that relationship the other way around. Both the original concept by Kuznets (1955), and the political expansion of his theory put an emphasis on that besides purely economic factors, politics can indeed influence economic inequality independently. However, this paper is set out to see if economic inequality influences the quality of democratic institutions, and identify a potentially two-way relationship. Despite providing more room to formulate the above thought, the political Kuznets-hypothesis fails to provide adequate theoretical foundations for the analysis. Besides, there is some empirical backing of the political Kuznets-curve on the upward (left) side, as well as the theory might capture real-life events slightly better compared to the redistributivist theory of democratisation, however, the lack of empirical support for the right side of the curve showcases the need to refine the theoretical framework of the analysis even further.

2.3 THE ELITE-COMPETITION APPROACH TO DEMOCRATISATION

Combining the learnings from analysing the applicability and descriptiveness of the redistributivist theory and the political Kuznets-curve, I need a theory that provides similar empirical results to the aforementioned theories when inequality increases up to the point of democratisation, but theoretically can produce a different setting which provides a better understanding on why inequality is reluctant to decrease after democratisation. This is best exemplified by the Elite-competition approach to democratisation, most comprehensively discussed by Ansell and Samuels (2014).

The theory lays out the thought that it is elite competition what drives democratisation, and as such, possible regime change is most likely to occur when inequality is high. However, it challenges the argument that inequality would decrease with democracy as “democratization is about fear of the expropriative authority of the state, not fear of the redistributive power of the poor” (Ansell & Samuels, 2014, pp. 17), while it is not the interest of the emerging economic elite to increase welfare redistribution. This argument is illustrated below in Figure 2.

Figure 2: Elite-competition approach to democratisation



What this means in connection with the research question of this thesis is that the elite-competition approach seems to promote a certain connection between democratic institutions and economic inequality, and it seems to suggest that higher level of economic inequality supports a suboptimal functioning of democracy in that the political power is not shared across people regardless of income levels but held on by the incumbent and the newly enfranchised economic elite. Consequently, in the early stages the development of democratic institutions follows the increasing level of economic inequality up to the point where nations democratise. After that, however, this theory seems to indicate that the connection changes; from then on, democratic developments are no longer being influenced by the level of inequality in the traditional way. Instead, economic inequality provides opportunity for the elite to influence political discussion in their favour.

2.3.1 Understanding the elite-competition approach

This theory is an “answer” to the hegemony of the redistributivist thesis. Ben Ansell and David Samuels (2014) expand on the traditional assumptions of the underlying problem to better represent the “real-world” scenarios. The traditional assumptions are the following: 1) the economy has one sector, 2) the political landscape is two-sided with rich and poor, 3) taxation and expropriation is absent in autocracy, 4) particularly high taxation and government spending exist in unequal democracies, and 5) assumed disconnect of a group’s economic power and their likelihood of success in challenging the political status quo. The authors extend all of the above assumptions: A) they consider an economy with two distinct sectors, the agricultural and the industrial, B) they increase the political participant groups to three; the incumbent elite, the rising, but disenfranchised elite, and the masses, C) the authors propose a regressive tax system in autocratic situation to transfer the wealth to the incumbent elite, D) they suggest that a partial democracy can yield lower tax rates than autocracy, and E) they propose that the relative amount of resources held by a group may very well approximate their chances in political battles; more resources held, the better the chances in winning the political battle.

Considering the main implications, there are several worth mentioning. Firstly, the one sector economy means that inequality can be understood as the disproportion of the total national income held by individuals or groups. Whereas the two-sector economy augments the situation; economic inequality is now multi-faceted, consisting of an intra-sector, and cross-sector component. Moreover, dynamism is being introduced into the system, *ceteris paribus* the different growth rate of the two sectors can also change the experienced economic inequality with the different groups holding different proportions in the two sectors.

Secondly, the introduction of a third political group introduces dynamics to the political field too. The importance of this implication is that changing the dynamics also changes the field of possible outcomes and offer a more detailed variety of political institutions taking the different interests of the groups into account. The change in Assumption 3 and 4 challenges the idea that autocracies are tax free, while increasing taxes in democracy are to support the implementation of programs which are redistributive in essence. Ansell and Samuels argue that historical

examples seem to contradict these assumptions: wealth is being expropriated in an autocracy, while taxation under democratic institutions are not always to support redistribution. For example, many of the welfare policies in Scandinavian welfare-states are not primarily redistributive, but trying to create a more efficient economy.⁴ Moreover, there are many government programs, such as infrastructure development and maintenance, national security projects, etc. which are hardly redistributive, but can take up a significant share in budgets.

And finally, the authors highlight their assumption that political power is not independent of economic power in Assumption E. The two seems to follow one another, and the success ratio in a political conflict seems to align with the relative proportion of resources held compared to the opposite group(s) (Hirshleifer, 1995, 2001; Fearon, 2008). If true, it means that economic inequality is not likely to change as the incumbents and the newly enfranchised elite are more prone to protect and increase their own wealth; they are not likely to introduce inequality decreasing redistributive policies, which projects economic inequality and the quality of democratic institutions to be stagnant, or increase in case of inequality and decrease in case of the quality of institutions.

2.3.2 The elite-competition approach in the broader literature

The elite-competition theory of democratisation is a far less popular theorem compared to the redistributivist theory of democratisation, or the political Kuznets-curve. Nevertheless, there is a strong background to the literature as well as many scholars are expanding on the arguments of the elite-competition theory.

Christian Houle (2009) provides a comprehensive mixed-methods article on the topic, discussing a broad range of theoretical arguments as well as empirically testing the viability and explanatory power of his theories. It is clear that he disagrees with the redistributivist thesis, championed by Acemoglu & Robinson (2006), among others, or the linear negative relationship supported by Boix (2003), saying that those theories are imperfect and fail to hold empirically.

⁴ For example, healthcare, early retirement, and longer unemployment subsidies are meant to boost the efficiency of the economy by getting the non/underperforming individuals out of the economy leaving room for a more efficient structure, or in case of expansive healthcare, hastening the time to return to work. These examples are only to illustrate the idea, their actual effectiveness, usefulness as well as their fairness is not discussed here.

Houle lists three explicit challenges to these theories: 1) the theories ignore collective action problems, 2) inequality seems to have two potentially offsetting effects, and 3) these theories are not addressing democratisation from “above”, meaning the occurrences when democratic developments are promoted by the economic elite. Out of these, 2) and 3) are relevant for this thesis: expanding on 2), “On the one hand, inequality makes democracy more costly for the elites by increasing redistribution, thus diminishing the probability of democratization. On the other hand, inequality increases the population’s demand for regime change by increasing potential gains from redistribution or expropriation, thus increasing the probability of democratization” (Houle, 2009, pp. 593), while 3) explicitly refers to intra-elite competition as a potential cause of democratisation.

Houle’s empirical results are also supportive of the elite-competition approach put together later by Ansell and Samuels, he provides clear findings that the proposed relationships of an inverted-U or a negative linearity is not supported.

Albertus & Menaldo (2013) are strongly arguing for the economic elite to have a hand in the process of democratisation. They say that inequality and democracy are much more compatible than presumed by other schools of thought. The influence of economic elite in the process of democratising is disproportionate to that of other socio-economic groups; the economic elite is the group which starts the progress to democracy, and historical precedent in many countries seems to suggest that small calculated steps are taken towards democracy to protect the financial interest and wealth of the high-income citizens. They also provide empirical arguments underscoring that redistribution and democracy are not parallel, as the economic elite primarily uses democracy as an institution to codify and enforce property rights.

Several other works are also debating the redistributivist theory of democratisation and conclude that some form of intra-elite competition might be in play to shape democratic transition and the democratic institutions afterwards. Bates and Lien (1985) provide the underlying argument for this theory. They advocate that wealthy citizens demand concessions from the state for complying with the financial burdens of taxes or expropriation, thus they will invest in measures to protect against the expropriation of the state, including potential steps to

democratise. Consistently with that, Levi (1988) highlights that the relative bargaining power of the incumbent elite decreases with the rise of a disenfranchised wealthy group. That leads to increased taxation and expropriation of their wealth, which then creates an opposite motion to protect against such measures, and the disenfranchised group's economic resources translating into political power can lead to their increased involvement in government matters.

Ansell and Samuels (2010) challenge the core concepts of Acemoglu and Robinson (2006) and Boix (2003), consistently with their later book, and research the connection of income inequality and democratic transitions to provide a different, more descriptive theory. As they put it: "In our view, democratization is best understood as a struggle on the part of disenfranchised groups – including a rising bourgeoisie – to obtain credible commitments against incumbent elites' expropriation of their income and assets."

Haggard and Kaufman (2012) provide research on the third wave of democratisation from 1980 to 2000 and find that the traditional redistributive conflict is not more significant than other factors. They do not explicitly support the idea of the intra-elite conflict approach, but they consider it, among other options, to play an important role in about half of the cases they examine. Moreover, they provide evidence, that transitional process occurred in all-levels of inequality, which is against the implications of Acemoglu and Robinson, or the political Kuznets hypothesis, but in line with the suggestions of the elite-competition approach.

Finally, Gimpelson and Treisman (2015) focus on researching the perception of inequality. They provide extensive argumentation that ordinary citizens have no idea on actual levels of income inequality, moreover, they cannot even pinpoint their relative socio-economic status in society. Their results are fundamentally challenging to the existing mainstream theories, they find that there is an extreme spread when people try to approximate the income/wealth share of the top 1%, while they significantly overestimate both their relative status, as well as the overall situation of economic inequality, people do only marginally better job in the approximation than chance. That consequently calls into question the mainstream theories of political Kuznets hypothesis as well as the redistributivist theory of democratisation, while they conclude that "Ansell and Samuels' (2010) argument that inequality motivates the rich to seek democracy as

a defence measure against state expropriation could still work even if rich and poor are uncertain of the distribution” (Gimpelson and Treisman, 2015, pp. 23).

2.3.3 The implication of the elite-competition approach of democratisation

What changes with the elite-competition approach compared to the theories discussed earlier? There is quite the fundamental change, as Ansell and Samuels’s approach introduces the economic elite’s struggle for more protection against expropriation as the decisive factor of democratisation. Moreover, the mechanisms of this struggle project that despite the significant expansion of the franchise and the inclusion of the poorer income groups, still the economic elite will dictate the changes after democratisation.

This concept is consistent with the observations discussed earlier in the thesis when making a judgement on the theory: 1) It is consistent with the empirical results that increasing economic inequality and the initial political transformation towards a democratic system is correlated – plainly that the existence of the left hand side of the political Kuznets-curve is more accepted in the broader literature: Ansell and Samuels (2014) say that the rising economic elite seeks to protect their wealth from the incumbent, and therefore pushes for a broader political participation. 2) It is consistent with the findings that redistribution appears to be lower than expected by the economic model and the median voter theorem. The elite-competition approach claims that the incumbent and the rising elite will retain most of the political influence despite the lower-income groups being able to participate in politics. This means that these elites will favour less taxation and will likely to push for government expenditure to be directed towards common goods, rather than welfare policies and other social benefits. 3) Consequently to 2), the elite-competition approach provides an answer to why inequality is not decreasing after a country has democratised. As depicted above, the rising and incumbent elite is expected to retain power and shape the political decision making. Their preferences are different from redistribution to the less fortunate, and therefore the political discussion is not likely to include inequality decreasing measures and policies prominently.

To encapsulate the above, the elite-competition approach to democratisation shows features consistent with the empirics and is more descriptive than its peers. Moreover, the idea that

democratisation occurs by the economically privileged who then maintain their grip on political and economic power poses the question of what happens with the relationship between economic inequality and democratic development after democratisation? Timmons (2010) puts forward the idea that this relationship has a time variant in that as time progresses, the relationship and causal mechanisms can change.

It is perfectly reasonable to assume that after democratisation the rising economic elite wants not only to protect against the incumbent elite, but also to defend the status-quo where they possess a rather significant share of wealth. To be able to do so, they need to solidify their grip on political power and maintain their political influence. Thus, despite the expansion of the franchise and the inclusion of lower-income citizens in the political decision making, the elite needs to create a political environment and institutional structure which preserves their influence as well as making it harder for other groups to amass significant political representation. This would signify that high economic inequality translates to a political system with lax democratic principles or institutions.

Broadening the above chain of thought, several political scientists have reached supporting conclusions. Charron and Lapuente (2010) say that “a low level of QoG [Quality of Governance] is predicted in such cases [...], which are to some degree more shielded from the demands of citizens and can ‘afford’ to make small investments for future improvements – only of course, if that enhances their capacity to survive in power or extract resources”. The authors capture the Quality of Governance as the ability of the state to perform its activities⁵ efficiently, without corruption. This statement is well in line with the elite-competition approach. The latter theory highlights the importance of rising elite in democratisation and provides an explanation why rising economic inequality leads to (some degree of) democratisation, while Charron and Lapuente argues that after such events, it is likely that the quality of government, which can be understood as the quality of democratic institutions, remains low.

⁵ It is a big question of both economics and political science what state ‘activities’ should be. This question is highly significant, still, it is not in the core of this thesis’ theoretical framework and is not going to be discussed in detail.

Diamond and Morlino (2004) approaches the connection from a similar angle and conclude that “while democracy does not demand a certain set of substantive social or economic policies, it does in practice presuppose a degree of political equality that is virtually impossible if wealth and status inequalities become too extreme”. This statement underlines that the likelihood of a democracy functioning better in an economically more equal environment is higher compared to that in a high economic inequality setting. And again, following the elite-competition approach, if the elite maintains its grip on political power as expected, it would translate to lower government effectiveness, or lower quality of democratic institutions.

Finally, Powell (2004) provides a very important paper expanding on how to define or understand if a democracy is of high quality or not. He identifies democratic responsiveness as the most important factor and states: “Democratic responsiveness is what occurs when the democratic process induces the government to form and implement policies that the citizens want. When the process induces such policies consistently, we consider democracy to be of higher quality.” (Powell, 2004, pp. 91). According to Powell, there are three key linkages in the process of responsiveness which clearly influence political decision making: Structuring choices, Institutional Aggregation, and Policy Making.⁶ He concludes that “high-quality democracy is sustained when institutional arrangements provide incentives supporting each of the major linkages of responsiveness” (Powell, 2004, pp. 92). Understanding this in the context of economic inequality and the elite-competition approach, there are several important implications to reach. First, as established earlier in this section, economic power does translate to political power quite clearly. That means a disproportionately high representation of the wealthy elite in all stages and at all linkages in Powell’s model. As their interests are different from the lower income groupings, it is highly likely that the political outcomes will favour the top earners. Secondly, it is important to point out the influence of the development of economic inequality. Some of the political power comes from obtaining and preserving economic resources. Based on the elite-competition approach, economic inequality is not expected to decline significantly after democratisation, consequently, the differences in the share of power

⁶ For a more detailed model, see Appendix 1.

from the economic factors are highly unlikely to decline. This creates a feedback mechanism which reinforces the political power differences, ultimately leading to a stagnant situation where the economically powerful retain their political influence over the long run.

2.4 THEORETICAL SYNTHESIS AND THE HYPOTHESES

Table 1 provides a summary of the applied theories. They are presented to highlight core features of each theory and their fit with the topic delimitation of this study. There are several things to consider. First and foremost, the redistributivist thesis and the political Kuznets-curve show several similarities, but there are major differences between them. They both assume that political institutions directly effect economic inequality without a significant influence the other way around. However, the role of economic inequality in the redistributivist thesis is extremely limited, it is only a proxy for redistributive preferences of citizens, while economic inequality can be used as input for political decision-making according to the Kuznets-curve, the latter theory assumes a more active role for economic inequality.

Still, the elite-competition approach provides the best fit with the central thought of this thesis. It depicts a dynamic relationship between economic inequality and political institutions, with the possibility of a feedback mechanism between the two. Moreover, democracy and the democratic institutions receive a significantly different function; they are tools for the economic elite to protect their resources against state expropriation. The elite-competition approach signals that the concepts of democratic institutions and economic inequality are interlinked, and it serves as the broad theoretical framework to analyse that relationship.

Table 1: Summary of applied Theories

	Redistributivist Thesis	Political Kuznets-curve	Elite-competition approach
Discipline	Economics	Political Economy	Political Economy
Source of democratisation	Pressure from Below	Pressure from Below	Elite-competition
Relationship after democratisation	Democracy ↓ Lower economic inequality	Democracy ↓ Lower economic inequality	Politics ↻ Economic Inequality
Role of economic inequality (reference point: democratisation)	<ul style="list-style-type: none"> • Before: driving democratisation • After: proxy for redistribution preferences 	<ul style="list-style-type: none"> • Before: driving democratisation • After: proxy for redistribution 	<ul style="list-style-type: none"> • Before: proxy for the development of economic elite • After: elite's way to maintain power
Role of Democracy	Redistribution	Government "Interference"	Protection against expropriation

2.4.1 Hypothesis 1:

As established earlier, there is empirical backing for the idea that as economic inequality increases, the likelihood of democratisation also increases. This is supported by Meltzer and Richard (1981), Acemoglu and Robinson (2006) as well as the political Kuznets hypothesis (e.x. Chong, 2004). Both theoretical fields reach similar conclusions after democratisation; they presume, that the existence of an expanded franchise gives rise to redistributive preferences, and through the democratic institutions citizens can introduce and influence these redistributive policies, subsequently creating an environment in which economic inequality should be decreasing. However, the broad empirical scrutiny of the topic has not yielded results supporting the second part of the theory. There is a potential disconnect between real life data and the applied theories. Instead, the relationship why increased economic inequality leads to democratisation and why inequality does not decrease after democratising seems to be better captured by the elite-competition approach (see e.x. Ansell and Samuels, 2014). Earlier I

presented arguments on how economic inequality and democratic institutions influence the other, and the conclusion can be captured in Hypothesis 1.

Hypothesis 1: There is a statistically significant and negative relationship between economic inequality and quality of democratic institutions: the higher economic inequality is, the lower the quality of democratic institutions is expected to be.

2.4.2 Hypothesis 2:

Reiterating the theoretical assumptions derived from the overview of the literature, economic inequality is assumed to exert influence on democratic developments. However, the streams of such influence have not been discussed.

What this means is that the concept of democratic institutions encompasses several distinct aspects of democracy. Since there seems to be no overall scientific consensus on what democratic institutions and what aspects of democracy should be regarded as essential or standard, for the sake of being coherent between theory and empirical analysis, I use the aspects and definitions from the dependent variables of the empirical research. This outlines three major pillars of democratic institutions: electoral process and pluralism, political participation, and functioning of government. It is reasonable to assume that these three pillars capture the majority of what can be understood as democratic institutions, and that the quality of the three pillars and subsequent constituents directly affect the overall quality of democratic institutions.

All of the above pillars can be influenced by disproportionate economic power. Electoral process and pluralism encapsulate the fundamentals of democracy and signals if elections are free, fair, and competitive. Having discussed that economic power is quite likely to translate into political power, there is a possibility that economic inequality affects electoral process considerably. While it would be hard to impose restrictions on the “freeness“ of an election in a democracy, fairness and competitiveness of the elections can be distorted using economic and political power. To give examples, the electoral system of the United States is highly scrutinised over the possibility that electors currently have the legal right to 1) accept financial contributions in line with their official duties and 2) decide to cast their vote against the will of

the people: the popular vote (Colorado Department of State v. Baca et al., 2020; Chiafalo v. Washington 2020). In addition, the example of the last 3 national elections in Hungary, where the ruling Fidesz party maintained a more than 2/3 majority in the parliament questions whether those elections are competitive.

Regarding political participation, this pillar can be understood as the collective will of citizens' to actively participate in the public debate and make their voices heard through voting. This pillar appears to be much less receptive of political or economic power as influencing the will of people directly would feed into the category of electoral process. There are ways, however, to indirectly influence people and steer the collective towards set agendas. A common theme across the populist governments of Europe is to use the migration stress on the EU to fire up citizens and push them towards the agendas of the populist political parties. An other example could be Michael Bloomberg's run to become the Democratic nominee for the 2020 US election spending hundreds of millions of dollars to influence both the willingness to vote, and the outcome.

Finally, functioning of government seems to be the pillar closest to the focus of this thesis. An effective government is certainly one of the core institutions of democracy, but it can easily be exposed to uneven economic influence. The three essential questions to ask to see whether the government is functioning are; who is being represented, how those people are represented, and whom are they represented by. It is highly likely that economic power can have unduly influence in all areas.

To illustrate, starting with the "whom" question, citizens do not necessarily have a say in the actual composition of the list by which political parties nominate members of parliament. Such an avenue can be used by the elite to establish such persons in those positions who are favourable to their cause. Moreover, many of the key public servant positions are assigned by nomination of the prime minister, or president, potentially exposing the government to biased nominations. In the case of Hungary, the electoral laws are put together so that there is a local list of electable persons, and there is a national list of all parties. Hungarians vote in the ballot

on both lists directly affecting who is representing the locality or region, but the national list still provides room for biased decisions by the political elite.

Considering the “how” question, since the ways how governments can act are exposed to much public and legal scrutiny, the economic elite might not be able to affect this. Still, corruption can take several forms, and potentially present even in the well-developed democracies of Western-, and Northern-Europe and North-America.

As for the “who is being represented” question, this is likely to be the part where uneven economic power can exert the most influence. In general, this can be understood as the following: the decision-making process of the government runs, but instead of taking into consideration all the available information for the decision, interest groups representing the economic elite can impact the decision to be more favourable towards them. It is very easy to demonstrate such action, as certain forms of lobbying represent the above quite well. Broader literature on lobbying derives influence functions connecting the inputs – including, but not limited to money – with political influence (see e.x. Tullock, 1980, Becker, 1985). Lobbying is widespread in the US, and most Anglo-Saxon countries, but it is also present in the EU, though the action in the latter region is much more regulated (Baumgartner, 2007). As the example suggests, lobbying and other similar actions are legitimate and are commonplace, hence it is highly likely that economic inequality can exert the most influence through this pillar.

To conclude, it is reasonable to assume that economic power can theoretically impact all discussed pillars of democratic institutions suggesting that economic inequality has a negative effect on them, though not to an equal extent and thus leading to Hypothesis 2.

Hypothesis 2: Economic inequality exerts the most influence through the “functioning of government” pillar of democratic institutions.

3 SPECIFICATIONS OF THE QUANTITATIVE ANALYSIS

There is an ever-growing interest in the relationship between economic inequality and democracy. It is not surprising that the magnitude of the question attracted much theoretical and empirical attention. However, until recently, the focus of empirical analyses was slightly

different: the quantitative research was target towards exploring the relationship between democracy and some indicator of development. As Ansell and Samuels (2014) put it, this could have been the case “because no cross-national income inequality data existed until relatively recently” (Ansell and Samuels, 2014, pp. 96), among other considerations.

Since data is still scarcely available with some ambiguity or trade-offs between quality and observed period length, I chose to standardise my empirical research in this thesis. This broadly means that I use well-known and scrutinised datasets to obtain all independent and dependent variables. Moreover, this approach stands to reason for that the research question is already a bit unconventional hypothesising a relationship which is not part of the mainstream of scientific research on economic inequality. Therefore, it makes sense to use data from generally trusted sources, or sources with known issues to circumvent potential errors of generating a new and original dataset myself.

The theory detailed above anticipates a negative causal relationship between economic inequality and the quality of democratic institutions. I progress forward with this empirical research by compiling a panel dataset from trusted sources with well-known proxies for the concepts included in the research question, with a European focus. Table 2 details the list of countries included in the research focusing on the European Union and other countries closest to it in terms of political culture, economic development, and diplomatic ties, with the data having a time span of around 15 years, favouring data quality and completeness over longitude.

Table 2: List of countries included in the research

Austria	Belgium	Bulgaria	Croatia
Cyprus	Czech Republic	Denmark	Estonia
Finland	France	Germany	Greece
Hungary	Iceland	Ireland	Italy
Latvia	Liechtenstein	Lithuania	Luxembourg
Malta	Netherlands	Norway	Poland
Portugal	Romania	Slovakia	Slovenia
Spain	Sweden	Switzerland	United Kingdom

The empirical analysis centres around the potential influence of economic inequality over the quality of democratic institutions. This suggests the need for data both specific enough to represent the concepts well, but also standardised so that the results are general enough to potentially expand the theory. For the democratic indicator, the balance is very important, as it is highly valuable to have layered data so that not only the main relationship can be analysed, but also the streams or mechanisms through which this relationship comes to be can also targeted empirically. For the inequality indicator, specificity is less significant as the importance of actual levels of inequality is being challenged by scholars saying that perception might be more descriptive.⁷ Since there is no readily available data on perceptions of inequality, the second-best option is to use well-established metrics detailing actual levels of inequality with well-known potential shortcomings.

3.1 DATA

3.1.1 Dependent Variable – Indicators of Quality of Democratic Institutions

The concept of “quality of democratic institutions” is difficult to define and operationalise. According to Diamond and Morlino (2004) the quality of democratic institutions can be measured analysing three different perspectives; 1) quality of results: how much does the regime strive to satisfy citizen’s expectations regarding governance, 2) quality of content: what

⁷ See for instance: Niehues (2014), Engelhart and Wagner (2014), Gimpelson and Treisman (2015).

degree of liberty and political equality do citizens enjoy, and 3) procedural quality: how well feedback and accountability is integrated into the system from both the citizenry (e.x. elections, strikes) and political peers (enforcing legal and constitutional accountability). These perspectives pinpoint key features any proxy for the quality of democratic institutions should have, the more nuanced the metric is, the better the analysis can be.

For the above reasons, I decided to use two metrics; the first is the Freedom in the World Index (FWI) by Freedom House (Freedom House, 2007-2019). It is a commonly used metric to approximate democratic developments. The FWI consists of two main parts: political rights and civil liberties, consisting of 10 and 15 indicators scored on a 0-4 scale respectively.⁸ The indicators also help to refine the 'quality of democratic institutions' proxy in the empirical research if deemed necessary. Moreover, these indicators are also grouped into distinct categories; for the political rights these are: electoral process, political pluralism and participation, functioning of government, for the civil liberties these are: freedom of expression and belief, associational and organisational rights, rule of law, and personal autonomy and individual rights. That there is a very good overlap with Diamond and Morlino's concept on how to measure the quality of democratic institutions. Furthermore, quite similarly to the Democracy Index discussed later, the availability of underlying scores of the indicators provide the option to refine the empirical analysis when checking the robustness of the initial results, or when the research is expanded upon.

The FWI is a well-known and scrutinised dataset from Freedom House, however, there is an important feature of the organisation worth mentioning. Freedom House is a US based NGO receiving funds from private contributors, and though Freedom House says it does not receive any government contribution, the funding sources might have implications on data quality.

The other metric to substitute and augment the usage of the Democracy Index

The other metric to substitute and augment the usage of the FWI is the Democracy Index (Economist Intelligence Unit, 2013-2020). This dataset is produced by the Economist

⁸ For a detailed list of indicators included in the Freedom in the World Index, see Appendix 2.

Intelligence Unit (henceforth: EIU), one of the most influential global business intelligence firms. The EIU's index consists of five categories; electoral process and pluralism; civil liberties; the functioning of government; political participation; and political culture. The categories are scored on a 10-point scale based on input from 60 indicators.⁹ The indicators themselves are measured on a dichotomous (0-1) scale, or a 0-3 scale to highlight the apparent differences between countries compared to a more refined scale. The methodology is consistent with Diamond and Morlino's concept on the quality of democracy, the five different aspects of the Democracy Index provide input to judge the performance of regimes on the three "qualities". It also provides opportunity to potentially expand the research and look at through what way economic inequality influences the quality of democratic institutions. All in all, the EIU's Democracy Index is a well-thought-out dataset from a well scrutinised source that effectively captures the essence of what people understand as democracy and democratic institutions in general.

3.1.2 Independent Variable – Indicator of Economic Inequality

Finding reliable and complete data on any inequality is not an easy task. The issues start well in advance of selecting or compiling a dataset. There are several challenges when discussing inequality. As Cowell (2011) organises the 'ingredients' of inequality measurements:

1. Specification of an individual social unit.
2. Description of a particular attribute by which the social unit is measured.
3. A method of aggregation and representation of the allocation of the attribute along the social units.

Ample attention is given to these challenges and how to resolve them, a discussion this thesis does not intend to join deeply, but it is worth mentioning the key questions around the first two 'ingredients'. The specification of a social unit tries to establish representativity. Who are going to be the central figures in the analysis, and who may not be included as a result? There are multiple valid choices for social scientists; individuals might be the most straightforward, but in such a case people who are not in working age, particularly children and young adults would

⁹ For a complete list of indicators included in the Democracy Index, see Appendix 3.

be included in the models as having essentially no economic resources and would introduce bias in the estimations. The common practice is to use households as units of analysis.

As for the attribute, again several equally valid choices are available. It might be income, or wealth, poverty level, or degree of access to a given set of goods. However, almost all types introduce difficulties in how to actually measure the attribute, data is scarcely available for thorough quantitative research. Among others, Credit Suisse (2019) tries to publish a global wealth report yearly on the development of wealth across the globe, but even they experience data issues. It is clear that it is much harder for independent researchers to obtain data this sensitive from anyone. The current trend is to use income as the proxy for economic inequality most of the times for the relatively easy availability from government agencies.

Based on the above considerations, I chose to use the most commonly applied metric to approximate economic inequality; the Gini Index. This measurement of inequality has many weaknesses and strengths, the description of which would be a different paper in its entirety,¹⁰ here I only present the key characteristics of the index. In general, this index can be seen as an average of deviations of quintile shares of economic resources (Barro, 2008). The measurement is based on the Lorenz-curve that maps out the increasing cumulative share of economic resources held by the increasing cumulative share of the population, measured against the equal distribution; the higher the Gini, the bigger the underlying Lorenz-curve's difference from equal distribution.

Starting with the drawbacks of the Gini Index, the measurement is generally computed based on household pre-tax income. This encapsulates the discussion presented above, as choosing households as the units of analysis would introduce heterogeneity between the units: not all households are created equal, it is easy to depict two entirely different households with the same income but different composition (e.x. generations living together), where arguing that similar income level would signify similar socio-economic position would be flawed (Ansell and Samuels, 2014). This heterogeneity introduces bias to the coefficient. Besides, the utilisation of

¹⁰ See e.x. the works of Corrado Gini (1912) and M. O. Lorenz (1905)

pre-tax income also comes with significant limitations. First and foremost, there is the question whether income is the best measure to capture economic inequality. Chong (2004) proposes that expenditure might serve as a proxy of economic inequality. Others argue that wealth might be more representative of the differences in obtaining economic resources as income has much more limitations compared to the virtually endless possibility to amass wealth, while its reproductive nature (Kuznets, 1955) would make the situation even more complex. Moreover, the pre-tax measurement is also questionable as it does not include the redistributive feature of taxation, a Gini on pre-tax income might misrepresent differences in economic inequality when comparing different countries with different tax policies. Furthermore, the Gini Index is really slow in reacting to changes in economic inequality (Ansell and Samuels, 2014). The methodology of the index results in the Gini contracting the changes: even big changes in economic inequality would account for only a small development in the Gini index. In addition to that, the Gini tends to respond to changes in the middle more readily compared to the ends of the income distribution (Lee, 2005). Lastly, the Index cannot be decomposed to additive subcategories of within and between group inequalities (Lee, 2005).

With all its shortcomings, however, the success of Gini shows that its advantages outweigh these flaws. First, the issues of Gini are well known and can be accounted for. If sample size grows, using households as the units of analysis would transition to represent an “average” household in all socio-economic groups, standardising comparisons and making them more relevant. Furthermore, pre-tax income data offers a delicate balance between sensitivity in nature¹¹ and availability with good data quality. Governments’ biggest revenue stream in general comes from taxation, out of which income taxes take on a significant proportion. Therefore, governments are inclined to measure and track pre-tax income as accurately as possible, assuring the data quality. Lastly, as Gini is a standardised metric, it is easy to draw comparisons between countries, if the respective indices are calculated using the same method. Worth mentioning though, the Gini itself is only an indicator of economic inequality, it does not possess actual economic meaning in itself. All in all, using the Gini Index to represent

¹¹ People are usually reluctant to share exact post-tax incomes or wealth data, making the pre-tax income the most available data source on economic situation.

economic inequality in this quantitative research stands to reason, and in line with the goal to use well-known and defined metrics and models in the thesis.

Considering sources, there are several trusted databases for Gini, however, many are updated with 4 or 5-year lags, which is not ideal trying to research actual developments. Moreover, the completeness of data, both cross-country and time-series is often suboptimal with big holes even in the data of the World Bank or the UN. As a consequence, while considering the focus of the thesis, it is possible to use the data of more specialised agencies such as the OECD or the Eurostat. Out of the two, Eurostat showed better data completeness for a considerable length and henceforth will be used in the empirical analysis.

3.1.3 Control Variables

To augment the research, I introduce additional variables to control for in the models, as well as other measurements of inequality to check the robustness of the findings. I use control variables which can be grouped into two distinct clusters; technology proxies, and economic development indicators. As for the economic development indicators, the rationale behind controlling for some form of economic process is both theoretical and intuition. The intuition is that democracies tend to be high income, or upper-middle income countries. This would suggest that democracy can be better sustained when there is ample economic resource available to produce the institutions of democracy and maintain them. This makes it quite interesting to think if there is some causal effect from economic development towards the quality of democratic institutions. For the theoretical perspective, the original Kuznets-hypothesis (Kuznets, 1955) uses economic development as the fundamental underlying cause for the decrease in economic inequality, while Acemoglu and Robinson (2000, 2006, 2015) attribute quite significant importance to economic development to analyse democratic transitions and dynamics, and the fundamental principle of the Elite-competition approach (Ansell and Samuels, 2014) is that the increase of a rising elite's economic resources leads to the expansion of the franchise. This underscores the importance of controlling for such variable.

With regards to the technological proxy variables, their inclusion is motivated based on current trends. It seems that the surge in the use of internet and mobile telecommunication products and

services have increased the extent of personalised political exposure. Think of the trend possibly originated from the United States that Twitter and Facebook, among other social media platforms, are becoming official channels not only for information sharing, but also to conduct diplomacy and complement the pursuit of political agendas. I chose internet penetration and standardised mobile subscription numbers as indicators of technological development, and it will be both interesting and important to see how much influence these variables exert when controlled for.

Table 3 presents the descriptive statistics of the variables. These include the mean, median, minimum, maximum the standard deviation, number of observations and the length of observed period. Democracy Index and the Freedom in the World Index represent the democracy indices and measured on a 0-10 and 0-100 scale respectively, the higher figure representing better quality of democracy. Notable difference between them is that the FWI runs almost twice the length of the Democracy Index. Gini Index represents the economic inequality. This index is measured between 0 and 1, though in some cases, including that of Eurostat, a multiplier of 100 is added. This does not significantly affect the data or the analysis, the coefficient for Gini will be 100 times smaller. A higher Gini stands for implying a more economically unequal society. For an alternative economic inequality measurement, the 80/20 Income Share Index is introduced. This index essentially compares the income share held by the top 20% of the population with that of the bottom 80%, resulting in a clear and concise inequality metric.¹² Internet penetration and mobile phone subscription are common variables, the former measured by the share of population accessing high-speed internet, the latter captured by a standardised metric of subscriptions per 100 people. Finally, the table includes an economic development proxy; GDP per capita measured based on purchasing power parity. desirable

¹² It is important to note that both the Gini Index and the 80/20 Income Share Index are only indicators of economic inequality. It is best to interpret these variables together with other socio-economic indicators.

Table 3: Descriptive statistics of variables.

Sources: EIU, Freedom House, Eurostat, World Bank Database

	Mean	Median	Min	Max	Standard Deviation	No. of Observations	Observation Period Length
Democracy Index (0-10)	8,1	7,9	6,4	9,9	0,905	248	2012 – 2019
Freedom in the World Index (0-100)	93,6	95,0	70,0	100,0	5,62	448	2006 – 2019
Gini Index (0-100)	29,6	29,4	20,9	40,2	3,92	395	2006 – 2018
80/20 Income Share Index (0-1)	0,651	0,658	0,515	0,832	0,0696	303	2006 – 2015
Internet Penetration (share of people)	73,5	75,8	24,7	99,0	16,3	414	2006 – 2018
Mobile subscriptions (# / 100 ppl)	120,7	118,1	75,3	172,1	16,31	416	2006 – 2018
GDP per capita (PPP)¹³	37.480	34.958	11.313	113.337	16.347	402	2006 – 2018

There are several things I would like to highlight based on the table. First and foremost, the statistics state clearly that the analysis is based on the majority of the best working democracies in the world. What this means is that any result deriving from the analysis might be specific to countries exemplifying such high-quality democratic institutions. In addition, The two metrics of democracy are considerably similar to one another. Adding to that the major difference in longevity of the data as highlighted above; the question stands out why to include the Democracy Index in the research at all. Is there any value gained from it? The reason why I

¹³ GDP per capita numbers are rounded to the nearest integer. The analysis and models use the original numbers.

stand by the choice to include it is based on two considerations. I hinted earlier that the FWI data source might include some bias based on the different political interest of Freedom House, the NGO conducting the research for the data. It would appear that the source of Democracy Index is less likely to include politically motivated bias. Moreover, the inclusion of a different, but quite similar variable can be used to check the robustness of the potential results.

It is also important to note, that the Gini coefficient also highlights that these countries are among the most economically equal societies. The Gini Index runs between 0-1; however, in reality the lowest number ever recorded is around 0,20, while the highest is around 0,60-0,70 (Milanovic at al., 2007).¹⁴ The average of the countries represented in the research is close to the lowest observed levels, with some entries being in the middle section.

The rest of the variables reinforce that not only these countries have developed democratic institutions, and relatively high degree of economic equality, these are among the wealthiest countries in the world with both the technology variables and the GDP per capita indices representing much higher numbers than the world average.¹⁵

What this translates to, is that the countries included in the research delineate a very distinct group of countries. It is important to keep at the forefront of the logic when interpreting the results of the regressions and avoid applying the results to other countries too quickly. It seems much more likely that any potential findings would hold to only these countries, and cannot be necessarily expanded, something other research projects could analyse.

3.2 MODEL SELECTION

I explore standard panel regression techniques to analyse the theoretical relationship between economic inequality and the quality of democratic institutions and to test the hypotheses. Panel, or longitudinal dataset is compiled following a selected sample of units over time, hence, providing multiple observations on each unit in a given time frame. It is basically combining

¹⁴To substantiate the range; Boix's (2003) analysis provides a range for Gini between 20,9 - 66,9. Acemoglu and Robinson (2000) provide historical insights into the Development of Gini with similar range.

¹⁵ For more information, see the World Bank database.

cross-sectional data with time-series data into one dataset. There are several advantages of using panel data, as Hsiao (2015) put it: “Panel data usually gives the researcher a large number of data points, increasing the degrees of freedom and reducing the collinearity among explanatory variables – hence improving the efficiency of econometric estimates. More importantly, longitudinal data allow a researcher to analyse a number of important economic questions that cannot be addressed using cross-sectional or time-series data sets separately” (Hsiao, 2015, pp. 3).¹⁶ He later highlights, that the strength of the panel data derives from the ability to isolate the influence of distinct actions, treatments, or more general policies.

Such data characteristics make the application of standardised panel regression techniques quite desirable. I explore the Pooled Ordinary Least Squares (henceforth: POLS, or Pooled OLS) and compare it against both Fixed Effects (FE hereafter), and Random Effects (RE afterwards) models.

3.2.1 Pooled Ordinary Least Squares

The Pooled OLS is a relatively simple way to analyse panel data. However, as Brüderl and Ludvig (2015) highlights; “standard regression models provide biased estimates of causal effects if there are unobserved confounders, FE regression is a method that can provide unbiased estimates in this situation” (Brüderl and Ludvig, 2015, pp. 327). Unobserved confounders are variables unaccounted for in the model that affect both the independent and the dependent variable (Bareinboim and Forney, 2015). Considering the above, there is practically no chance a model is perfectly specified to measure the causal mechanisms between economic inequality and the quality of democratic institutions without leaving out some variable that affects both. Hence, it is highly likely that bias from unobserved confounders would impact the coefficient estimates from a simple Pooled OLS and make them imprecise. For this reason, it is important to consider two commonly used models, the Fixed Effects and the Random Effects models.

¹⁶ The author argues that the ‘*dynamics of change*’ is best captured using panel dataset instead of standard cross-sectional or time-series datasets. For detailed examples, see Hsiao (2015).

3.2.2 Fixed and Random Effects models

“The fixed effects model arises from the assumption that the omitted effects [...] can be arbitrarily correlated with the included variables” (Greene, 2000, pp. 393). The FE model compresses all time-invariant variables into the constant, hence, solving the autocorrelation issues in POLS due to unobserved confounders. However, this is also one of the major drawbacks of the FE model, it cannot estimate coefficients for such time-invariant variables. Furthermore, the FE model specification cannot improve the precision of the constant with N increasing. The Random Effects model circumvent the issues of the FE by providing a dispersion to the constant and estimating the time-invariant variables separately from it. In this research though, based on theoretical considerations, I do not expect distinct time-invariant variables to have a major influence on the dependent variables, therefore the application of FE model stands to reason.

The anticipation of the theory is a distinct, statistically significant, negative relationship between economic inequality and the quality of democratic institutions.

4 REGRESSION ANALYSIS

4.1 THE STANDARD MODEL

Model 1 shows the starting point of the empirical research. As argued before, the model being used is a standard Fixed Effects model to deal with unobserved confounders. Dependent variable is the Freedom in the World Index, the independent variable is the Gini Index, while technological development and economic development is controlled for using internet penetration and mobile subscription numbers, and GDP per capita (PPP) respectively.

Model 1: Fixed Effects.

Dependent variable: Freedom in the World Index.

No. of observations: 380. Significance levels: * 10%, ** 5%, *** 1%¹⁷

Coefficient	Standard Error	t-ratio	p-value
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¹⁷ The indication of significance levels is standard across all models and robustness checks in this thesis.

Constant	99,6 ***	2,28	43,69	6,78e-143
Gini Index	-0,0769	0,0647	-1,189	0,235
Internet penetration	-0,0632 ***	0,0130	-4,867	1,72e-06
Mobile subscriptions	0,0195 **	0,00975	2,004	0,0458
GDP per Capita (PPP)	-4,20e-05 **	2,12e-05	-1,976	0,0489

Mean dependent variable	93,51053	S. D. dependent variable	5,423723
Sum squared residuals	897,3224	S. E. of regression	1,610409
LSDV R-squared	0,919515	Within R-squared	0,167957
LSDV F (33, 346)	119,7862	P-value (F)	2,6e-168
Log-likelihood	-702,4530	Akaike criterion	1472,906
Schwarz criterion	1606,872	Hannan-Quinn	1526,064
rho	0,865712	Durbin-Watson	0,370798

There are several important considerations when analysing the results of Model 1. Considering the theory detailed in the thesis, hypothesis 1 expects a negative, statistically significant relationship between economic inequality and the quality of democratic institutions. Model 1 does not showcase such a relationship. The line of the causal arrow seems to point to the right direction, as the coefficient is negative, but it is not statistically significant with a p-value of 0,235. To elaborate on this result, the coefficient would mean that a change of 1 in the Gini would result a change of -0,0769 in the Freedom in the World Index. Considering the characteristics of the used Gini data, it runs between 0-100, with the note that the minimum and the maximum of the used data are 20,7 and 40,2, which essentially means that the Gini could only account for a difference of 1,4 in the FWI.

An additional interesting result is the coefficient of GDP per capita. It is below zero and appears to be statistically significant on a 95% significance level. This suggests that the increase in economic development actually decreases the democratic quality proxy. Such a connection cannot be understood from the perspective of the redistributivist theory, nor of the political Kuznets-hypothesis as both theoretical streams regard economic development as beneficial for democratic progress. Ansell and Samuels' (2014) arguments detailed in the elite-competition

approach capture this better. The authors think that democratisation happens as a rising elite obtains a significant-enough economic power and want to protect their resources against the state. So initial economic development would increase the quality of democratic institutions. However, in their theory, democracy's main purpose is to protect the wealth of people without significant redistribution, therefore it could be assumed that further economic development would accrue to the elite who oppose further increasing democratic quality. Since the research uses well-developed democracies, the latter part of the argument represents the situation, and the data underscores that economic development does not elevate the quality of democratic institutions. Nonetheless, this line of thought stands on multiple uncertain or dubious assumptions, not yet investigated thoroughly, and the apparent relationship of economic development and the quality of democratic institutions is worth investigating further in a different research project.

Drawing attention to the puzzling features of the initial model, it is also important to consider the quality of the overall model specification as well. Despite the majority of the variables on the right being statistically significant, the overall explanatory power of the model is low. The “within R-squared” number indicates how much of the variance in the dependent variable is explained by the model, and can be understood as percentages. Hence, an R-squared around 17% indicates that the model specification is not particularly strong in explaining the dependent variable. Besides, considering the assumptions of normality and heteroscedasticity, concluding respective tests show that those assumptions do not stand in this current model specification as detailed in Appendix 5. While the lack of normal distribution of error terms is dealt with by a large-enough sample, the presence of heteroscedasticity indicates that the model is better specified using robust standard errors.

4.2 THE REVISED MODEL

Model 2 depicts the revised model with Freedom in the World Index as dependent variable. The model uses robust standard error estimations based on Arellano (2003), which is a heteroscedasticity and autocorrelation consistent (HAC) technique. This can be used for panels

with large-N, and small-T variety; meaning that the unites are observed over a relatively small time period, a criterion that the current dataset satisfies.

Besides, additional changes are implemented in the revised FE model. First, the economic inequality indicator, the Gini Index is lagged. There are two underlying theoretical considerations for this, causality or Granger-causality, and “stickiness” of the variables.

The issue of causality can be approached by defining the term. As Granger (1969) puts it: “We say that X, is causing Y, if we are better able to predict Y, using all available information than if the information apart from X had been used” (Granger, 1969, pp. 428). This definition basically says that X has a distinct influence on Y; knowing X improves estimating Y. Moreover, Granger augments this definition introducing that in a causal connection, the cause has to pre-date the effect.

Considering stickiness, the general scientific consensus tends to be that political, social, and economic variables are not likely to change suddenly and significantly at the same time. What this means in the current research is, that neither economic inequality, nor the quality of democratic institutions are expected to produce a sudden drop or increase in the matter of days or weeks. Any developments in the two respective concepts are expected to span over years. For that reason, any causal mechanisms between the two are also expected to surface when there is a significant-enough time lag between the dependent and independent variable so that economic inequality has enough time to exert its influence and affect the quality of democratic institutions.

The second additional change is to use logarithmic scale for GDP per capita. Table 3 presents the descriptive statistics of the variables, the maximum variance of the data for GDP per capita is more than 100.000 USD, almost equal to the maximum of the dataset. This underlines the need for the data to be more concise and provides reason to use the logarithmic transformation. Moreover, such a transformation also corrects the skewness of the data and produce normality as shown in Appendix 6.

Model 2: Fixed Effects, robust standard errors.
Dependent variable: Freedom in the World Index.

No. of observations: 351

	Coefficient	Standard Error	t-ratio	p-value
constant	127,16 ***	16,36	7,771	1,10e-013
lag_Gini Index	-0,0445	0,0752	-0,5907	0,555
Internet penetration	-0,0528 *	0,0319	-1,653	0,0994
Mobile subscriptions	0,0280	0,0276	1,017	0,3099
log_GDP per Capita (PPP)	-3,05 *	1,79	-1,705	0,0893

Mean dependent variable	93,45584	S. D. dependent variable	5,468629
Sum squared residuals	771,3293	S. E. of regression	1,559877
LSDV R-squared	0,926309	Within R-squared	0,194595
Log-likelihood	-636,2237	Akaike criterion	1340,447
Schwarz criterion	1471,714	Hannan-Quinn	1392,691
rho	0,883486	Durbin-Watson	0,391775

Model 2 shows important similarities and improvements over Model 1. Starting with the similarities, introducing the lagged Gini Index does not provide significantly different results. The coefficient is still negative, but its significance appears to be even lower than that of the non-lagged Gini.¹⁸ However, it is important to consider that the revised model uses robust standard errors to correct heteroscedasticity, and thus providing better estimates for the standard errors in Model 2. Also, the GDP per capita variable maintains the negative coefficient, and retains its significance on a 90% significance level. It is important to note though, that the relationship between the dependent variable and the logged GDP per capita is now different: a 10% increase in GDP per capita would account for a change of $\beta_{\text{GDP_per_capita}} * \ln([100+p]/100)$, so $-3,05 * \ln(110/100) = -0,29$. The result is in absolute terms, not in percentages.

¹⁸ Running the same model specifications with up to lag_4 of Gini has not yielded better results. Going back even further does not seem theoretically worthwhile.

Considering the improvements of the model, despite the variables losing significance in general, Model 2 has an increased R-squared just below 20%. Moreover, all three of the used information criteria (Akaike, Schwartz, Hannan-Quinn) has improved. All in all, the revised model attains better performance compared to its standard peer, as it is theoretically more sound, and methodologically more stringent than Model 1. Still, the overall explanatory power of the revised model is unsatisfactory, and supports the rejection of Hypothesis 1. The next step is to analyse if any of the underlying indicators of the dependent variable, Freedom in the World Index, exemplify a more direct connection between economic inequality and the respective indicator, essentially providing insight into how, if, economic inequality affects the quality of democratic institutions.

4.3 INDICATOR ANALYSIS

The underlying indicators of FWI are distributed into two categories, Political Rights and Civil Liberties. After an extensive look at the composition of the indicators and the methodology of FWI, I concluded that the Political Rights category is more relevant for this thesis as it is the one addressing the more institutionalised aspects of democracy, and henceforth will be the focus of this section.

The category of Political Rights consists of the subcategories represented in Table 4: Electoral Process, Political Pluralism and Participation, and Functioning of the Government. All share the same methodology; each subcategory has questions targeting different aspects of the respective subcategory and scored from 0-4. The scores of the questions are added to receive the overall score for each subcategory. Important to note that the maximum score Political Rights can receive is 40, while the other category, Civil Liberties may receive up to 60 points, demonstrating that the overall FWI is a weighted Index representing the societal aspects of democracy over the institutionalised framework. This makes it interesting to see if there is a more significant connection between the economic inequality indicator, the Gini Index, and the respective subcategories of FWI. For modelling, fixed effects model with robust standard errors is used.

**Table 4: Analysis of underlying indicators of Freedom of the World Index,
Political Rights category**
Standard errors in parenthesis

	Electoral Process	Political Pluralism and Participation	Functioning of the Government
Constant	14,61*** (2,00)	19,97*** (2,65)	15,20* (8,39)
lag_Gini Index	-0,0321** (0,0141)	-0,0152 (0,0151)	-0,0140 (0,0297)
Internet Penetration	-0,0077* (0,00442)	0,000415 (0,00375)	-0,0146 (0,0165)
Mobile Subscription	0,00766 (0,00647)	0,00525 (0,00455)	0,00470 (0,00575)
log_GDP per capita (PPP)	-0,205 (0,118)	-0,458* (0,257)	-0,342 (0,902)
R-squared	0,100	0,0513	0,0838
Observations	351	351	351

Now, the results detailed in Table 4 are quite consistent with Model 2, without much variance in the significance when estimating the coefficients. Notable difference is the negative coefficient of Gini Index when estimating Electoral Process, which is significant on a 95% significance level. However, the three models showcase even smaller R-squared values, further signalling that a prospective connection between economic inequality and the quality of democratic institutions based on the used data is questionable, showing a lack of support for neither Hypothesis 1, nor Hypothesis 2.

4.4 ROBUSTNESS CHECKS

The results of the standard and revised model showcase the lack of causal connection between economic inequality and the quality of democratic institutions, when the former is captured by the Gini Index, while the latter is approximated by the Freedom in the World Index. Despite the discouraging findings, it is important to test the robustness of the models and the theory and see if similar results hold regardless of what combination of theoretically sound dependent and independent variables are being used. Therefore, in the subsequent section, I will test the robustness of the empirical analysis by first introducing the Democracy Index (DI) as dependent

variable, and then introduce a different measure of economic inequality into the equation, running regressions with both dependent variables.

4.4.1 Change in the dependent variable

Democracy Index by the Economist Intelligence Unit, as presented above, is a complex and exhaustive metric for judging countries performance on several scale related to aspects of democracy, and add up the scores to measure the extent countries satisfy the core principles of democracy. The DI is made of five categories; electoral process and pluralism, civil liberties, the functioning of government, political participation, and political culture. As the EIU puts it, the Democracy Index is meant to be a “thicker” measure of democracy, including a broader range of aspects of democracy and being a more substantive proxy for democratic principles. The anticipation is that since the DI is a more inclusive, thicker metric of democracy than the FWI, the connection between the overall Democracy Index and economic inequality measurements might be weaker compared to the FWI, but the underlying categories of DI might show a much stronger relationship to economic inequality.

Table 5 presents the results of the regressions between DI and its underlying categories¹⁹ and Gini Index as independent variable. Fixed effects model with robust standard errors is used. There are several important things to consider. First, the number of observations is significantly lower than that of the FWI and related subcategories. This might have an effect on the estimation of coefficients as fixed effects models are more precise at estimating coefficients from larger samples.

Secondly, the results show quite the opposite picture compared to the assumptions. The lagged Gini Index is statistically significant and positive for the overall Democracy Index, while it is statistically insignificant for all considered categories of DI. Also, the apparent positive relationship shown in the results is quite puzzling; especially the redistributivist theory and the

¹⁹ Civil Liberties category is not included in the robustness check as it is the least institutionalised aspect of democracy and hence, of limited interest to this thesis.

Table 5: Robustness check - changing the Quality of Democratic Institutions indicator
Standard errors in parenthesis

	Democracy Index	Electoral Process and Pluralism	Functioning of Government	Political Participation	Political Culture
Constant	9,37*** (2,37)	9,30*** (1,23)	4,61 (3,60)	3,00 (6,16)	5,88 (8,25)
lag_Gini Index	0,0258** (0,0130)	0,00787 (0,00716)	0,0276 (0,0266)	0,0123 (0,0327)	0,0360 (0,0322)
Internet Penetration	-0,00185 (0,00487)	-0,00837** (0,00364)	-0,00158 (0,0112)	0,0259* (0,0136)	-0,000408 (0,0130)
Mobile Subscription	0,000514 (0,00212)	0,000548 (0,00109)	-0,00258 (0,00465)	-0,00462 (0,00491)	0,00938 (0,00664)
log_GDP per capita (PPP)	-0,190 (0,243)	0,0561 (0,136)	0,232 (0,372)	0,199 (0,572)	-0,0708 (0,886)
R-squared	0,0511	0,0955	0,0237	0,123	0,0321
Observations	207	207	207	207	207

elite-competition approach does say that increasing economic inequality brings about democratic progress, but only up to democratisation, and it would decrease after it. Hence, finding an apparent positive relationship between economic inequality and democracy considering well developed democratic countries is counterintuitive and is likely incorrect.

Finally, considering the general lack of significance of the variables, and the R-squared values being quite low in almost all cases, the first robustness check presents similar findings as the revised Model 2. The causal relationship between economic inequality and the quality of democratic institutions does not appear in the results of the revised model, nor in the first robustness analysis. Still, we must explore the relevance of the independent variable to assess if the assumed relationship between the two concepts, economic inequality and the quality of democratic institutions, surfaces when a different inequality indicator is used.

4.4.2 Change in the independent variable.

The core of the empirical analysis of this research is to use standardised modelling and commonly used and well-understood variables to approximate the core concepts of the thesis' theory. Therefore, changing the independent variable does not mean that I will break with the principle mentioned above. The new inequality indicator is not as frequently included in empirical research as the Gini Index, but equally well-known indicator of economic inequality; the 80/20 Income Share Index.

Similarly to the Gini, there is a common methodology to calculate the 80/20 Index: approximate the income shares of the top 20 percent of the population and the bottom 80 percent of the population, and divide the share of the top 20 with the bottom 80. This essentially create an Index indicating how much of the economic resources are obtained by the top 20 percent of the population compared to the rest, which is a quite clear way of demonstrating economic inequality. It is really important to note though, that any income share index in itself is not sufficient to judge the performance of a country, it is important to consider other socio-economic measures before deriving normative judgements of countries. Nonetheless, the 80/20

Index does provide a valid alternative to the Gini Index, and is used as the independent variable, in lagged form.²⁰

Table 6 details the results of the second robustness check. Consistently with the other models, fixed effects model with robust standard errors is used. Both the Freedom in the World Index and the Democracy Index are analysed as dependent variables. The lagged 80/20 Index is the independent variable, while there is no change in the control variables.

Table 6: Robustness check – Changing the Economic Inequality Indicator
Standard errors in parenthesis

	Freedom in the World Index	Democracy Index
Constant	111,88*** (12,44)	8,643*** (2,95)
lag_80/20 Income Share	-6,547 (4,998)	0,643 (0,735)
Internet Penetration	-0,0657** (0,0294)	0,00731 (0,00608)
Mobile Subscription	0,0194 (0,0202)	0,000878 (0,00203)
log_GDP per capita (PPP)	-1,105 (1,189)	-0,0159 (0,288)
R-squared	0,200	0,0367
Observations	293	146

The results of Table 6 reinforces earlier findings, with small differences. The economic indicator is negatively correlated with FWI and positively with the Democracy Index, though it is not statistically significant in either case. The logarithmic GDP per capita variable maintains the negative coefficient and also remains statistically insignificant. The other control variables do not break trend either. It is interesting to note though, that the introduction of the

²⁰ For theoretical argumentation for using the lagged variable, please refer to section 4.2.

80/20 Income Share Index as independent variable highlights the apparent differences between Freedom in the World Index and the Democracy Index in terms of overall explanatory power of respective models. Whilst the R-squared value of 0,200 for the FWI-80/20 Index model presents the most explanatory power among the presented models, the DI-80/20 Index specification and its R-squared of 0,0367 exemplifies the other end of the spectrum and is among the lowest scores.

5 CRITICAL EXAMINATION OF THE EMPIRICAL RESULTS AND THE THEORY

After conducting the empirical analysis, the results indicate that neither hypotheses can be confirmed. Hypothesis 1 established the thought of a causal relationship between economic inequality and the quality of democratic institutions in that the increase in economic inequality would decrease the quality of democratic institutions. Model 2 provides results that counter the hypothesis, the coefficient for the lagged Gini Index is statistically insignificant, and the overall explanatory power of the empirical model is moderately low. Moreover, the compiled information in Table 4 shows a lack of support for Hypothesis 2; not only the “functioning of government” proxy do not showcase the most significance, but the underlying categories and subcategories for the Freedom in the World Index and the Democracy Index do not appear to be statistically significant in general. Having said that, it is also important to critically evaluate both the theory and the empirical analysis to identify any crucial fault, or misspecification in them.

Starting with the analysis of the methodological part and the empirical research, a deficiency can occur either in the data, or in the model. As for the model, there is a low likelihood that the model selection was wrong. Standard fixed effects model is used in this empirical analysis, which is standard practice among scientific papers with similar focus. Moreover, theoretical considerations surrounding the model selection does not imply that it would be necessary to use more complex and difficult modelling techniques.

Considering the data, however, despite the intentions of using the best data available, I presented several factors that limit the quality and applicability of the dataset used in this research. I derive two potential sources of issues: 1) there might be a latent disconnect between the indicators and respective theoretical concepts, and 2) the length of the data compiled for the empirical research might not be adequate to analyse the relationship of economic inequality and the quality of democratic institutions.

Addressing the potential disconnect mentioned earlier, there are several considerations to take into account. The data used in the empirical research is compiled from trusted sources; the World Bank database, Eurostat, and the democracy indicators from Freedom House and the Economist Intelligence Unit. Moreover, special emphasis was placed on the completeness of the data, especially considering the inequality indicators; the Gini Index from the World Bank, UN, or the OECD performed far below the threshold of completeness, but Eurostat still provided suitable data. What this means is that any potential issue is more likely to arise from representativity perspective: To how much extent the theoretical concepts are captured in the respective indicators. I would argue that the democracy proxies correspond to the concept of democratic institutions fairly, and a difference in the value of the indicator does provide information on the change in the quality of democratic institutions. The underlying categories and subcategories of both indices represent many aspects of democracy and democratic institutions; hence, I assume their fit to be satisfactory. As for the inequality indicators, the picture is far more complex. As detailed in section 3.1.2, the standard inequality indicators used in mainstream economic and political economic research have many limitations. Still, economic inequality as understood in this thesis is represented appropriately by the Gini Index and the 80/20 Income Share, they capture the actual differences of economic resources obtained by individuals or groups of society and indicate the distribution of that quite well. Hence, I would argue that the issue is not with the data not representing the theoretical specifications of the research.

Regarding issue 2), the length of the data can influence the outcomes of the empirical research from two points of view. In general, regressions become better and more precise approximating

the coefficients of independent and control variables when N, the number of observations increases. In the case of panel data used in this thesis, increasing N can only be done by expanding the time horizon of observations, the more the better. However, this would have raised other concerns, most importantly, the methodology of different indicators might be changed when going back in time resulting in difficulties bridging the differences and ensuring the soundness and continuity of the data. Nonetheless, the number of observations as detailed in Table 3 and for all respective models generally accepted to be large-N and the models avoid distortions from utilising small samples.

On the other hand, the focus of the thesis is analysing the causal connection between economic inequality and the quality of democratic institutions. In section 4.2, I presented arguments for the “stickiness” of the analysed concepts. As the democratic institutions are the core of the political system of any democratic country, they are not likely to respond to rapid changes in circumstances. Moreover, economic processes are also very slow, a fundamental change in economic inequality would take substantial time. Hence, the size of the dataset used in the empirical analysis might have limited the scope and span of the research and could not capture a prolonged relationship between economic inequality and the quality of democratic institutions.

Having discussed the empirical research and the methodology, it seems more probable that the lack of significant evidence supporting a relationship between economic inequality and the quality of democratic institutions is due to the imperfect formulation of the theoretical framework. There are two possible reasons for this, either the core of the theory is completely wrong and there is nothing connecting economic inequality and the quality of democratic institutions, or that the assumptions of the theory need to be reviewed.

As for the first option, there is the possibility that economic inequality does not affect democratic quality at all in politically and economically well-developed European countries. Ansell and Samuels (2014) hint the possibility of such a disconnect, which is also captured in Figure 2. The influence of economic inequality can reach a plateau, something the

redistributivist theory (e.x. Boix, 2003; Acemoglu and Robinson, 2006) and the political Kuznets-hypothesis (e.x. Chong, 2004) disputes. But how this would come to be?

Earlier in the thesis I presented the theory of the elite-competition approach to democratisation. The approach points out that democratisation is due to the increasing economic resources of a rising elite, which then uses democracy as protective measure against state expropriation. This means that the main actors in democracy are the political and economic elite. Moreover, I also presented argumentation that economic power translates to political influence quite well; hence, the “economic” elite and the “political” elite is likely the same group of individuals. This pinpoints the focus for answering the above question; we have to look at both the economic and political interests of the elite and see if it is possible that such a disconnect between economic inequality and the quality of democratic institutions.

It seems clear that the interest of the elite is to maintain and increase economic resources, and protect their wealth, resulting in a subsequent interest of sustaining their political influence. However, though the elite-competition approach does not explicitly say that the poor population has the option to revolt, some scholars present a mixed picture. Haggard and Kaufman (2012), while supporting the thought that democratic transition can originate “from above” (by the elite), they also argue that the threat “from below”, the possibility that lower income segment of the population would revolt, is also real and can be the source of political change. Albertus and Menaldo (2013) provide quite similar considerations, saying that the essence of democracies can be different in cases where the transition originated from above, or below. This suggests that the threat of a revolution, though not as important as in the redistributivist theory, can present some form of challenge to the elite, and the group has to take it into account when optimising their actions. This would mean that though the elite is likely to control the economy and the political landscape, there are limits to how much proportion of economic resources they can acquire, and how much can they imprint their political interests in the political establishment. If those limits are reached, there can be a situation when both economic inequality and the quality of democratic institutions are stagnant, and any connection would seize to occur.

Though the above seems theoretically possible, there are many debatable prerequisites for such a situation to exist. Therefore, I propose that the most likely scenario why a causal connection between economic inequality and the quality of democratic institutions did not materialise in the empirical research is that the theory is imperfectly specified.

The most important element of the theory of this thesis is that *actual* levels of economic inequality can exert direct influence over political institutions. This assumption is gaining more and more scientific interest and scrutiny. The triad of economic inequality, economic development, and democracy has been attracting much attention from World War II, but in recent years, data gathering techniques and other econometric methods have improved much, making it possible to derive from the conventional analysis of the interconnectedness of the concepts. What that means for this thesis, is that the toolbox for social scientists to analyse economic inequality has grown, and a relatively new focus have opened up, analysing people's *perception* on economic inequality.

This field of interests has not garnered much empirical analysis yet, due to the still relatively scarcely available quantifiable data, but the theoretical attention is ample. Newman et al. (2015) Cramer (2016), and Mutz (2018) when examining recent political developments reach similar judgement that individuals' perception of socio-economic status explains political events much more than actual levels of economic inequality. More related to this thesis, Cruces et al. (2013) provide experimental findings supporting that the misperception of economic resources held by individuals might be a possible cause for prejudiced redistributive preferences. Niehues (2014), when researching the connection between economic inequality and redistributive preferences concludes that her conjured "subjective Gini" metric is much better at indicating redistributive preferences compare to the standard Gini. In addition, Engelhardt and Wagner (2014) propose a similar assertion saying that "there is ample of evidence [...] that individuals hold erroneous beliefs about income inequality" (Engelhardt and Wagner, 2014, pp. 3), and concluding that "perceived inequality and expected upwards mobility are good predictors of social policy, sometimes even better ones than objective, official or factual measures" (Engelhardt and Wagner, 2014, pp. 16). On top of all that, Gimpelson and Treisman (2015) provide a

comprehensive article on the perception of economic inequality. One of their core arguments is that estimating actual levels of economic inequality of the distribution of economic resources is painfully hard for skilled professional, therefore assuming the public holds an accurate understanding of such distribution is simply implausible.

The above discussion signals that A) the theory detailed in this thesis and captured by the hypotheses is incorrect, and B) it also proposes a solution how to improve it. The hypothesised causal relationship between economic inequality and the quality of democratic institutions could not be confirmed based on the findings of the empirical research conducted in this paper. However, the theory needs to be more refined, in that actual levels of economic inequality is unlikely to be the determinant of such a relationship. It is much more possible that the perception of economic inequality plays a much more important role in the equation. Hence, the expansion of the research to include such measurements would be appropriate to analyse the research question of this thesis more thoroughly.

6 CONCLUSION

This thesis was devoted to researching the probability of a potential two-way relationship between economic inequality and the quality of democratic institutions. While the broader literature engages in discussion around how, and to what extent democratic development influences economic inequality through taxation and redistribution, the possibility of a reversed relationship is largely overlooked. The core of the thesis was to look into the latter relationship, engage with the literature and find if any such relationship has wider theoretical backing, and test the influence of economic inequality on the quality of democratic institutions with a focus on politically and economically well-developed European countries.

The thesis provided no support for the hypothesised reversed relationship. Economic inequality appeared to be statistically insignificant determinant of democratic institutions, and this finding was consistent across different model specifications and robustness checks, employing standard modelling technique and commonly used data. The most likely reason for such findings is that the theoretical question of the relationship was imperfectly formulated. Recent scientific work

from Engelhardt and Wagner (2014), Niehous (2014), and Gimpelson and Treisman (2015) all highlight the importance to break with the tradition of using indicators of *actual* levels of economic inequality and introduce the *perception* of economic inequality into the equation as such metric captures individual preferences much more closely. As a result, the theoretical specification is imperfect in applying the indicators of actual economic inequality, and despite the lack of support on the possibility of a reversed relationship between economic inequality and the quality of democratic institutions, such connection is worth revisiting with a different set of variables.

7 LIST OF REFERENCES:

- Acemoglu, D., & Robinson, J. A. (2000). Why did the West extend the franchise? Democracy, inequality, and growth in historical perspective. *The Quarterly Journal of Economics*, 115(4), 1167-1199.
- Acemoglu, D., & Robinson, J. A. (2002). The political economy of the Kuznets curve. *Review of development economics*, 6(2), 183-203.
- Acemoglu, D., & Robinson, J. A. (2006). *Economic origins of democracy and dictatorship*. Cambridge University Press.
- Acemoglu, D., Naidu, S., Restrepo, P., & Robinson, J. A. (2015). Democracy, redistribution, and inequality. In *Handbook of income distribution* (Vol. 2, pp. 1885-1966). Elsevier.
- Albertus, M., & Menaldo, V. (2014). Gaming democracy: Elite dominance during transition and the prospects for redistribution. *British Journal of Political Science*, 44(3), 575-603.
- Alesina, A., & Rodrik, D. (1994). Distributive politics and economic growth. *The quarterly journal of economics*, 109(2), 465-490.
- Ansell, B. W., & Samuels, D. J. (2014). *Inequality and democratization*. Cambridge University Press.
- Ansell, B., & Samuels, D. (2010). Inequality and democratization: A contractarian approach. *Comparative Political Studies*, 43(12), 1543-1574.
- Arellano, M. (2003). *Panel data econometrics*. Oxford University Press.
- Barro, R. J. (2008). Inequality and growth revisited (No. 11). ADB Working paper series on regional economic integration. Asian Development Bank.
- Bassett, W. F., Burkett, J. P., & Putterman, L. (1999). Income distribution, government transfers, and the problem of unequal influence. *European Journal of Political Economy*, 15(2), 207-228.
- Bates, R. H., & Donald Lien, D. H. (1985). A note on taxation, development, and representative government. *Politics & Society*, 14(1), 53-70.
- Baumgartner, F. R. (2007). EU Lobbying: A view from the US. *Journal of European Public Policy*, 14(3), 482-488.

- Becker, G. S. (1983). A theory of competition among pressure groups for political influence. *The quarterly journal of economics*, 98(3), 371-400.
- Benabou, R. (2000). Unequal societies: Income distribution and the social contract. *American Economic Review*, 90(1), 96-129.
- Benabou, R., & Ok, E. A. (2001). Social mobility and the demand for redistribution: the POUM hypothesis. *The Quarterly Journal of Economics*, 116(2), 447-487.
- Boix, C., & Stokes, S. C. (2003). Endogenous democratization. *World politics*, 55(4), 517-549.
- Bonica, A., McCarty, N., Poole, K. T., & Rosenthal, H. (2013). Why hasn't democracy slowed rising inequality?. *Journal of Economic Perspectives*, 27(3), 103-24.
- Borge, L. E., & Rattsø, J. (2003). Income distribution and tax structure: Empirical test of the Meltzer–Richard hypothesis. *European Economic Review*, 48(4), 805-826.
- Bredemeier, C. (2014). Imperfect information and the Meltzer-Richard hypothesis. *Public Choice*, 159(3-4), 561-576.
- Brüderl, J., & Ludwig, V. (2015). Fixed-effects panel regression. *The Sage handbook of regression analysis and causal inference*, 327-357.
- Charron, N., & Lapuente, V. (2010). Does democracy produce quality of government?. *European journal of political research*, 49(4), 443-470.
- Chiafalo, P., B., et al. v Washington. No. 19-465 (US, 2020)
- Chong, A. (2004). Inequality, democracy, and persistence: is there a political Kuznets curve?. *Economics & Politics*, 16(2), 189-212.
- Colorado department of State v. Baca, M., et al. No. 19-518. (US, 2020)
- Cowell, F. (2011). *Measuring inequality*. Oxford University Press.
- Cramer, K. J. (2016). *The politics of resentment: Rural consciousness in Wisconsin and the rise of Scott Walker*. University of Chicago Press.
- Credit Suisse Research Institutie (2019). *Global Wealth Report 2019*. Credit Suisse
- Cruces, G., Perez-Truglia, R., & Tetaz, M. (2013). Biased perceptions of income distribution and preferences for redistribution: Evidence from a survey experiment. *Journal of Public Economics*, 98, 100-112.

Diamond, L., & Morlino, L. (2004). The quality of democracy: An overview. *Journal of democracy*, 15(4), 20-31.

EIU (2013). Democracy Index 2012: Democracy at a standstill. The Economist Intelligence Unit

EIU (2014). Democracy Index 2013: Democracy in limbo. The Economist Intelligence Unit

EIU (2015). Democracy Index 2014: Democracy and its discontents. The Economist Intelligence Unit.

EIU (2017). Democracy Index 2016: Revenge of the “deplorables”. The Economist Intelligence Unit.

EIU (2020). Democracy Index 2019: A year of democratic setbacks and popular protests. The Economist intelligence Unit.

EIU. (2016). Democracy index 2015: Democracy in an age of anxiety. The Economist Intelligence Unit

EIU. (2018). Democracy Index 2017: Free speech under attack. The Economist Intelligence Unit

EIU. (2019). Democracy Index 2018: Me too? Political participation, protest and democracy. The Economist Intelligence Unit

Engelhardt, C., & Wagener, A. (2014). Biased perceptions of income inequality and redistribution.

Fearon, J. D. (2008). Economic development, insurgency, and civil war. *Institutions and economic performance*, 292-328.

Freedom House (2007). *Freedom in the World 2007*. (Arch Puddington, Editor).

Freedom House (2008). *Freedom in the World 2008*. (Arch Puddington, Editor).

Freedom House (2009). *Freedom in the World 2009*. (Arch Puddington, Editor).

Freedom House (2010). *Freedom in the World 2010*. (Arch Puddington, Editor).

Freedom House (2011). *Freedom in the World 2011*. (Arch Puddington, Editor).

Freedom House (2012). *Freedom in the World 2012*. (Arch Puddington, Editor).

- Freedom House (2013). *Freedom in the World 2013*. (Arch Puddington, Editor).
- Freedom House (2014). *Freedom in the World 2014*. (Arch Puddington, Editor).
- Freedom House (2015). *Freedom in the World 2015*. (Arch Puddington, Editor).
- Freedom House (2016). *Freedom in the World 2016*. (Arch Puddington, Editor).
- Freedom House (2017). *Freedom in the World 2017*. (Arch Puddington, Editor).
- Freedom House (2018). *Freedom in the World 2018*. (Arch Puddington, Editor).
- Freedom House (2019). *Freedom in the World 2019*. (Arch Puddington, Editor).
- Gimpelson, V., & Treisman, D. (2018). Misperceiving inequality. *Economics & Politics*, 30(1), 27-54.
- Gini, C. (1912). *Variabilità e mutabilità*. Reprinted in *Memorie di metodologica statistica* (Ed. Pizetti E, Salvemini, T). Rome: Libreria Eredi Virgilio Veschi.
- Granger, C. W. (1969). Investigating causal relations by econometric models and cross-spectral methods. *Econometrica: journal of the Econometric Society*, 424-438.
- Greene, W. H. (2000). *Econometric analysis 4th edition*. International edition, New Jersey: Prentice Hall, 201-215.
- Haggard, S., & Kaufman, R. R. (2012). Inequality and regime change: Democratic transitions and the stability of democratic rule. *American Political Science Review*, 106(3), 495-516.
- Hirshleifer, J. (1995). Anarchy and its breakdown. *Journal of Political Economy*, 103(1), 26-52.
- Hirshleifer, J. (2001). *The dark side of the force: Economic foundations of conflict theory*. Cambridge University Press.
- Hollyer, J. R., Rosendorff, B. P., & Vreeland, J. R. (2015). Transparency, protest, and autocratic instability. *American Political Science Review*, 109(4), 764-784.
- Houle, C. (2009). Inequality and democracy: Why inequality harms consolidation but does not affect democratization. *World politics*, 61(4), 589-622.
- Hsiao, C. (2014). *Analysis of panel data* (No. 54). Cambridge university press.

- Kuznets, S. (1955). Economic growth and income inequality. *The American economic review*, 45(1), 1-28.
- Lee, C. S. (2005). Income inequality, democracy, and public sector size. *American Sociological Review*, 70(1), 158-181.
- Levi, M. (1988). *Of rule and revenue*. University of California Press.
- Lind, J. T. (2005). Why is there so little redistribution?. *Nordic Journal of Political Economy*, 31, 111-125.
- Lorenz, M. O. (1905). Methods of measuring the concentration of wealth. *Publications of the American statistical association*, 9(70), 209-219.
- Meltzer, A. H., & Richard, S. F. (1981). A rational theory of the size of government. *Journal of political Economy*, 89(5), 914-927.
- Meltzer, A. H., & Richard, S. F. (1983). Tests of a rational theory of the size of government. *Public Choice*, 41(3), 403-418.
- Milanovic, B. (2000). The median-voter hypothesis, income inequality, and income redistribution: an empirical test with the required data. *European Journal of Political Economy*, 16(3), 367-410.
- Milanovic, B., Lindert, P. H., & Williamson, J. G. (2007). *Measuring ancient inequality*. The World Bank.
- Mutz, D. C. (2018). Status threat, not economic hardship, explains the 2016 presidential vote. *Proceedings of the National Academy of Sciences*, 115(19), E4330-E4339.
- Newman, B. J., Johnston, C. D., & Lown, P. L. (2015). False consciousness or class awareness? Local income inequality, personal economic position, and belief in American meritocracy. *American Journal of Political Science*, 59(2), 326-340.
- Niehues, J. (2014). Subjective perceptions of inequality and redistributive preferences: An international comparison. Cologne Institute for Economic Research. IW-TRENDS Discussion Paper, 2, 1-23.
- Perotti, R. (1996). Growth, income distribution, and democracy: What the data say. *Journal of Economic growth*, 1(2), 149-187.

Persson, T., & Tabellini, G. (1994). Is Inequality Harmful for Growth. *American Economic Review*, 84(3), 600-621.

Powell Jr, G. B. (2004). The quality of democracy: The chain of responsiveness. *Journal of Democracy*, 15(4), 91-105.

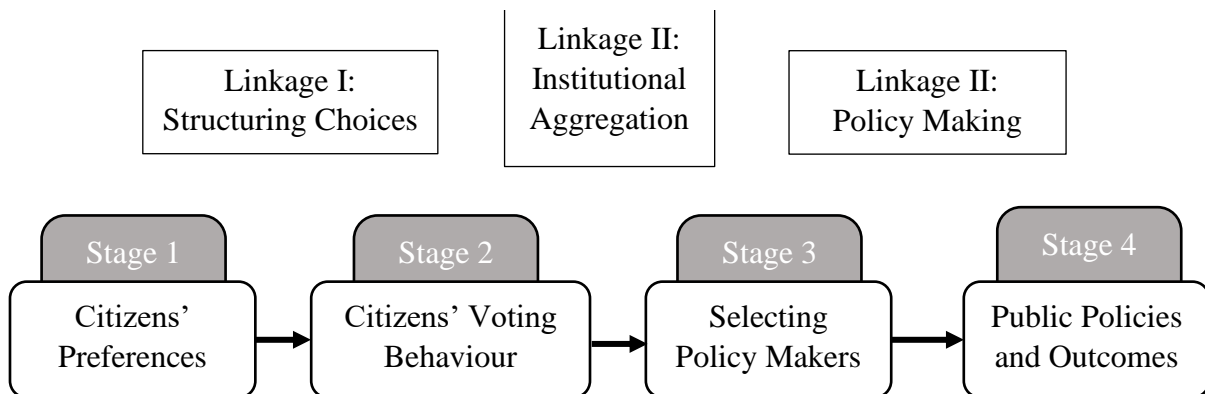
Timmons, J. F. (2010). Does democracy reduce economic inequality?. *British Journal of Political Science*, 40(4), 741-757.

Tullock, G. (1980). Efficient rent-seeking. In J. Buchanan, R. Tollison, and G. Tullock (Editors.), *Towards a theory of the rent-seeking society*. College Station: Texas A&M University Press.

UNU-WIDER (2007). *World Income Database. Version 2*. World Institute for Development Economics Research of the United Nations University

8 APPENDICES:

Appendix 1: Democratic Responsiveness - Stages and Linkages. Source: Powell, 2004



Appendix 2: Democracy Index - Underlying indicators. Source: Economist Intelligence Unit, 2019

I. Electoral process and pluralism

1. Are elections for the national legislature and head of government free? Consider whether elections are competitive in that electors are free to vote and are offered a range of choices.
 - 1: Essentially unrestricted conditions for the presentation of candidates (for example, no bans on major parties).
 - 0.5: There are some restrictions on the electoral process.
 - 0: A single-party system or major impediments exist (for example, bans on a major party or candidate).
2. Are elections for the national legislature and head of government fair?
 - 1: No major irregularities in the voting process.
 - 0.5: Significant irregularities occur (intimidation, fraud), but do not significantly affect the overall outcome.
 - 0: Major irregularities occur and affect the outcome.
 - Score 0 if score for question 1 is 0.
3. Are municipal elections both free and fair?
 - 1: Are free and fair.
 - 0.5: Are free, but not fair.
 - 0: Are neither free nor fair.

4. Is there universal suffrage for all adults? Bar generally accepted exclusions (for example, non-nationals; criminals; members of armed forces in some countries).
 - 1: Yes.
 - 0: No.
5. Can citizens cast their vote free of significant threats to their security from state or non-state bodies?
 - 1: Yes.
 - 0: No.
6. Do laws provide for broadly equal campaigning opportunities?
 - 1: Yes.
 - 0.5: Formally, yes, but, in practice, opportunities are limited for some candidates.
 - 0: No.
7. Is the process of financing political parties transparent and generally accepted?
 - 1: Yes.
 - 0.5: Not fully transparent.
 - 0: No.
8. Following elections, are the constitutional mechanisms for the orderly transfer of power from one government to another clear, established and accepted?
 - 1: All three criteria are satisfied.
 - 0.5: Two of the three criteria are satisfied.
 - 0: Only one or none of the criteria is satisfied.
9. Are citizens free to form political parties that are independent of the government?
 - Yes.
 - 0.5: There are some restrictions.
 - 0: No.
10. Do opposition parties have a realistic prospect of achieving government?
 - 1: Yes.
 - 0.5: There is a dominant two-party system, in which other political forces never have any effective chance of taking part in national government.
 - 0: No.
11. Is potential access to public office open to all citizens?
 - 1: Yes.
 - 0.5: Formally unrestricted, but, in practice, restricted for some groups, or for citizens from some parts of the country.
 - 0: No.
12. Are citizens allowed to form political and civic organisations, free of state interference and surveillance?

- 1: Yes.
- 0.5: Officially free, but subject to some unofficial restrictions or interference.
- 0: No.

II. *Functioning of government*

13. . Do freely elected representatives determine government policy?

- 1: Yes.
- 0.5: Exercise some meaningful influence.
- 0: No.

14. Is the legislature the supreme political body, with a clear supremacy over other branches of government?

- 1: Yes.
- 0: No.

15. Is there an effective system of checks and balances on the exercise of government authority?

- 1: Yes.
- 0.5: Yes, but there are some serious flaws.
- 0: No.

16. Government is free of undue influence by the military or the security services.

- 1: Yes.
- 0.5: Influence is low, but the defence minister is not a civilian. If the current risk of a military coup is extremely low, but the country has a recent history of military rule or coups.
- 0: No.

17. Foreign powers and organisations do not determine important government functions or policies.

- 1: Yes.
- 0.5: Some features of a protectorate.
- 0: No (significant presence of foreign troops; important decisions taken by foreign power; country is a protectorate).

18. Do special economic, religious or other powerful domestic groups exercise significant political power, parallel to democratic institutions?

- 1: Yes.
- 0.5: Exercise some meaningful influence.
- 0: No.

19. Are sufficient mechanisms and institutions in place for ensuring government accountability to the electorate in between elections?

- 1: Yes.
- 0.5. Yes, but serious flaws exist.
- 0: No.

20. Does the government's authority extend over the full territory of the country?
- 1: Yes.
 - 0: No.
21. Is the functioning of government open and transparent, with sufficient public access to information?
- 1: Yes.
 - 0.5: Yes, but serious flaws exist.
 - 0: No.
22. How pervasive is corruption?
- 1: Corruption is not a major problem.
 - 0.5: Corruption is a significant issue.
 - 0: Pervasive corruption exists.
23. Is the civil service willing to and capable of implementing government policy?
- 1: Yes.
 - 0.5: Yes, but serious flaws exist.
 - 0: No.
24. Popular perceptions of the extent to which citizens have free choice and control over their lives.
- 1: High.
 - 0.5: Moderate.
 - 0: Low.
 - If available, from World Values Survey
 - % of people who think that they have a great deal of choice/control.
 - 1 if more than 70%.
 - 0.5 if 50-70%.
 - 0 if less than 50%
25. Public confidence in government.
- 1: High.
 - 0.5: Moderate.
 - 0: Low.
 - If available, from World Values Survey, Gallup polls, Eurobarometer, Latinobarometer
 - % of people who have a "great deal" or "quite a lot" of confidence in government.
 - 1 if more than 40%.
 - 0.5 if 25-40%.
 - 0 if less than 25%.
26. Public confidence in political parties.
- 1: High.
 - 0.5: Moderate.
 - 0: Low.

- If available, from World Values Survey
% of people who have a “great deal” or “quite a lot” of confidence.
 - 1 if more than 40%.
 - 0.5 if 25-40%.
 - 0 if less than 25%.

III. *Political participation*

27. Voter participation/turn-out for national elections. (Average turnout in parliamentary elections since 2000. Turnout as proportion of population of voting age.)

- 1 if above 70%.
- 0.5 if 50%-70%.
- 0 if below 50%.
- If voting is obligatory, score 0. Score 0 if scores for questions 1 or 2 is 0.

28. Do ethnic, religious and other minorities have a reasonable degree of autonomy and voice in the political process?

- 1: Yes.
- 0.5: Yes, but serious flaws exist.
- 0: No.

29. Women in parliament. % of members of parliament who are women.

- 1 if more than 20% of seats.
- 0.5 if 10-20%.
- 0 if less than 10%.

30. Extent of political participation. Membership of political parties and political non-governmental organisations.

- Score 1 if over 7% of population for either.
- Score 0.5 if 4-7%.
- Score 0 if under 4%.
- If participation is forced, score 0.

31. Citizens' engagement with politics.

- 1: High.
- 0.5: Moderate.
- 0: Low.
- If available, from World Values Survey
% of people who are very or somewhat interested in politics.
 - 1 if over 60%.
 - 0.5 if 40-60%.
 - 0 if less than 40%.

32. The preparedness of population to take part in lawful demonstrations.

- 1: High.
- 0.5: Moderate.
- 0: Low.

- If available, from World Values Survey
% of people who have taken part in or would consider attending lawful demonstrations.
 - 1 if over 40%.
 - 0.5 if 30-40%.
 - 0 if less than 30%.

33. Adult literacy.

- 1 if over 90%.
- 0.5 if 70-90%.
- 0 if less than 70%.

34. Extent to which adult population shows an interest in and follows politics in the news.

- 1: High.
- 0.5: Moderate.
- 0: Low.
- If available, from World Values Survey
% of population that follows politics in the news media (print, TV or radio) every day.
 - 1 if over 50%.
 - 0.5 if 30-50%.
 - 0 if less than 30%.

35. The authorities make a serious effort to promote political participation.

- 1: Yes.
- 0.5: Some attempts.
- 0: No.
- Consider the role of the education system, and other promotional efforts. Consider measures to facilitate voting by members of the diaspora.
- If participation is forced, score 0.

IV. Democratic political culture

36. Is there a sufficient degree of societal consensus and cohesion to underpin a stable, functioning democracy?

- 1: Yes.
- 0.5: Yes, but some serious doubts and risks.
- 0: No.

37. Perceptions of leadership; proportion of the population that desires a strong leader who bypasses parliament and elections.

- 1: Low.
- 0.5: Moderate.
- 0: High.
- If available, from World Values Survey
% of people who think it would be good or fairly good to have a strong leader who does not bother with parliament and elections.

- 1 if less than 30%.
- 0.5 if 30-50%.
- 0 if more than 50%.

38. Perceptions of military rule; proportion of the population that would prefer military rule.

- 1: Low.
- 0.5: Moderate.
- 0: High.
- If available, from World Values Survey
% of people who think it would be very or fairly good to have military rule.
 - 1 if less than 10%.
 - 0.5 if 10-30%.
 - 0 if more than 30%.

39. Perceptions of rule by experts or technocratic government; proportion of the population that would prefer rule by experts or technocrats.

- 1: Low.
- 0.5: Moderate.
- 0: High.
- If available, from World Values Survey
% of people who think it would be very or fairly good to have experts, not government, make decisions for the country.
 - 1 if less than 50%.
 - 0.5 if 50-70%.
 - 0 if more than 70%.

40. Perception of democracy and public order; proportion of the population that believes that democracies are not good at maintaining public order.

- 1: Low.
- 0.5: Moderate.
- 0: High.
- If available, from World Values Survey
% of people who disagree with the view that democracies are not good at maintaining order.
 - 1 if more than 70%.
 - 0.5 if 50-70%.
 - 0 if less than 50%.
- Alternatively, % of people who think that punishing criminals is an essential characteristic of democracy.
 - 1 if more than 80%.
 - 0.5 if 60-80%.
 - 0 if less than 60%.

41. Perception of democracy and the economic system; proportion of the population that believes that democracy benefits economic performance.

- If available, from World Values Survey

- % of people who disagree with the view that the economic system is badly run in democracies.
- 1 if more than 80%.
- 0.5 if 60-80%.
- 0 if less than 60%.

42. Degree of popular support for democracy.

- 1: High.
- 0.5: Moderate.
- 0: Low.
- If available, from World Values Survey
% of people who agree or strongly agree that democracy is better than any other form of government.
 - 1 if more than 90%.
 - 0.5 if 75-90%.
 - 0 if less than 75%.

43. There is a strong tradition of the separation of Church and State.

- 1: Yes.
- 0.5: Some residual influence of Church on State.
- 0: No.

V. *Civil liberties*

44. Is there a free electronic media?

- 1: Yes.
- 0.5: Pluralistic, but state-controlled media are heavily favoured. One or two private owners dominate the media.
- 0: No.

45. Is there a free print media?

- 1: Yes.
- 0.5: Pluralistic, but state-controlled media are heavily favoured. There is high degree of concentration of private ownership of national newspapers.
- 0: No.

46. Is there freedom of expression and protest (bar only generally accepted restrictions, such as banning advocacy of violence)?

- 1: Yes.
- 0.5: Holders of minority viewpoints are subject to some official harassment. Libel laws heavily restrict scope for free expression.
- 0: No.

47. Is media coverage robust? Is there open and free discussion of public issues, with a reasonable diversity of opinions?

- 1: Yes.

- 0.5: There is formal freedom, but a high degree of conformity of opinion, including through self-censorship or discouragement of minority or marginal views.
- 0: No.

48. Are there political restrictions on access to the Internet?

- 1: No.
- 0.5: Some moderate restrictions.
- 0: Yes.

49. Are citizens free to form professional organisations and trade unions?

- 1: Yes.
- 0.5: Officially free, but subject to some restrictions.
- 0: No.

50. Do institutions provide citizens with the opportunity to petition government to redress grievances?

- 1: Yes.
- 0.5: Some opportunities.
- 0: No.

51. The use of torture by the state.

- 1: Torture is not used.
- 0: Torture is used.

52. The degree to which the judiciary is independent of government influence.

Consider the views of international legal and judicial watchdogs. Have the courts ever issued an important judgement against the government, or a senior government official?

- 1: High.
- 0.5: Moderate.
- 0: Low.

53. The degree of religious tolerance and freedom of religious expression. Are all religions permitted to operate freely, or are some restricted? Is the right to worship permitted both publicly and privately? Do some religious groups feel intimidated by others, even if the law requires equality and protection?

- 1: High.
- 0.5: Moderate.
- 0: Low.

54. The degree to which citizens are treated equally under the law. Consider whether favoured groups or individuals are spared prosecution under the law.

- 1: High.
- 0.5: Moderate.
- 0: Low.

55. Do citizens enjoy basic security?

- 1: Yes.
 - 0.5: Crime is so pervasive as to endanger security for large segments.
 - 0: No.
56. Extent to which private property rights are protected and private business is free from undue government influence
- 1: High.
 - 0.5: Moderate.
 - 0: Low.
57. Extent to which citizens enjoy personal freedoms. Consider gender equality, right to travel, choice of work and study.
- 1: High.
 - 0.5: Moderate.
 - 0: Low.
58. Popular perceptions on protection of human rights; proportion of the population that think that basic human rights are well-protected.
- 1: High.
 - 0.5: Moderate.
 - 0: Low.
 - If available, from World Values Survey:
% of people who think that human rights are respected in their country.
 - 1 if more than 70%.
 - 0.5 if 50-70%.
 - 0 if less than 50%.
59. There is no significant discrimination on the basis of people's race, colour or religious beliefs.
- 1: Yes.
 - 0.5: Yes, but some significant exceptions.
 - 0: No.
60. Extent to which the government invokes new risks and threats as an excuse for curbing civil liberties.
- 1: Low.
 - 0.5: Moderate.
 - 0: High.

Appendix 3: Freedom in the World Index - included indicators.

Source: Freedom House, 2019

POLITICAL RIGHTS (0–40 POINTS)

A. ELECTORAL PROCESS

A1. Was the current head of government or other chief national authority elected through free and fair elections? (Note: Heads of government chosen through various electoral frameworks, including direct elections for president, indirect elections for prime minister by parliament, and the electoral college system for electing presidents, are covered under this question. In cases of indirect elections for the head of government, the elections for the legislature or other body that chose the head of government, as well as the selection process for the head of government itself, should be taken into consideration. In systems where executive authority is formally divided between a head of state and a head of government, greater weight should be given to elections for the official with the most executive authority.)

- Did independent, established, and reputable national and/or international election monitoring organizations judge the most recent election for head of government to have met democratic standards?
- Was the most recent election for head of government called in a timely manner, without undue, politically motivated delays or an accelerated schedule that unfairly limited campaign opportunities for some candidates?
- Was the registration of voters and candidates conducted in an accurate, timely, transparent, and nondiscriminatory manner?
- Were women allowed to register and run as candidates?
- Could all candidates make speeches, hold public meetings, and enjoy fair or proportionate media access throughout the campaign, free of intimidation?
- Did voting take place by secret ballot?
- Were voters able to vote for the candidate or party of their choice without undue pressure or intimidation?
- Was the vote count transparent and timely, and were the official results reported honestly to the public?

- Could election monitors from independent groups and representing parties/candidates watch the counting of votes to ensure its honesty?
- Did voters have equal access to polling places and opportunities to cast ballots?
- Has the most recently elected head of government been removed from office through violent, irregular, unconstitutional, or otherwise undemocratic means? (Note: Although a bloodless coup may ultimately lead to a positive outcome—particularly if it removes a head of government who was not freely and fairly elected—the new leader has not been freely and fairly elected and cannot be treated as such.)
- Has the head of government’s electorally mandated term expired or been extended without new elections?
- In cases where elections for regional, provincial, or state governors and/or other subnational executive officials differ significantly in conduct from national elections, does the conduct of the subnational elections reflect an opening toward improved political rights in the country, or, alternatively, a worsening of political rights?

A2. Were the current national legislative representatives elected through free and fair elections?

- Did independent, established, and reputable domestic and/or international election monitoring organizations judge the most recent national legislative elections to have met democratic standards?
- Were the most recent legislative elections called in a timely manner, without undue, politically motivated delays or an accelerated schedule that unfairly limited campaign opportunities for some parties or candidates?
- Was the registration of voters and candidates conducted in an accurate, timely, transparent, and nondiscriminatory manner?
- Were women allowed to register and run as candidates?
- Could all candidates make speeches, hold public meetings, and enjoy fair or proportionate media access throughout the campaign, free of intimidation?
- Did voting take place by secret ballot?

- Were voters able to vote for the candidate or party of their choice without undue pressure or intimidation?
- Was the vote count transparent and timely, and were the official results reported honestly to the public?
- Could election monitors from independent groups and representing parties/candidates watch the counting of votes to ensure its honesty?
- Have members of the most recently elected national legislature been removed from office through violent, irregular, unconstitutional, or otherwise undemocratic means? (Note: Although a bloodless coup may ultimately lead to a positive outcome—particularly if it removes a legislature that was not freely and fairly elected—an appointed postcoup legislative body has not been freely and fairly elected and cannot be treated as such.)
- Has the legislature’s electorally mandated term expired or been extended without new elections?
- In cases where elections for subnational councils/parliaments differ significantly in conduct from national elections, does the conduct of the subnational elections reflect an opening toward improved political rights in the country, or, alternatively, a worsening of political rights?

A3. Are the electoral laws and framework fair, and are they implemented impartially by the relevant election management bodies?

- Is there a clear, detailed, and fair legislative framework for conducting elections? (Note: Changes to electoral laws should not be made immediately preceding an election if these changes infringe on the ability of voters, candidates, or parties to fulfill their roles in the election.)
- Does the composition of election commissions ensure their independence?
- Are election commissions or other election authorities free from government or other pressure and interference?
- Do adult citizens enjoy universal and equal suffrage?
- Is the drawing of election districts conducted in a fair and nonpartisan manner, as opposed to malapportionment or gerrymandering for personal or partisan advantage?

- Has the selection of a system for choosing legislative representatives (such as proportional versus majoritarian) been improperly manipulated to advance certain political interests or to influence the electoral results?
- Are procedures for changing the electoral framework at the constitutional level, including referendums, carried out fairly and transparently, with adequate opportunity for public debate and discussion?

B. POLITICAL PLURALISM AND PARTICIPATION

B1. Do the people have the right to organize in different political parties or other competitive political groupings of their choice, and is the system free of undue obstacles to the rise and fall of these competing parties or groupings?

- Do political parties encounter undue legal or practical obstacles in their efforts to form and operate, including onerous registration requirements, excessively large membership requirements, etc.?
- Do parties face discriminatory or onerous restrictions in holding meetings or rallies, accessing the media, or engaging in other peaceful activities?
- Are laws and regulations governing party financing fair and equitably enforced? Do they impose excessive obstacles to political and campaign activity, or give an effective advantage to certain parties?
- Are party members or leaders intimidated, harassed, arrested, imprisoned, or subjected to violent attacks as a result of their peaceful political activities?
- In systems dominated by political parties, can independent candidates register and operate freely?

B2. Is there a realistic opportunity for the opposition to increase its support or gain power through elections?

- Are various legal/administrative restrictions selectively applied to opposition parties to prevent them from increasing their support base or successfully competing in elections?
- Are there genuine opposition forces in positions of authority, such as in the national legislature or in subnational governments?

- Does intimidation, harassment, arrest, imprisonment, or violent attack as a result of peaceful political activities affect the ability of opposition party members or leaders to increase their support or gain power through elections?
- Is there a significant opposition vote?
- Did major opposition parties choose to boycott the most recent elections rather than participate in a flawed process?

B3. Are the people's political choices free from domination by forces that are external to the political sphere, or by political forces that employ extrapolitical means?

- Do entities that are external to the political system (the military, foreign powers, economic oligarchies, criminal organizations, armed militants, or any other powerful group) intimidate, harass, or attack voters or political figures in order to influence their political choices?
- Do such groups offer bribes or other incentives to voters or political figures in order to influence their political choices?
- Do entities within the political system, such as major parties and incumbent leaders, use extrapolitical means (corrupt patronage networks, control over land or employment, control over security forces, control over party militias, manipulation of state institutions or resources) to exert improper influence over the political choices of voters or political figures?
- Do traditional or religious leaders use extrapolitical means (control over communal land or resources, bribes or economic incentives, violence or intimidation) to exert improper influence over the political choices of voters or political figures?
- Do major private or public-sector employers directly or indirectly control the political choices of their workers?
- Do major private donors to political parties or causes use opaque or illegal methods to exert improper influence over voters or political figures?
- Does the formal structure of the political system give overriding authority to entities that are not accountable to voters (hereditary monarchs, religious hierarchies, unelected

military or party officials, the sole legal party in one-party states), thus excluding the public from meaningful political participation?

B4. Do various segments of the population (including ethnic, religious, gender, LGBT, and other relevant groups) have full political rights and electoral opportunities?

- Do national political parties of various ideological persuasions address issues of specific concern to minority or other relevant groups?
- When other parties fail to address the interests of certain groups, are political parties that are focused on those groups—provided they espouse peaceful, democratic values—legally permitted and de facto allowed to operate?
- Does the government inhibit the participation of certain groups in national or subnational political life through laws and/or practical obstacles—for example, by limiting access to voter registration or failing to publish public documents in certain languages?
- Are the interests of women represented in political parties—for example, through party manifestos that address gender issues, gender equality policies within parties, and mechanisms to ensure women’s full and equal participation in internal party elections and decision-making?
- Are there unusually excessive or discriminatory barriers to acquiring citizenship that effectively deny political rights to a majority or large portion of the native-born or legal permanent population, or is citizenship revoked to produce a similar result?

C. FUNCTIONING OF GOVERNMENT

C1. Do the freely elected head of government and national legislative

representatives determine the policies of the government? (Note: Because the score for question C1 is partly dependent on the presence of a freely elected head of government and national legislative representatives, under most circumstances it will not exceed the average of the scores for questions A1 and A2.)

- Are the candidates who were elected freely and fairly duly installed in office, and were they able to form a functioning government within a reasonable period of time?

- Do other appointed or non–freely elected state actors interfere with or prevent freely elected representatives from adopting and implementing legislation and making meaningful policy decisions?
- Do nonstate actors, including criminal gangs and insurgent groups, interfere with or prevent elected representatives from adopting and implementing legislation and making meaningful policy decisions?
- Do the armed forces or other security services control or enjoy a preponderant influence over government policy and activities, including in countries that are nominally under civilian control?
- Do foreign governments control or enjoy a preponderant influence over government policy and activities by means including the presence of foreign military troops and the use of significant economic threats or sanctions? (Note: If a treaty was signed and ratified by a freely elected government, adherence to that treaty is typically not considered an improper external influence on policymaking, even if it limits a government’s options in practice.)
- Is the freely elected government able to implement its decisions across the entire territory without interference from nonstate actors?
- Does the executive exhibit excessive dominance over the legislature?
- Has partisan polarization or obstructionism seriously impaired basic executive or legislative functions, such as approving a budget or filling important vacancies?

C2. Are safeguards against official corruption strong and effective?

- Has the government implemented effective anticorruption laws or programs to prevent, detect, and punish corruption among public officials, including conflicts of interest?
- Is the government free from excessive bureaucratic regulations, registration requirements, or other controls that increase opportunities for corruption?
- Are there independent and effective auditing and investigative bodies that function without impediment or political pressure or influence?
- Are allegations of corruption involving government officials thoroughly investigated and prosecuted without prejudice or political bias?

- Are allegations of corruption given extensive and substantive airing in the media?
- Do whistleblowers, anticorruption activists, investigators, and journalists enjoy legal protections that allow them to freely and safely report abuses?

C3. Does the government operate with openness and transparency?

- Do citizens have the legal right and practical ability to obtain information about state operations and the means to petition government agencies for it?
- Does the government publish information online, in machine-readable formats, for free, and is this information accessible by default?
- Are civil society groups, interest groups, journalists, and other citizens given a fair and meaningful opportunity to comment on and influence pending policies or legislation?
- Are elected representatives accessible to their constituents?
- Is the budget-making process subject to meaningful legislative review and public scrutiny?
- Does the state ensure transparency and effective competition in the awarding of government contracts?
- Are the asset declarations of government officials open to public and media scrutiny and verification?

ADDITIONAL DISCRETIONARY POLITICAL RIGHTS QUESTION

Is the government or occupying power deliberately changing the ethnic composition of a country or territory so as to destroy a culture or tip the political balance in favor of another group?

- Is the government providing economic or other incentives to certain people in order to change the ethnic composition of a region or regions?
- Is the government forcibly moving people in or out of certain areas in order to change the ethnic composition of those regions?
- Is the government arresting, imprisoning, or killing members of certain ethnic groups in order change the ethnic composition of a region or regions?

CIVIL LIBERTIES (0-60 POINTS)

D. FREEDOM OF EXPRESSION AND BELIEF

D1. Are there free and independent media? (Note: “Media” refers to all relevant sources of news and commentary—including formal print, broadcast, and online news outlets, as well as social media and communication applications when they are used to gather or disseminate news and commentary for the general public. The question also applies to artistic works in any medium.)

- Are the media directly or indirectly censored?
- Is self-censorship common among journalists (the term includes professional journalists, bloggers, and citizen journalists), especially when reporting on sensitive issues, including politics, social controversies, corruption, or the activities of powerful individuals?
- Are journalists subject to pressure or surveillance aimed at identifying their sources?
- Are libel, blasphemy, security, or other restrictive laws used to punish journalists who scrutinize government officials and policies or other powerful entities through either onerous fines or imprisonment?
- Is it a crime to insult the honor and dignity of the president and/or other government officials? How broad is the range of such prohibitions, and how vigorously are they enforced?
- If media outlets are dependent on the government for their financial survival, does the government condition funding on the outlets’ cooperation in promoting official points of view and/or denying access to opposition parties and civic critics? Do powerful private actors engage in similar practices?
- Do the owners of private media exert improper editorial control over journalists or publishers, skewing news coverage to suit their personal business or political interests?
- Is media coverage excessively partisan, with the majority of outlets consistently favoring either side of the political spectrum?
- Does the government attempt to influence media content and access through means including politically motivated awarding or suspension of broadcast frequencies and newspaper registrations, unfair control and influence over printing facilities and distribution networks, blackouts of internet or mobile service, selective distribution of advertising, onerous operating requirements, prohibitive tariffs, and bribery?

- Are journalists threatened, harassed online, arrested, imprisoned, beaten, or killed by government or nonstate actors for their legitimate journalistic activities, and if such cases occur, are they investigated and prosecuted fairly and expeditiously?
- Do women journalists encounter gender-specific obstacles to carrying out their work, including threats of sexual violence or strict gender segregation?
- Are works of literature, art, music, or other forms of cultural expression censored or banned for political purposes?

D2. Are individuals free to practice and express their religious faith or nonbelief in public and private?

- Are registration requirements employed to impede the free functioning of religious institutions?
- Are members of religious groups, including minority faiths and movements, harassed, fined, arrested, or beaten by the authorities for engaging in their religious practices?
- Is state monitoring of peaceful religious activity so indiscriminate, pervasive, or intrusive that it amounts to harassment or intimidation?
- Are religious practice and expression impeded by violence or harassment by nonstate actors?
- Does the government appoint or otherwise influence the appointment of religious leaders?
- Does the government control or restrict the production and distribution of religious writings or materials?
- Is the construction of religious buildings banned or restricted?
- Does the government place undue restrictions on religious education? Does the government require religious education?
- Are individuals free to eschew religious beliefs and practices in general?

D3. Is there academic freedom, and is the educational system free from extensive political indoctrination?

- Are teachers and professors at both public and private institutions free to pursue academic activities of a political and quasi-political nature without fear of physical violence or intimidation by state or nonstate actors?
- Does the government pressure, strongly influence, or control the content of school curriculums for political purposes?
- Is the allocation of funding for public educational institutions free from political manipulation?
- Are student associations that address issues of a political nature allowed to function freely?
- Does the government, including through school administration or other officials, pressure students and/or teachers to support certain political figures or agendas, including by requiring them to attend political rallies or vote for certain candidates? Conversely, does the government, including through school administration or other officials, discourage or forbid students and/or teachers from supporting certain candidates and parties?

D4. Are individuals free to express their personal views on political or other sensitive topics without fear of surveillance or retribution?

- Are people able to engage in private discussions, particularly of a political nature, in public, semipublic, or private places—including restaurants, public transportation, and their homes, in person or on the telephone—without fear of harassment or detention by the authorities or nonstate actors?
- Do users of personal online communications—including direct messages, voice or video applications, or social media accounts with a limited audience—face legal penalties, harassment, or violence from the government or powerful nonstate actors in retaliation for critical remarks?
- Does the government employ people or groups to engage in public surveillance and to report alleged antigovernment conversations to the authorities?

E. ASSOCIATIONAL AND ORGANIZATIONAL RIGHTS

E1. Is there freedom of assembly?

- Are peaceful protests, particularly those of a political nature, banned or severely restricted?

- Are the legal requirements to obtain permission to hold peaceful demonstrations particularly cumbersome or time-consuming?
- Are participants in peaceful demonstrations intimidated, arrested, or assaulted?
- Are peaceful protesters detained by police in order to prevent them from engaging in such actions?
- Are organizers blocked from using online media to plan or carry out a protest, for example through DDoS attacks or wholesale blackouts of internet or mobile services?
- Are similar restrictions and obstacles used to impede other public events, such as conferences, panel discussions, and town hall–style meetings?
- Are public petitions, in which citizens gather signatures to support a particular policy or initiative, banned or severely restricted?

E2. Is there freedom for nongovernmental organizations, particularly those that are engaged in human rights– and governance-related work? (Note: This includes civic organizations, interest groups, foundations, think tanks, gender rights groups, etc.)

- Are registration and other legal requirements for nongovernmental organizations particularly onerous or intended to prevent them from functioning freely?
- Are laws related to the financing of nongovernmental organizations unduly complicated and cumbersome, or are there obstacles to citizens raising money for charitable causes or civic activism?
- Are donors and funders of nongovernmental organizations free from government pressure?
- Are members of nongovernmental organizations intimidated, arrested, imprisoned, or assaulted because of their work?

E3. Is there freedom for trade unions and similar professional or labor organizations?

- Are trade unions allowed to be established and to operate without government interference?

- Are workers pressured by the government or employers to join or not to join certain trade unions, and do they face harassment, violence, or dismissal from their jobs if they fail to comply?
- Are workers permitted to engage in strikes, and do participants in peaceful strikes face reprisals? (Note: This question may not apply to workers in narrowly defined essential government services or public safety jobs.)
- Are unions able to bargain collectively with employers and negotiate agreements that are honored in practice?
- For states with primarily agricultural economies that do not necessarily support the formation of trade unions, does the government allow for the establishment of agricultural workers' organizations or their equivalents? Is there legislation expressly forbidding the formation of trade unions?
- Are professional organizations, including business associations, allowed to operate freely and without government interference?

F. RULE OF LAW

F1. Is there an independent judiciary?

- Is the judiciary subject to interference from the executive branch of government or from other political, economic, or religious influences?
- Are judges appointed and dismissed in a fair and unbiased manner?
- Do judges rule fairly and impartially, or do they commonly render verdicts that favor the government or particular interests, whether in return for bribes or for other reasons?
- Do executive, legislative, and other governmental authorities comply with judicial decisions, and are these decisions effectively enforced?
- Do powerful private entities comply with judicial decisions, and are decisions that run counter to the interests of powerful actors effectively enforced?

F2. Does due process prevail in civil and criminal matters?

- Are defendants' rights, including the presumption of innocence until proven guilty, protected?

- Do detainees have access to independent, competent legal counsel regardless of their financial means?
- Are defendants given a fair, public, and timely hearing by a competent, independent, and impartial tribunal?
- Is access to the court system in general dependent on an individual's financial means?
- Are prosecutors independent of political control and influence?
- Are prosecutors independent of powerful private interests, whether legal or illegal?
- Do law enforcement and other security officials operate professionally, independently, and accountably?
- Do law enforcement officials make arbitrary arrests and detentions without warrants, or fabricate or plant evidence on suspects?
- Do law enforcement and other security officials fail to uphold due process because of influence by nonstate actors, including organized crime, powerful commercial interests, or other groups?

F3. Is there protection from the illegitimate use of physical force and freedom from war and insurgencies?

- Do law enforcement officials beat detainees during arrest or use excessive force or torture to extract confessions?
- Are conditions in pretrial detention facilities and prisons humane and respectful of the human dignity of inmates?
- Do citizens have the means of effective petition and redress when they suffer physical abuse by state authorities?
- Does the law allow corporal punishment, and are such penalties employed in practice?
- In countries that allow the death penalty, is it applied for crimes other than murder or in a manner that violates basic standards of justice?
- Is violent crime common, either in particular areas or among the general population?
- Is the population subjected to physical harm, forced removal, or other acts of violence or terror due to civil conflict or war?

F4. Do laws, policies, and practices guarantee equal treatment of various segments of the population?

- Are members of various distinct groups—including ethnic, religious, gender, LGBT, and other relevant groups—able to effectively exercise their human rights with full equality before the law?
- Is violence against such groups considered a crime, is it widespread, and are perpetrators brought to justice?
- Do members of such groups face legal and/or de facto discrimination in areas including employment, education, and housing because of their identification with a particular group?
- Do noncitizens—including migrant workers and noncitizen immigrants—enjoy basic internationally recognized human rights, including the right not to be subjected to torture or other forms of ill-treatment, the right to due process of law, and the freedoms of association, expression, and religion?
- Do the country’s laws provide for the granting of asylum or refugee status in accordance with the 1951 UN Convention Relating to the Status of Refugees, its 1967 Protocol, and other regional treaties regarding refugees? Has the government established a system for providing protection to refugees, including against *refoulement* (the return of persons to a country where there is reason to believe they would face persecution)?

G. PERSONAL AUTONOMY AND INDIVIDUAL RIGHTS

G1. Do individuals enjoy freedom of movement, including the ability to change their place of residence, employment, or education?

- Are there restrictions on foreign travel, including an exit visa system, which may be enforced selectively?
- Is permission required from the authorities or nonstate actors to move within the country?
- Do state or nonstate actors control or constrain a person’s ability to change their type and place of employment?
- Are bribes or other inducements needed to obtain the necessary documents to travel, change one’s place of residence or employment, enter institutions of higher education, or advance in school?

- Is freedom of movement impaired by general threats to physical safety, such as armed conflict? Do such threats lead to forced displacement?
- Do women enjoy the same freedom of movement as men?

G2. Are individuals able to exercise the right to own property and establish private businesses without undue interference from state or nonstate actors?

- Are people legally allowed to purchase and sell land and other property, and can they do so in practice without undue interference from the government or nonstate actors?
- Do women face discrimination in property and inheritance rights?
- Are individuals protected from arbitrary expropriation, and do they receive adequate and timely compensation when property is seized?
- Are people legally allowed to establish and operate private businesses with a reasonable minimum of registration, licensing, and other requirements?
- Are bribes or other inducements needed to obtain the necessary legal documents to operate private businesses?
- Do private/nonstate actors, including criminal groups, seriously impede private business activities through such measures as extortion?

G3. Do individuals enjoy personal social freedoms, including choice of marriage partner and size of family, protection from domestic violence, and control over appearance?

- Are personalized forms of violence—including domestic violence, female genital mutilation/cutting, sexual abuse, and rape—widespread, and are perpetrators brought to justice?
- Does the government directly or indirectly control choice of marriage partner or other personal relationships through means such as bans on interfaith marriages, failure to enforce laws against child marriage or dowry payments, restrictions on same-sex relationships, or criminalization of extramarital sex?
- Do individuals enjoy equal rights in divorce proceedings and child custody matters?
- Do citizenship or residency rules undermine family integrity through excessively high or discriminatory barriers for foreign spouses or transmission of citizenship to children?

- Does the government determine the number of children that a couple may have, including by denying access to or imposing birth control, or by criminalizing or imposing abortion?
- Does the government restrict individuals' choice of dress, appearance, or gender expression?
- Do private institutions or individuals, including religious groups or family members, unduly infringe on the personal social freedoms of individuals, including choice of marriage partner, family size, dress, gender expression, etc.?

G4. Do individuals enjoy equality of opportunity and freedom from economic exploitation?

- Do state or private employers exploit their workers through practices including unfairly withholding wages, permitting or forcing employees to work under unacceptably dangerous conditions, or adult slave labor and child labor?
- Does tight government control over the economy, including through state ownership or the setting of prices and production quotas, inhibit individuals' economic opportunity?
- Do the revenues from large state industries, including the energy sector, benefit the general population or only a privileged few?
- Do private interests exert undue influence on the economy—through monopolistic practices, concentration of ownership, cartels, or illegal blacklists—that impedes economic opportunity for the general population?
- Do laws, policies, or persistent socioeconomic conditions effectively impose rigid barriers to social mobility, generally preventing individuals from rising to higher income levels over the course of their lives?
- Is the trafficking of persons for labor, sexual exploitation, forced begging, etc., widespread, and is the government taking adequate steps to address the problem?

Appendix 4: Correlation matrix of the variables used in the empirical analysis

Freedom in the World Index	Gini Index	Internet penetration	Mobile Subscription	log_GDP per capita (PPP)	80/20 Income Share Index	
1,0000	-0,5066	0,5744	-0,0531	-0,0558	-0,3944	Freedom in the World Index
	1,0000	-0,4961	0,1995	0,1167	0,9079	Gini Index
		1,0000	-0,0780	0,2096	-0,4562	Internet penetration
			1,0000	0,0589	0,1966	Mobile Subscription
				1,0000	0,0991	log_GDP per capita (PPP)
					1,0000	80/20 Income Share Index

The table shows generally no to low levels of correlation, except for the highlighted values that capture moderate correlation levels. The 80/20 Income Share Index and the Gini Index are the only variables showcasing strong correlation

Appendix 5: Tests of normality and heteroscedasticity of Model 1

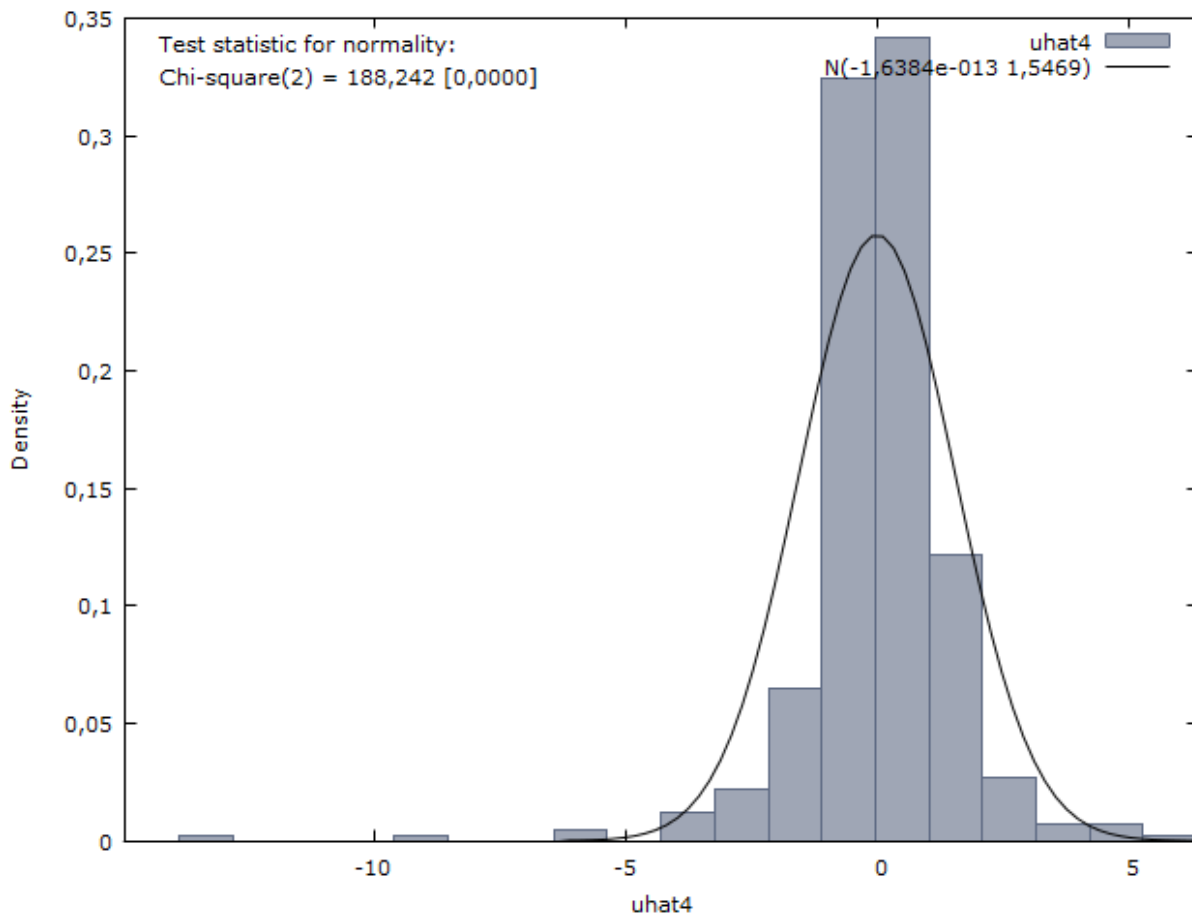
1. Testing the assumption of heteroscedasticity:

Distribution free Wald test for heteroskedasticity:

Chi-square (30) = 14010,2, with p-value = 0

The test supports to reject the null hypothesis of homoscedasticity, the model is heteroscedastic.

2. Testing the assumption of normality:

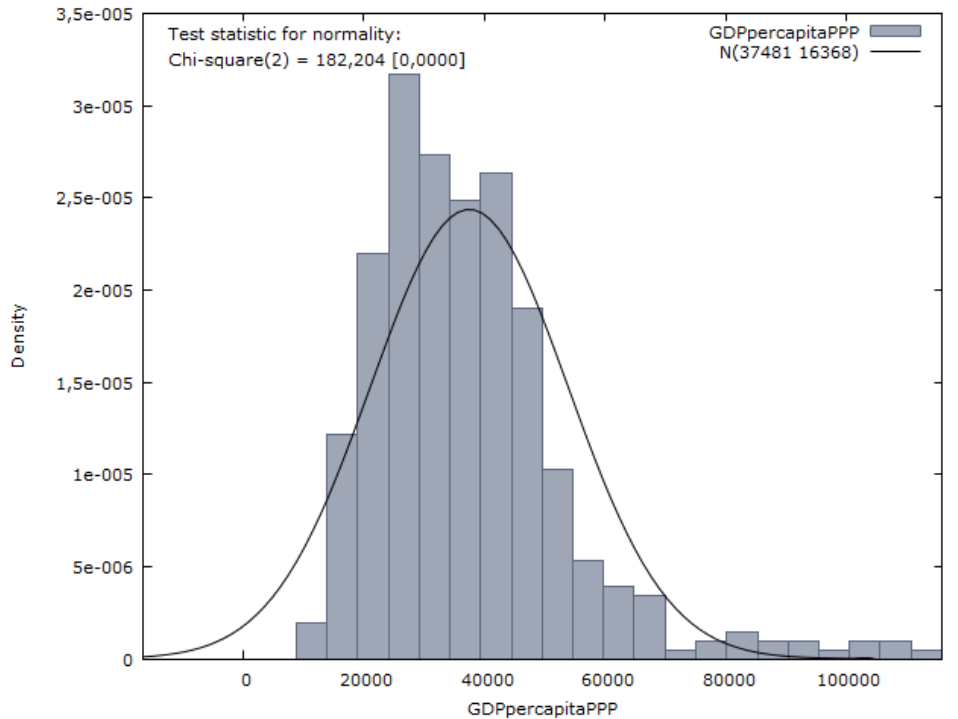


'uhat4' represents the error term of Model 1.

The test supports the rejection of the null hypothesis that the error term has normal distribution.

Appendix 6: Skewness of GDP per capita and log_GDP per capita variables

1. Distribution of the untransformed variable, testing for normal distribution:



2. Distribution of the variable after the logarithmic transformation, testing for normal distribution:

