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Laura-Kristin Baric

Niels Geiger

University of Hohenheim

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Political Implications of Economic Inequality: A Literature Survey

Laura-Kristin Baric and Niels Geiger

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Abstract

This survey documents the different arguments discussed in the academic literature on whether and how economic inequality and the emergence and stability of democratic political systems are connected. While early research in this domain has often focused on new and emerging democracies, this paper also provides an overview of the more recent literature in economics and neighboring fields that discusses democratization as well as established democracies' stability and other institutional traits. In doing so, the survey contains a critical review of both theoretical and empirical contributions on the topic. The different arguments are systematically evaluated and their core hypotheses are distilled in order to document the main lines of argumentation prevalent in the literature. Together with a summary of the theoretical arguments, the main findings of related empirical research are also documented and shortly discussed. Whereas taken together, research so far generally does not suggest any conclusive results concerning economic inequality and the emergence of democracies, the survey indicates that the stability and institutional quality of established democracies can be negatively affected by economic inequality, and it outlines the conditions for this to occur. However, additional research especially on some of the more tentative hypotheses is required to allow for a more profound understanding of the different channels and relationships. Therefore, points of departure for further research, e. g. on how to operationalize specific theoretical constructs of interest and thereby on how to get a better understanding of the relations, are also suggested.

Keywords: economic inequality, institutions, democracy, political stability

JEL Classification: D63, D72

*Laura-Kristin Baric: baric.laura@googlemail.com; Niels Geiger: geiger.econ@gmail.com. This paper is a condensed and slightly restructured version of Laura-Kristin Baric's original 2018 master's thesis. The authors are grateful to Klaus Prettner for making the publication of this working paper possible, even though both authors are no longer directly affiliated with the University of Hohenheim's Chair for Growth and Distribution.

1 Introduction

Rising levels of economic inequality in many countries, especially in the Western world, have led to growing interest in both the determinants of economic inequality as well as its potential effects. Regardless of the particular inequality measure that is used, economic inequality in developed OECD countries has increased notably in more recent decades, with the United States demonstrating the highest levels of income inequality among the developed nations (see Stiglitz 2012: p. 21; Merkel 2015: p. 185; EIU 2018: p. 21). Consequently, the reduction of economic inequality is now considered “a defining challenge of our time” (United Nations 2016), and has even been included as a development goal into the United Nations’ 2030 Agenda for Sustainable Development (United Nations: 2015c, p. 1). Indeed, the issue has increasingly become the subject of many discussions in the general public as well, as particularly exemplified by the reception of Thomas Piketty’s 2014 book *Capital in the Twenty-First Century*.

Oftentimes, the implications of economic inequality are discussed in the context of growth theory. In this particular area of research, the question of whether or not there is an “optimal” level of economic inequality in terms of economic growth is one of the oldest topics of interest. However, especially more recently, the scope has broadened and an expanding literature is aimed at analyzing the consequences (and dependencies) of economic inequality on politics in general and democratic systems in particular – not merely as a means to economic growth, but as an end in and of itself. While throughout the 20th century, many countries in Latin America, East and South Asia, Southern and Eastern Europe, and Sub-Saharan Africa experienced a process of democratization (see Huntington 1993: p. 5; Carothers 2002: p. 5), democracy has gone through a recession during the past few years, around the globe but also in many developed countries (see EIU 2018: p. 3). This democratic recession manifests itself in different phenomena such as declining political participation, increasing dissatisfaction with government, lacking political representation, deficiencies in government effectiveness or growing influence and pressures of unelected parties and interest groups (see EIU 2018: pp. 3, 21; Diamond 2015: p. 152). Considering how many countries experienced a rise in economic inequality and simultaneously a decrease in institutional measures of democratic quality, attention has been drawn to several often interrelated questions: What is the effect of economic inequality on the stability of democracies? Is the quality of democracies eroded by excessive economic inequality? Is economic inequality the reason why people restrain from democracy? Can economic inequality even trigger a change from democracy to an autocratic regime?

While there is this recent surge in interest, the debate on the connection between economic inequality and democracy has a long research tradition and different opinions about the relationship¹ between these variables have long been exchanged in respective discussions. Therefore, the present survey aims at systematically reviewing and summarizing the existing literature on the interrelations between economic inequality and

¹Whenever the term “relationship” is used in this paper (e. g. “inequality-democratization-relationship”), it refers to both causal directions. When the term “linkage” is used instead, emphasis is on a specific connection in one direction, e. g. how inequality affects democracy.

the emergence of democracy, but also between economic inequality and the stability of democracies and the quality of their institutions. Specifically, the survey also considers research which analyses the respective interrelations in developed countries, which often have not been the primary interest of research on the interrelation between economic inequality and democracy. Thereby, particular emphasis is placed on the direction that a respective contribution under review considers for the linkages between economic inequality and democracy. At the same time, the survey also indicates that the relationship may be neither simple nor unidirectional. It is important to note that, although focus is on the economics literature owing to the authors' academic backgrounds, contributions from political science and other related disciplines are also considered. And indeed, many of the more interesting arguments discussed in the survey stem from the latter branches of the academic literature.

In order to eventually provide a well-founded overview of different arguments and approaches in the literature on the nexus between economic inequality and democracy, this survey is structured as follows: Section 2 contains the main part of this paper, namely an overview and systematic assessment of relevant (and particularly of more recent) literature. Section 3 then condenses this summary by identifying the main hypotheses and channels which are discussed in that literature. Section 4 provides a few notes on empirics by pointing out the different aspects and dimensions that need to be considered as well as by providing a short discussion on some empirical variables relevant for operationalization. Finally, Section 5 concludes the paper and provides a short outlook.

2 Literature survey

In general, the literature on the relationship between economic inequality and democracy can be grouped into two broad strands: one focuses on how economic inequality features in the process of democratization (Subsection 2.1), and in the other branch, primary interest lies on the stability and (potentially reduced) functionality of already established democracies (Subsection 2.2). Naturally, arguments in the two strands are often connected, and they often feature similar ideas: For example, an increasingly unstable democracy that turns into a more authoritarian regime might experience many of the effects at work during democratization of an emerging democracy, but in reverse. Put differently, the establishment or dissolution of a democratic regime can be considered as extreme points on the scale of democratic stability. Nonetheless, distinguishing these two branches in the literature does allow for a better organized overview. Either way, connections between the two branches will be pointed out wherever appropriate, especially in the next Section 3, where the main ideas are condensed and summarized.

To provide a concise overview, empirical findings of the papers which are surveyed in the following and their main aspects and points are documented in Tables 1 and 2 (concerning democratization, Subsection 2.1) as well as Tables 3–5 (concerning democratic stability, Subsection 2.2) at the end of their respective subsections.² However, caution is

²Further references as documented in the tables are to those sources as referenced in the respective papers, and not explicitly documented in the bibliography here, unless also cited elsewhere.

advised especially with regards to interpretations of the empirical evidence summarized in the tables. Quite clearly, there is hardly a uniform standard which would make the different contributions directly comparable – both in terms of their empirical methods, and concerning the samples and specific data they use. This is a very fundamental problem indeed, as it already touches upon the question of how to measure inequality and especially democracy (also see Section 4 on this topic). Availability of objective and reliable data is an especially pressing concern for earlier papers. Nonetheless, the summary does provide an impression of what research has already been conducted, and which hypotheses have found more support than others.

2.1 Economic inequality and democratization

One of the central ideas in the literature on the linkage from economic inequality to democratization has been brought forward by Lipset (1959: pp. 75), who suggested that “[a] society divided between a large impoverished mass and a small favored elite would result either in oligarchy [...] or in tyranny”. In the more recent literature, non-quantitative research largely agrees that democracy is less likely to emerge or endure in societies with extremely high levels of inequality (see Acemoglu and Robinson 2006: p. 61). However, empirical analyses of the relationship are more scarce and often also more ambiguous, as the following survey shows. Indeed, this has led some authors to argue in favor of a non-relationship; and at the very least, this highlights the complexity of the research topic at hand.

In his strongly influential book on *Democracy and Redistribution*, Boix (2003) claims that there is a negative effect of inequality on democratization because the wealthy elites in power fear the high costs of redistribution they would incur if a democratic system was established (see Houle 2009: p. 592). Boix (2003: p. 10) argues that low levels of economic inequality increase the chances of democratization because the ruling elites will only accept democratization if redistribution costs are lower than the costs of repressing the majority of citizens by maintaining authoritarian rule. The major factor in the inequality-democratization-relationship is therefore elites’ fear of expropriation. However, this theory only takes elites’ actions into account while neglecting any influence of the other members of society (see Houle 2009: p. 593). To support the hypothesis that the probability of transition depends on the level of inequality, Boix (2003: pp. 75, 79, 82) builds a dynamic probit model, including a dichotomous democracy variable and different control variables. Based on his findings, he concludes that income inequality is associated with a decreasing probability of transitioning to democracy. He also extends his analysis to the related question of democratic stability and observes that inequality also harms the endurance of democracies. Even though Boix (2003: pp. 78, 81) also refers to reversed causality between inequality and democracy, arguing that democracy can contribute to a reduction in economic inequality (after all, this would be the driver behind elites’ fear of expropriation in his model), he does not include a test of the direction of statistical causality.

In another highly relevant contribution, Acemoglu and Robinson (2006: p. 37) suggest that democratization is related to inequality by an inverted U-shaped curve. On the one

hand, highly equal countries are not likely to democratize because the population has no incentive to revolt since redistribution gains are too small (see Acemoglu and Robinson 2006: p. 37; Houle 2009: p. 594). Only with sufficiently high levels of inequality within a country, poor citizens are inclined to initiate revolutions to potentially increase their income share (see Acemoglu and Robinson 2006: p. 34). On the other extreme, very high levels of inequality correspond to immense costs of redistribution for the ruling elites if a democracy was established. If these costs are higher than the costs of repression, democratic tendencies will be suppressed (as in Boix 2003). Therefore, extreme economic inequality prevents the transition to democracy (see Acemoglu and Robinson 2006: p. 37; Houle 2009: p. 591). Democratization is thus most likely to occur for intermediate levels of inequality because people are inclined to revolt as they are dissatisfied with the current political regime and because the elite is willing to give in, with redistribution costs being relatively low (see Acemoglu and Robinson 2006: p. 37; Houle 2009: p. 591). Acemoglu and Robinson (2006: p. 36) also consider the possibility of a democracy backsliding into an authoritarian regime by arguing that inequality negatively affects a democracy's chances to consolidate, since higher redistribution costs increase the likelihood of elites initiating a coup against democracy. This is notably different from an earlier paper, where Acemoglu and Robinson (2000: p. 1167) had explained the nineteenth-century wave of democratization and associated redistribution policies as strategic decisions by the political elite to maintain political and economic influence and to prevent social unrest and revolution, arguing that democratization was more likely at very high levels of inequality. Acemoglu and Robinson (2000 and 2006) do not include a statistical test to support their models in neither of those two papers.

With their model, Acemoglu and Robinson (2006) go further than Boix (2003). Acemoglu and Robinson (2006) consider not only the high redistribution costs of inequality for the elites, but they also incorporate the population or what might be labeled the demand side of this model (see Pengl 2013: p. 2). Therefore, they combine the factor of elites' fear of expropriation with the mechanism of potential social revolts by the majority of citizens. However, both papers still assume that the population's interest in democracy stems mainly from potential economic gains, meaning that preferences such as political efficacy are not included. Acemoglu and Robinson (2000) provide another argument, namely that democratization may come about as a result of the elites' desire to secure (at least some degree of) their power. As a general point of criticism of these models, however, it should be noted that in reality, a population's option set – especially as a collective – is not really binary, and instead several levels of social unrest exist (see Houle 2009: p. 594): At the very least, there is a potential middle ground between launching a revolution that overthrows the current regime, and not challenging the status quo at all. Additionally, whereas both models also address the question of democratic stability, they do so only fairly superficially: In Acemoglu and Robinson (2006), for example, consolidation is simply their basic democratization model with a reversed sign in their mathematical framework (see Pengl 2013: p. 3).

An important paper with regard to both, democratization and consolidation, that also builds on Boix (2003) as well as Acemoglu and Robinson (2006), is from Houle (2009). Houle (2009: p. 591) emphasizes the need to distinguish the two concepts and depicts the

fundamental differences between transitions to and from democracy. According to Houle (2009), transitions to democracy can follow different paths. Similar to Boix (2003), he states that high redistribution costs for the elites reduce the probability of democratization. Additionally and related to the argument in Acemoglu and Robinson (2006), inequality raises incentives of the population to revolt against the current political system. Thus, depending on how the population and the elites behave, the net effect of inequality on democratization is ambiguous (see Houle 2009: p. 593). He further argues that transitions away from democracy are usually driven from above and not by majority vote as it would deprive most citizens of their rights, putting them in a disadvantageous situation. As Acemoglu and Robinson (2006: p. 225) point out as well, “the move from democracy to dictatorship is almost never consensual”. Houle (2009: pp. 590 f., 607) empirically tests his hypothesis by using a dynamic probit method similar to Boix (2003) and by using linear and non-linear models without accounting for reversed causality. In contrast to the previous evidence, his main findings conclude that inequality harms consolidation, increasing the probability of a country to backslide from democracy to an authoritarian regime, but has no net effect on democratization itself (see Houle 2009: pp. 590 f.).

Savoia et al. (2010: pp. 142 f.) address the inequality-democratization linkage by assessing the implications of economic inequality on institutions in a more general sense, i. e. as the rules that provide incentives for and constraints on actors to shape outcomes (also see Acemoglu et al. 2005: pp. 386 f.). They consider an indirect relationship between inequality and democratization that acts via other institutions. On the one hand, democracy creates the necessary political environment to establish efficient economic institutions (see Savoia et al. 2010: pp. 142 f.). On the other hand, unequal societies prevent the emergence of efficient institutions, thereby impeding democratization, or they lead to inefficient and corrupt institutions with a biased distribution of resources towards a certain social group due to rent-seeking behavior of political and business elites (see Savoia et al. 2010: p. 143 ff.; Engerman and Sokoloff 2002: pp. 17 f.). Economic inequality thus undermines the quality of political and economic institutions, thereby negatively affecting democracy (see Savoia et al. 2010: p. 143). Concerning the other direction, Savoia et al. (2010: p. 146) argue that economic inequality aggravates social conflict and unrest over the distribution of resources, which destabilizes institutions and therefore increases the probability of backsliding from democracy. While Savoia et al. (2010) build their arguments on a review and analysis of different theoretical and empirical contributions, they do not conduct a separate empirical analysis. However, by explicitly including an economy’s institutional framework, they broaden the scope of considerations on the inequality-democratization-relationship and provide another channel through which the two can interact.

In general, it deserves to be noted that the empirical evidence for a specific inequality-democratization-linkage is less clear-cut than some theoretical considerations may suggest. Bollen and Jackman (1985) review and analyze the interrelations between democracy and economic inequality. By creating a non-recursive model using Two-Stage Least Squares, the authors consider both causal relations and test for simultaneity and a non-linear relationship. Bollen and Jackman (1985: p. 438) find no evidence for a statistically

significant relationship between political democracy and income inequality in neither direction. Muller (1988: p. 50) conducts an empirical test on the relationship between democracy and inequality by operationalizing democracy as a concept that operates over time via a country's years of democratic experience. Muller (1988: p. 65) argues that new democracies with almost no democratic "experience" and weak democratic institutions cannot be as egalitarian as old democracies (note, however, that this inevitably presupposes some egalitarian effect of democracy). He first tests the relationship between years of democratic experience and income inequality; then the interrelations between income inequality and the stability of democracy. Stability of democracy in this context refers to its consolidation and the likelihood of backsliding, and not to the elements determining democratic stability in established democracies. Running a point-biserial correlation analysis, Muller (1988: pp. 61 ff.) argues against a relationship between income inequality and democratization, but for a highly negative correlation between income inequality and consolidation based on correlation and regression analyses. Regarding the reverse direction, his analysis reveals a significant negative effect of democracy on income inequality, when existing for a relatively long time (see Muller 1988: p. 50). In a later paper, Muller (1995) analyses the linkage between economic development and democracy and hypothesizes that income inequality affects democracy, which in turn negatively affects economic development. Muller (1995: p. 966) concludes a robust negative effect of income inequality on democratization as well as on changes in the level of democracy. Muller (1995: p. 977) briefly refers to potential omitted-variable bias resulting from a reciprocal relationship but dismisses this objection by simply referring to the findings of Bollen and Jackman (1985). Barro (1999) explicitly considers different determinants to analyze their effects on democratization, such as per capita GDP, primary schooling, gap between male and female primary attainment, ethno-linguistic fractionalization, rule of law, colonial history, religion, and, most relevant in this context, income inequality. Barro (1999: p. 171) concludes that higher levels of income inequality result in lower levels of democracy (as measured by a variable of institutional quality) with the size of the middle class having a major impact on the extent of democracy. No separate test to control for endogeneity is conducted.

As noted earlier, Savoia et al. (2010) point out the relevance of institutions in the inequality-democratization-linkage. Especially in this relationship, it is clear that not only can economic inequality affect the probability of democratization and backsliding, but that causality can very well run in the opposite direction, too, namely that the actual level of economic inequality is a function of the political regime. Early research on this direction stems from Lipset (1960) and Lenski (1966). Lipset (1960) focuses on the role of elections in democracies, arguing that the majority votes for those parties that concentrate on the interests of the working-class or middle-class (also see Bollen and Jackman 1985: p. 438). As democracy gives franchise to the previously disadvantaged lower-income groups and as it is based on political competition for votes, democracy increases responsiveness to the preferences of the less affluent citizens (see Gradstein and Milanović 2004: pp. 517 f.). Similarly, Lenski's (1966: pp. 44 f.) theory states that the redistribution of political power towards the poor leads to more economic equality as the

demands of the majority imply a more even distribution of resources, and because the suppression of the majority of the poorer population does not comply with democratic institutions in the long run (see Bollen and Jackman 1985: p. 439 f.). These arguments feature in two additional channels of the inequality-democracy relationship: (1) preferences in favor of redistribution lower the level of economic inequality under democracy, especially because (2) democracy enables political competition.

To analyze this situation, the median voter model of Meltzer and Richard (1981) constitutes an important theoretical reference. In this model, voters' preferences on the ideal level of redistribution and economic inequality differ, and the tax rate represents the magnitude of redistribution. People earning higher incomes tend to favor lower tax rates and less redistribution, while voters with incomes below the mean income demand higher taxes and redistribution (see Meltzer and Richard 1981: p. 924). Democratization grants political power to those who are likely relatively poor (and given a right-skewed income distribution, the majority earns an income below the mean), so the median voter shifts towards poorer parts of society and advocates their higher preference for redistribution (see Acemoglu et al. 2015: p. 1890; also see Savoia et al. 2010: p. 143). Closely related, the model predicts the actual degree of redistribution to increase with prevalent inequality (see Kenworthy and Pontusson 2005: p. 450). Whereas Meltzer and Richard (1981) did not provide an empirical test of their model, it has been applied in various empirical studies ever since.

In their comprehensive paper, Acemoglu et al. (2015: pp. 1886, 1953) build on the median voter model, but point out where and why the democratization-inequality-linkage may be weak. Acemoglu et al. (2015: pp. 1886 ff.) propose three potential reasons. (1) Democracy may be "captured" by the richer parts of the population. This resembles the discussion on democratic stability, as surveyed in Subsection 2.2. (2) In contrast to what the median voter model suggests, democracy may be more responsive to the preferences of the middle class, which differ from those of the poorer segments of society. In that case, democracy does lead to increased taxes and redistribution, but not to the extent indicated by the median voter model. (3) Democracy, at least in its early stages, opens up disequalizing opportunities to parts of the population that were previously excluded or disadvantaged, therefore increasing economic inequality especially early on following democratization. As two cases in point, consider, for example, the emergence of democracies in Eastern Europe and Latin America in the second half of the 20th century, which generally coincided with increases in economic inequality (see Gradstein and Milanović 2004: p. 532; Freeman 2017: pp. 6 f.)

Yet another perspective on the democratization-inequality-linkage is provided by Rodrik (1999: p. 727), who argues that due to their stable institutional structure and enforcement of the rule of law, democracies are positively associated with higher average real wages and a larger labor share. As argued by other authors, democratic trademarks such as free and fair elections, separation of powers and political checks and balances contribute to political accountability, which reduces rent-seeking behavior and thus leads to higher equality (see Savoia et al. 2010: p. 146; Barro 1999: p. 158). Accordingly, a reduction in inequality occurs because democracy strengthens workers' position in relation to capital owners by allowing for freedom of association and collective bargaining.

2 Literature survey

With a bigger labor share, the part of national income that largely accrues to the higher income shares – namely capital income – is smaller, and thus has less of an effect on overall income inequality. Rodrik (1999: p. 708) confirms his hypothesis in cross-section and panel regressions with country fixed effects, controlling for labor productivity, income levels, and other possible influencing factors. Rodrik (1999: pp. 709, 718, 723) also provides both empirical and historical support for the claim that causality runs from democracy to wage levels (and thus reduced inequality).

Overall, however, empirical evidence for causality running in a particular direction is mixed. In their review of previous work from Cutright (1967) and Jackman (1974), Rubinson and Quinlan (1977) consider a reciprocal relationship between democracy and income inequality in their empirical analysis. In a simultaneous equation model, Rubinson and Quinlan (1977: p. 611) find a negative effect of inequality on democratization but less evidence for the hypothesis that democratization reduces inequality (also see Muller 1988: p. 50). Taken as a whole, therefore, the evidence remains inconclusive. In part, this may be due to the primarily binary understanding of democracy as either in place or non-existent in this line of research. Potentially, a more refined picture that allows for differences in degree and for more diverse institutional setups, can provide further insights. This literature that discusses the relationship between economic inequality and democratic stability (here used as a catch-all term for different aspects related not just to the stability, but also to the institutional quality of a democratic regime) is presented in the following subsection.

Author and Perspective	Relationship	Methodology	Measure of Inequality	Measure of Democracy	Sample	Consideration of Reversed Causality
Acemoglu et al. (2015), Economics	No relationship between democracy and inequality.	Standard generalized method of moments (GMM) with country and time fixed effects and modeling dynamics of inequality and redistribution.	Income Gini coefficient from the Standardized Worldwide Income Inequality Database (SWIID) (2009).	Democracy index by Papaiannou and Siourounis (2008) extended with information from Freedom House and Polity data sets.	A yearly and a 5-year panel of 184 countries from independence, or 1960 to 2010 respectively.	Democracy→Inequality, no empirical consideration of reversed causality.
Barro (1999), Economics	Negative effect of inequality on democracy.	Dynamic specification and panel estimation with seemingly unrelated regression (SUR) method and control variables.	Income Gini coefficient from Deininger and Square (1996) (adjusted) and Income Quintiles of the middle class from Deininger and Squire.	Indicator of electoral rights by Gastil and Freedom House (1972 to 1995), and Bollen's (1990) index.	Panel of over 100 countries from 1960 to 1995.	Inequality→Democracy, no empirical consideration of reversed causality.
Boix (2003), Politics	Negative effect of inequality on democratization and democratic consolidation.	Dynamic probit model with control variables.	Income Gini coefficient from Deininger and Square (1996) and Family farms as a percentage of the total area of holdings by Vanhanen (1997).	Democracy as dichotomous variable (takes on value 1 for democracy and 0 otherwise).	Sample of over 50 countries (from 1950 to 1990 for Gini coefficient, from 1850 to 1980 for % family farms).	Inequality→Democracy, no empirical consideration of reversed causality.
Bollen and Jackman (1985), Sociology and Politics	No relationship between inequality and democracy.	Nonrecursive model using 2SLS and a new weighted 2SLS procedure with control variables.	Income Quintiles from the World Bank.	Bollen's (1980, 1979) index of political democracy for 1965.	60 countries.	Both, Democracy ↔ Inequality.

Table 1: Empirical review: economic inequality and democratization. Overview of the empirical findings of the relationship between inequality and democratization based on the literature review in Subsection 2.1.

Author and Perspective	Relationship	Methodology	Measure of Inequality	Measure of Democracy	Sample	Consideration of reversed Causality
Houle (2009), Politics	No relationship between inequality and democratization, negative effect of inequality on consolidation.	Dynamic probit model, linear and nonlinear model with control variables.	Capital shares for inequality from Ortega and Rodriguez database (2006)	Democracy index of Przeworski et al.'s extended database (2000).	Sample of 116 countries (Democracy data from 1960 to 2000, inequality data from 1950 to 2002).	Inequality→Democracy, no empirical consideration of reversed causality.
Muller (1988), Sociology	No effect of inequality on democratization, negative effect on consolidation. Negative effect of democracy on inequality.	Point-biserial correlation and bivariate regression analysis.	Income Gini coefficient and Income Quintiles from the World Bank.	Democracy as binary variable, stability versus instability from Bollen's (1980) Political Democracy Index (PDI).	Sample of 55 countries from 1965 to 1975 and 33 countries from 1961 to 1980.	Both, Democracy ↔ Inequality, but two separate analyses.
Muller (1995), Sociology	Negative effect of inequality on democratization.	Multivariate analysis.	Income Gini coefficient and Income Quintiles from the World Bank.	Democracy scores from Bollen (1969, 1993).	58 countries (1970).	Inequality→Democracy, no empirical consideration of reversed causality.
Rodrik (1999), Economics	Negative relationship between democracy and inequality (due to positive effect of democracy on average real wages).	Cross section and panel regression using country fixed effects (wages are regressed on measures of democracy as well as other determinants) and 2SLS estimation.	Average level of wages in manufacturing from World Bank Labor Market Data Base (WBLMDB) (1996) and U. S. Bureau of Labor Statistics (BLS) (1998).	Democracy measure by Gastil and Freedom House (1994, 1996) and Polity III data set of Jaggers and Gurr (1995).	From 1990 to 1994 with BLS for 29 countries, from 1985 to 1989 with WBLMDB/UNIDO data for 138 countries.	Democracy→Inequality, consideration of reversed causality.
Rubinson and Quinlan (1977), Sociology	Negative effect of inequality on democratization but no effect of democracy on inequality.	Instrumental Variables (IV) regression.	Gini index of personal income inequality by Paukert (1973).	Cutright and Jackman's index of democracy (Reanalysis).	32 countries.	Both, Democracy ↔ Inequality, but small sample size.

Table 2: Empirical review: economic inequality and democratization, *continued*. Overview of the empirical findings of the relationship between inequality and democratization based on the literature review in Subsection 2.1.

2.2 Economic inequality and democratic stability

As the previous subsection has shown, there is no decisive result on the inequality-democratization-relationship that can be taken from both the theoretical and empirical literature on the topic. To go a step further, the related – but not identical – question of the interrelations between democratic stability and economic inequality is considered next. With many arguments, the parallels to considerations presented in the previous subsection will become apparent. However, it will also be clear that democratic stability constitutes a more “zoomed-in” factor in this context: given rising economic inequality, for example, the question of a democracy backsliding into an authoritarian regime does not need to be binary, and instead depends on the quality of democratic institutions (among other factors, arguably). As Crouch (2012: pp. 8 f.) points out, a democracy will only endure if the majority of the population has the possibility to participate, e. g. via political debates or membership in organizations, and by actively making use of these possibilities. There are three channels through which economic inequality may exert an influence here, and they can be described in relation to Dahl’s (1971: p. 2) definition of democracy: “People need to articulate their preferences and communicate them” presupposes political participation, whereas “and these preferences, in turn, need to be equally considered by government without any discrimination” is relevant in context of the questions of whether or not richer parts of the population have disproportionate political influence, and how well the democratic system responds to its different citizens.

Concerning this strand of the literature, therefore, three main mechanisms by which economic inequality affects democratic stability (and vice versa) are central to the present survey: A disproportionate influence of wealthy elites and democratic responsiveness (which are directly intertwined), as well as political participation in general. With regard to the first two factors, the primary focus of research so far has been on developments in the United States: Here, the increase in income inequality that can be observed for developed countries since the 1970s was especially pronounced (see Piketty 2014: p. 15; EIU 2018: p. 21), leading some observers to go as far as to state that “concentration of income and wealth threatens to make [the United States] a democracy in name only” (Krugman 2011). The share of total income earned by the top 0.1% or top 1% of income-earners in the United States has increased substantially: The share going to the top 0.1% has increased threefold from 3.3% in the late 1950s to 10.3% in 2014, and the share going to the top 1% has doubled during the same period to 21.2% (see Bartels 2016: p. 1). While these developments provide good reasons for the particular interest in the United States’ democracy as one where those at the top of the income and wealth distribution may have disproportionate political influence (as noted e. g. by Stiglitz 2012: p. xi or Page et al. 2013: p. 51), it should nonetheless be mentioned that the United States – and therefore, the results from respective research – might not be representative of or directly comparable to other established democracies, e. g. in continental Europe.

In general, the core of this argument is that high levels of economic inequality translate into imbalances in political power, therefore lowering democracy’s potential and stability (see Dahl 1971: p. 82). Economic inequality leads to the creation and reinforcement of a wealthy elite that can influence political decisions to their own advantage by translating

their large share of economic resources into political resources (see Dahl 1971: p. 82; Bollen and Jackman 1985: p. 440). Likewise, Stiglitz (2012: p. 39) theoretically elaborates this argument by means of the term “rent-seeking” and claims that government gives disproportionate power to those at the top of the income distribution who make use of said power by reducing redistribution and thus further increasing their own income share. If this happens, political inequality may reinforce economic inequality, resulting in a democracy-threatening feedback loop (see Frank 2014). This chain of causation, however, is hard to pin down empirically: For one, there are no statistical estimates such as a Gini coefficient of political inequality (see Schlozman et al. 2012: p. 15). Additionally, a disproportionate political influence of the upper classes does not necessarily translate into different policies – indeed, it does so only to the extent that their preferences are different from those of the rest of society.³

In the previous section, Acemoglu et al. (2015) were referenced with their argument that democracy does not necessarily reduce economic inequality, because the political system may be “captured”. What Acemoglu et al. (2015: p. 1887) mean is that whereas democracy changes the distribution of *de jure* power to benefit poorer parts of the population, *de facto* power may remain with the wealthy classes, thus preventing redistribution. Indeed, political power in a society is determined by both: political institutions (*de jure* power) and the distribution of resources (*de facto* power; see Acemoglu et al. 2005: pp. 387, 390, 392). Wealthy elites who hold *de facto* political power can then use said power outside the traditional democratic channels: For example, they can influence politics and control political agendas by means of lobbying or repression, or through control of local law enforcement (see Acemoglu et al. 2015: p. 1895). Furthermore, it could be added that high income and wealth allow the respective citizens to exert political influence via different media channels. The model implies a dynamic framework over time: Agents with high *de facto* political power try to change political institutions in order to increase their *de jure* political power in the future (see Acemoglu et al. 2005: p. 387) – which would endanger the democratic regime that underlies the distribution of *de jure* power. On the other hand, of course, *de jure* political power, if successfully used for redistribution, affects future *de facto* political power. It is clear how these considerations are closely interrelated and provide further depth to the previous subsection’s notes on the democratization-inequality-relationship (e. g. as in Boix 2003; or the references to Acemoglu et al. 2015: p. 1888).

If the theory suggests that causality can run both ways, and the system is dynamic over time, empirically assessing the relationship, e.g. by measuring differences in political preferences, and whether and how high-income, wealthy individuals exert political influence, becomes especially important. In this context, the United States is a country of primary interest, because the income and wealth distributions are not only more skewed compared to other industrialized economies, but also, as Bartels (2017a: p. 1) points out, due to the distinctive features of its political system such as private campaign financing,

³This is not to claim that there are no such differences. As some of the literature surveyed in the following shows, there certainly are. However, this is not a logical necessity. Empirically, too, unequal political influence can only be demonstrated if policy preferences actually differ between affluent and poorer citizens (see Page et al. 2013: p. 67).

weak labor unions, or the individualistic political culture.

Gilens (2005: pp. 779 ff.; also later in *Affluence and Influence*, Gilens 2012) compares data from extensive surveys recording public preferences on diverse policy issues of different economic groups over two decades with actual outcomes of policy-making. Respondents are categorized according to three different income groups, the lowest 10th percentile, the middle 50th and the affluent 90th percentile of income earners. In a logistic regression analysis, Gilens (2005: p. 784) regresses policy outcomes as a dummy variable, with 1 representing change and 0 status quo, on the percentage of respondents being in favor of the proposed change. The empirical evidence supports the hypothesis that policy corresponds more to higher-income earners' preferences at the expense of middle- and low-income earners, i. e. that proposals are more likely to become adopted if they are supported by the income distribution's top tiers (see Gilens 2005: pp. 786, 788). Gilens (2005: p. 791) also discusses the multifaceted relationship between public preferences and government policy and theoretically elaborates why causality runs from policy preferences of different income groups to policy outcomes.

In similar research that builds on survey data on foreign policy, Jacobs and Page (2005) reveal a relatively small influence of the general public compared to business leaders on U. S. foreign policy by means of cross-sectional and time-lagged analyses. Winters and Page (2009) also analyze political influence, but do not operationalize the variable of political influence and instead simply assume that money income and wealth translate into political power. Similar work by Bartels (2009) assesses the distinctive responsiveness of U. S. senators by analyzing the relationship between recorded policy choices of elected senators and the policy preferences of different income groups. Running ordinary regressions and probit analyses of U. S. senators' roll-call votes to the preferences of different constituents reveals that senators' policy-making corresponds more to the opinions of high-income constituents and is less responsive to policy preferences of constituents with modest incomes (see Bartels 2009: pp. 168 f.). On average, constituents which are located in the upper third of the income distribution can accordingly influence senators' general voting patterns two times more than constituents in the middle third, whereas senators barely consider the interests of the bottom third in decision-making (see Bartels 2009: p. 169). The general result also largely holds when controlling for other influencing factors, such as wealthier income group's higher tendency to vote (see Bartels 2009: pp. 183 ff.).

Page et al. (2013: p. 51) assess the political attitudes and actions of the top 1% of U. S. wealth holders within a pilot study for the Chicago metropolitan area. While the sample size of this survey is small, it manages to capture preferences of those at the top of the wealth distribution better than general population surveys can. Summarizing the results, Page et al. (2013: p. 51) conclude that the top 1% of the population is more politically engaged and on average holds more conservative views compared to the majority of the U. S. population. These attitudes apply to policies regarding taxation, economic regulation and social welfare measures. However, Page et al. (2013) do not compare their survey results with actual policy outcomes in the United States. Instead, they run regression analyses on the relationship between economic wealth positions and policy preferences. Thus, Page et al. (2013) provide evidence for the other component that matters to determine whether and how disproportionate influence may shape policy

outcomes, namely by suggesting that there are indeed discrepancies between the political preferences of the most affluent citizens as compared with the general population.

Going beyond the United States, Bartels (017a: p. 1) examines the relationship between public preferences and social spending encompassing age pensions, health, education, or unemployment benefits in thirty affluent democracies over the past three decades. The central hypothesis is that more affluent citizens are less in favor of welfare state policies than poorer ones. In order to identify preferences of different income groups, he runs regression analyses on average levels of support for social spending policies among high- and low-income survey respondents. Shifts in social spending in the two years following each survey serve as an indicator for policy changes (Bartels 017a: p. 15). Bartels (017b) derives a low-income responsiveness ratio, a parameter which assesses the relative impact that people at the lower section of the income distribution have on social spending in each country-year; a ratio of 1 implies that the opinions of affluent and poor people are equally represented in social spending decisions, while a value of 0 implies that poorer citizens' opinions have no influence on social policy. Bartels (017b) tentatively concludes that government's responsiveness regarding social spending policies is also highly biased towards more affluent citizens in established democracies other than the United States, and predicts that this biased responsiveness lowers the equilibrium level of social spending by 10–15% (Bartels: 2017b). It should be noted, however, that Bartels's sample of social policies is quite small and heterogeneous, which severely limits the possibility to draw general conclusions. Thus, much more research on other countries and policies is necessary for a more comprehensive assessment.

Overall, this line of work therefore suggests a potentially destabilizing influence of income inequality on democracy via the channel of responsiveness: Those at the top of the income and wealth distribution tend to have different political preferences than the rest of the population (at least on some matters), and they can additionally have relatively higher political influence. These results are quite consistent, especially when compared with the literature on democratization as presented in the previous subsection. In fact, as already indicated earlier, some authors have even argued that due to disproportionate political influence of top income holders in the U. S., the political system rather resembles an oligarchy instead of a democracy (see e.g. Winters and Page 2009: p. 731; also Krugman 2011, already quoted earlier). The connection with the inequality-democratization-relationship is clear: Reduced democratic responsiveness may increase discontent with democracy and in the extreme even ignite social revolts and a backsliding from democracy into an authoritarian regime.

There is also research (for example Cutright 1967) on the other direction in this relationship, namely from political equality and representativeness to reduced economic inequality (similar to the arguments on how democratization may affect economic inequality), but the linkage from economic inequality to democratic stability is discussed more prominently in the literature. While many of these contributions can be criticized for not considering what determines political preferences (other than maybe income and wealth), as e. g. argued by York (2017), it should be noted that the cause of different political preferences is not immediately required to assess the question of, given those differences, whether or not some citizens are able to exert more political influence. How-

ever, further research should definitely put more focus on other conflating factors that differ between more and less affluent citizens: For example, wealthy respondents may be better informed or have a different understanding of economic and social reality due to differentiated access to media or education (see Page et al. 2013: p. 67).

In a democracy, economic inequality can also affect policy more indirectly, namely by affecting political participation in general. Political participation describes citizens' actions to influence politics (see Brady 2004: p. 669). One of the most relevant forms of participation is voting (see Schäfer 2010: p. 137; Crouch 2012: p. 10). Other actions typically involve engaging in public debate, becoming members of political parties, attending legal demonstrations, getting involved in campaigns or making financial contributions for campaigns (see Verba et al. 1995: p. 2; EIU 2018: p. 63). In Europe, for example, political participation is more present in voting, while in America it is often performed in terms of financial campaign contributions or campaign work (see Brady 2004: p. 669). If, for example, due to being economically marginalized, some citizens no longer actively participate in political acts such as voting, this implies a higher influence on policy outcomes for those citizens who are still involved in political participation. Naturally, reduced political participation of poorer parts of the population also affects how well they are represented in the democratic process, and therefore the ability of government to respond to their interests (see Merkel 2015: p. 189). A reduction in voter participation especially among the poorer parts of society thus tends to increase the disproportionate impact of the well-off citizens on politics (see Page et al. 2013: p. 51; Taylor 2017). Therefore, the effect of economic inequality in a democratic system as described before could be even stronger due to the additional effects through this channel. Simultaneously, when people feel that government does not respond to their needs, they may simply react by withdrawing from political participation (which would constitute an effect by which a disproportionate political influence of the wealthy leads to decreases in political participation of the less affluent). Both arguments are therefore closely interlinked.

Obviously, the linkage from inequality to political participation crucially hinges on the question of how exactly people at the lower end of the income distribution actually behave in terms of their political participation. Indeed, reduced activity does not need to be the default behavior in response to increased economic inequality: Recall, for example, many of the arguments on economic inequality and democratization as discussed in the previous subsection, where social unrest or revolts constituted crucial components. Therefore, different and competing claims about the connection between economic inequality and political participation exist. The argument that economic inequality increases political participation originates from the view that people blame politics for their bad economic situation, therefore they mobilize themselves via voting, organizing, lobbying, protesting and other forms of participation to counteract this situation (see Rosenstone 1982: p. 25). In the same manner, Solt (2008: p. 49) argues from a conflict theory perspective that inequality increases polarization among people, and therefore, increases participation of all social groups (see Schäfer 2010: p. 136). This claim builds on the assumption that individuals' political preferences are shaped by their relative position in a country's income distribution. It argues that the preferences of richer and poorer citizens differ, and that they differ more the higher the discrepancy is. Poorer citizens, for example, demand

redistributive policies to improve their circumstances and to reduce their distance to the wealthy (see Solt 2008: p. 49; Brady 2004: p. 675). They further aim to oppose the demands of the rich who tend to vote against redistribution as redistribution costs they would incur increase with rising inequality (Solt 2008: p. 49). Therefore, lower levels of inequality result in fewer discrepancies in preferences and a broader consensus, and less need for political engagement (see Solt 2008: p. 49). This claim is also supported by Lipset (1960: p. 187): “groups subjected to economic pressures with which individuals cannot cope, such as inflation, depression, monopolistic exploitation, or structural change in the economy, might also be expected to turn to government action as a solution and to show a high voting average.”

Several other arguments support the claim that economic inequality instead reduces political participation of the less affluent part of society. The relative power theory of political engagement implies that the concentration of income and wealth translates into political power and influence. Higher economic inequality then increases the relative power of the more affluent citizens to shape politics. This basically describes the channel as discussed before, i. e. a disproportionate political influence of the wealthy parts of the population. In such a situation, poorer citizens may feel that political debate does not address their interests and give up on participating in politics (see Solt 2008: p. 48; Galbraith 2012: p. 153). In a similar vein, Goodin and Dryzek (1980) assume that political engagement decreases with growing inequality because the population pessimistically assesses their chances to influence politics (see Schäfer 2010: p. 136). They refer to the concept of political efficacy, i. e. “the feeling that individual political action does have, or can have, an impact upon the political process” (Campbell et al. 1954: p. 187), which determines people’s decisions to participate in politics. Citizens who feel that they can actually influence politics tend to participate more while those who feel powerless tend to withdraw (see Goodin and Dryzek 1980: p. 273; Brady 2004: p. 674). Another theoretical argument is that people who are faced with severe economic problems are under psychological stress and more preoccupied with their personal situation. As a result, external matters are of secondary importance and people withdraw from politics (see Rosenstone 1982: p. 26). These factors, as argued before, would constitute an additional channel that reinforces the same effect.

Approaching the discussion from another perspective, the resource theory implies that economic inequality affects political participation only to the extent that it determines the available means and resources to engage in politics (see Solt 2008: p. 50). Analogously to a usual consumption decision, individuals engage to the degree to which they are able and willing to pay the costs (see Solt 2008: p. 50; Brady 2004: p. 678). Higher levels of inequality correspond to fewer resources available to the poor to pay the costs of political engagement, therefore reducing their political participation (see Solt 2008: p. 50). Simultaneously, the resource theory implies that richer people have more resources than less affluent shares of the population, and these resources affect their personal capacity to participate in politics (see Brady 2004: p. 675). Once again, this argument is highly similar to those on the disproportionate political influence of wealthy citizens, but focuses more on the question of economic resources necessary for political participation in the first place. Verba et al. (1995: p. 11) argue in a similar fashion: if resources are

unequally distributed, chances to get heard by decision makers differ and not everyone can participate in the way he or she wants to.

Summarizing the different theoretical arguments, the relationship between economic inequality and political participation can be described by the polarization argument, the withdrawal argument, and the resource argument. Unfortunately, empirical evidence of the linkage between economic inequality and political participation is still scarce since studies on political engagement have often focused on cross-sectional data, which implies that income inequality is fixed, while focusing on occupational and educational factors as major determinants of participation (see Brady 2004: p. 14).

Rosenstone (1982: pp. 31, 33, 39) runs a probit regression analysis to model the dichotomous dependent variable voter turnout and incorporates several demographic variables such as household income and unemployment to estimate the partial effect of economic adversity on voter turnout in the United States in the 1974 election and for presidential and midterm elections between 1896 and 1980. He concludes that economic adversity negatively affects voter turnout (see Rosenstone 1982: p. 41), i. e. supports the withdrawal argument that less affluent citizens are less politically active. Brady (2004: pp. 644, 670) examines the effects of changes in income inequality from the 1980s to the 1990s on unequal political participation between different income groups. He concludes that no clear relationship between inequality and political participation exists due to contradictory results (see Brady 2004: pp. 691 ff.). For example, the results differ between a time series analysis and a cross-sectional study: Analyzing participatory inequality over time from 1970 to 1990 predicts a negative relationship; higher income inequality is associated with decreasing participatory inequality. But when scattering income inequality and participatory inequality across 29 states in 1985, participatory inequality increases with increasing income inequality, suggesting a strong positive relationship (see Brady 2004: pp. 692, 695). Solt (2008: p. 48) uses data from multiple cross-national surveys of advanced industrial democracies. Variables include income, political engagement and overall economic inequality. The multi-level regression model reveals a strong negative relationship between income inequality and political interest, discussion, and participation among income earners in the low and medium quintiles, but not for the high-income quintiles, which supports the claim that income inequality effectively increases the political influence of top income earners, thus undermining political equality (see Solt 2008: p. 57).

Goodin and Dryzek (1980) model political participation through rational choice theory and expected utility calculation. One main determinant entering this calculation is the probability of getting a net gain from the election, which is influenced by people's relative economic power and by the utility they gain from participating (see Goodin and Dryzek 1980: pp. 278, 289). Running regression analyses, Goodin and Dryzek (1980: pp. 283, 287 f.) find a negative relationship between income inequality and turnout in a sample of 38 democracies around 1957 and across 42 U. S. communities in the early 1960s. Goodin and Dryzek (1980: p. 283) further state that relative economic power strongly determines political participation, providing additional support to the claim that economic inequality affects democratic responsiveness. Uslaner and Brown (2005: p. 869) suggest that economic inequality directly affects political participation, but also indi-

rectly via its effects on trust in politics. Running a two-stage least squares analysis on the relationship between economic inequality and trust on participation, Uslander and Brown (2005: pp. 868, 882, 889) find that inequality is strongly negatively related to the level of trust. At the same time, the authors find no evidence that economic inequality directly affects political engagement and only limited evidence that political participation depends on trust. Once more, this puts the other results on the economic inequality democracy linkage into perspective.

Considering descriptive statistics, Galbraith (2012: p. 16) argues that U. S. states with higher levels of inequality are associated with lower levels of voter turnout in presidential elections. Galbraith (2012) also zooms in on the structure of these differences and assesses the effects of inequality on voter turnout and the consequences for election outcomes and party choices, i. e. he considers the geographic dispersion of richer and poorer people in the United States and analyses associated election outcomes in support of Democrats or Republicans. Levin-Waldman (2013: p. 83) finds that political participation increases with income so that households with higher incomes participate more in politics, thus affecting democratic responsiveness. Overall, there is some support for the claim that economic inequality negatively affects democratic responsiveness both due to a disproportionate influence of the top share of the wealth and income distributions as well as due to reduced activity by less affluent citizens, but more empirical research – especially on countries other than the United States – is necessary to get a better picture of the linkage.

Author and Perspective	Relationship	Methodology	Measure of Inequality	Measure of Democracy	Sample	Consideration of Reversed Causality
Bartels (2009), Politics	Negative effect of inequality on political responsiveness of U.S. Senators to constituents.	Ordinary regression and probit analysis, repetition with instrumental variable estimation.	Inequality is incorporated into the analysis by categorizing survey respondents according to different income levels.	Degree of senators' responsiveness to different constituents with varying income levels.	Focus on United States, data from the Senate Election Study (1988, 1990, 1992) by the National Election Studies (NES) research team.	Inequality→Political responsiveness, no empirical consideration of reversed causality.
Bartels (2017), Politics	Negative effect of inequality on political responsiveness in affluent countries regarding social spending policies.	Nonlinear regression analysis with country fixed effects. Creation of a low-income responsiveness ratio.	Inequality is incorporated into the analysis by categorizing survey respondents according to different income groups.	Degree of government's responsiveness to the opinions of different income groups regarding social spending.	Public opinion data conducted in 30 established democracies between 1985 and 2012 from the International Social Survey Programme (ISSP), World Values Survey (WVS), European Values Survey (EVS).	Inequality→Political responsiveness, no empirical consideration of reversed causality.
Cutright (1967), Sociology	Negative effect of political representation on inequality. A more equal distribution of political power is related to a more equal distribution of earnings.	Regression analysis to analyze the percentage change in inequality explained by the distribution of power.	Index for inter-sectoral inequality developed by Kuznets, compares the degree to which "worker participation income" in eight sectors of the economy is equal or unequal.	Distribution of power, measured by the Political Representativeness Index from 1945 to 1954.	Data covers 44 non-communist nations and eight communist nations.	Political responsiveness → Inequality, no empirical consideration of reversed causality.

Table 3: Empirical review: economic inequality, political influence and responsiveness. Overview of the empirical findings of the relationship between economic inequality and disproportionate influence or democratic responsiveness, respectively. As discussed in Subsection 2.2.

Author and Perspective	Relationship	Methodology	Measure of Inequality	Measure of Democracy	Sample	Consideration of Reversed Causality
Gilens (2005), Politics	Negative effect of inequality on political responsiveness.	Quadratic logistic regression technique to assess the strength of relationship between policy preferences and policy outcome.	Inequality is incorporated into the analysis by categorizing survey respondents according to different income percentiles.	Degree of government's responsiveness regarding policy changes to the preferences of its citizens.	Focus on United States, data set consists of 1,935 survey questions between 1981 and 2002.	Inequality→Political responsiveness, no empirical consideration of reversed causality.
Gilens and Page (2014), Politics	Negative effect of inequality on political responsiveness. Strong impact of economic elites and organized groups on U. S. government policy.	Multi-variate regression analysis.	Inequality is incorporated into the analysis by categorizing survey respondents according to different income percentiles.	Degree of government's responsiveness to the preferences of different actors according to the traditional American political theories.	Focus on United States, Data from Gilens (2005).	Inequality→Political responsiveness, no empirical consideration of reversed causality.
Jacobs and Page (2005), Politics	Negative effect of inequality on political responsiveness. Strong influence of business leader's preferences on U. S. foreign politics.	Multivariate regression analysis: Cross-sectional (1), cross sectional and time-lagged analysis with lagged dependent variable (2), two-observation time series analysis with lagged variables (3), Change measures for dependent and independent variables (4).	Inequality is incorporated into the analysis by categorizing respondents according to their status which is assumed to result from income.	Degree of politics' responsiveness regarding foreign policy issues to the preferences of its citizens. Indicator for foreign policy making are the expressed preferences of foreign policy decision makers.	Focus on United States, Survey data from 1974 to 2002 sponsored by the Chicago Council on Foreign Relations (CCFR) and implemented by the Gallup and Harris organizations.	Inequality→Political responsiveness, consideration of reversed causality in the regression models. Incorporation of two-observation time series analysis.

Table 4: Empirical review: economic inequality, political influence and responsiveness, *continued*. Overview of the empirical findings of the relationship between economic inequality and disproportionate influence or democratic responsiveness, respectively. As discussed in Subsection 2.2.

Author and Perspective	Relationship	Methodology	Measure of Inequality	Measure of Democracy	Sample	Consideration of reversed Causality
Brady (2004), Politics	No relationship between inequality and political participation (ambiguous findings).	No regression analysis, analysis of associations between income inequality and participatory inequality (cross-section, time series).	Income percentiles from the Census Bureau on inequality in the 50 states plus the District of Columbia since 1977.	Voter turnout and the Current Population Survey (1972 to 2000, 1974 to 1998) and the Roper and Political Trends Dataset (1973 to 1994).	Focus on United States.	Inequality \rightarrow Political participation, no empirical consideration of reversed causality.
Goodin and Dryzek (1980), Politics	Negative relationship between inequality and political participation.	Multiple regression analysis and path analysis.	Income Gini coefficient from Paukert (1973) and from the U. S. Bureau of the Census (1970).	Election turnout from Bruce Russett, World Handbook of Social and Political Indicators (1964), data on Participation by Verba and Nie (1957).	Sample of 38 countries in \approx 1957 and 42 U. S. communities in the early 1960s.	Inequality \leftrightarrow Political participation, question of causality is addressed by means of path analysis.
Rosenstone (1982), Politics	Negative effect of inequality on political participation (of poorer people).	Probit regression analysis with control variables.	Inequality is indirectly considered by the indicator economic adversity and the variables worse off financially, poverty and unemployment.	Voter turnout from the Center for Political Studies 1974 National Election Study and presidential and midterm elections from 1896 to 1980.	Focus on United States, data from the U. S. Bureau of the Census, 1974 and 1896 to 1980.	Inequality \rightarrow Political participation, no empirical consideration of reversed causality.
Solt (2008), Politics	No relationship between inequality and political participation.	Multi-level analysis and analysis of the estimated effects in logits across different income quintiles, including control variables.	Income Gini coefficient and income percentiles of Luxembourg Income Study.	Political engagement, data from multiple cross-national surveys, World Values Survey, European Election Survey, Eurobarometer.	Sample of rich and upper-middle income democracies.	Inequality \rightarrow Political participation, no empirical consideration of reversed causality.
Uslaner and Brown (2005), Politics	No relationship between inequality and political participation. Inequality is negatively related to the level of trust.	2SLS models on the effects of inequality and trust on participation with control variables.	Gini coefficient of the distribution of wealth across a society by the U. S. Census Bureau.	Civic and political participation from U. S. Census Bureau, Roper Social and Political Trends data set.	Focus on United States for the 1970s, 1980s, and 1990s.	Inequality \rightarrow Political participation, test for reciprocal causation between trust and civic engagement, not for the inequality-participation link.

Table 5: Empirical review: economic inequality and political participation. Overview of the empirical findings of the relationship between economic inequality and political participation. As discussed in Subsection 2.2.

3 Distilling the main hypotheses

From the various theoretical and empirical contributions presented in the previous subsection, ten main hypotheses on the major factors and channels connecting economic inequality on the one hand, and democratization, democracy and democratic stability on the other hand, can be distilled. Those can be summarized as follows, where unidirectional horizontal arrows imply a predominant understanding of the way causality runs (as per contributions in the literature), and vertical arrows document the direction of changes (increases or decreases) of the respective variable in the chain of causation:

1. **Economic inequality** (\uparrow) \Rightarrow **fear of expropriation** (\uparrow) \Rightarrow **democratization** (\downarrow)
High levels of inequality delay or hinder the emergence of democracies because the ruling elites are less inclined to give in or actively endorse the transition due to the high costs of redistribution they are likely to incur when extending political rights (see, for example, Savoia et al. 2010: pp. 142-143; Houle 2009: p. 595; Bollen and Jackman 1985: p. 438).
2. **Economic inequality** (\uparrow) \Rightarrow **securing power** (\uparrow) \Rightarrow **democratization** (\uparrow)
At the same time, a contrary effect may occur: High levels of economic inequality can pressure the elites to consider and accept some degree of redistribution (political and economical) in order to maintain political and economic influence, i. e. democratization serves as a means to prevent revolutions and their potentially worse outcomes, such as full expropriation (see Acemoglu and Robinson 2000: p. 1167; Savoia et al. 2010: p. 147).
3. **Democratization** (\uparrow) \Rightarrow **preferences in favor of redistribution** (\uparrow) \Rightarrow **economic inequality** (\downarrow)
Democratic systems grant voting rights and political power to all people, also to the previously disenfranchised and poorer segments of society. This increases the (effectively articulated) demand for redistribution, thereby reducing inequality (see Bollen and Jackman 1985: p. 439; Savoia et al. 2010: p. 147; Acemoglu et al. 2015: p. 1890).
4. **Economic inequality** (\uparrow) \Rightarrow **social unrest** (\uparrow) \Rightarrow **democratization** (\uparrow)
High economic inequality increases social unrest and may even ignite revolts which, together with thus articulated preferences for higher redistribution, can induce a transition to democracy (e. g. Acemoglu and Robinson 2000: p. 1168). This argument is closely related to the first two hypotheses, but it focuses on the poorer parts of the population instead of the wealthy elites.
5. **Economic inequality** (\uparrow) \Rightarrow **discontent with democracy** (\uparrow) \Rightarrow **social unrest** (\uparrow) \Rightarrow **democratic stability** (\downarrow)
High levels of economic inequality affect the stability of democracies by making people feel disillusioned by and dissatisfied with democracy. This is accompanied by declining trust in politics, resentment and frustration (see Dahl 1971: p. 81; EIU 2018: p. 21). Discontent with democracy can result in social turmoil, threatening and destabilizing democracy (see Alesina and Perotti 1996: pp. 1, 8; Savoia et al. 2010: p. 147). These arguments are evidently very closely related to the previous hypothesis on the emergence of democracies, but they provide a more detailed picture since they do not reduce the emergence or backsliding of democracy to a binary event.

6. **Economic inequality** (\uparrow) \Leftrightarrow **quality of institutions** (\downarrow) \Leftrightarrow **democratic stability** (\downarrow)

High levels of economic inequality lead to inefficient and corrupt institutions that give even more advantage to the more affluent, thereby increasing imbalances in political power. Considering the reversed causality, democracy or democratic stability contribute to the creation and preservation of economic institutions which, in turn, tend to foster economic and political equality (see e. g. Savoia et al. 2010: pp. 142 f.). Further interrelations between this channel and the discontent with democracy argument from the previous hypothesis are possible.

7. **Economic inequality** (\uparrow) \Leftrightarrow **disproportionate influence** (\uparrow) \Leftrightarrow **democratic responsiveness** (\downarrow) \Leftrightarrow **democratic stability** (\downarrow)

Economic inequality leads to imbalances in political power by creating a wealthy elite that influences political decisions to their own advantage, disadvantaging the poorer parts of the population, which have less access to means such as lobbying etc. In other words, economic resources are translated into political resources, which tends to violate democracy's principle that every citizen has the same political influence via their vote (see Dahl 1971: pp. 82 f.; Bollen and Jackman 1985: p. 440; Milanović 2018). Politics which are determined by the interests of the wealthy can imply that the interests of large parts of the population are not considered. This reduces the responsiveness of politics to its citizens, which, in turn, negatively affects democratic stability. Whether or not, and to which degree, it is possible for the more affluent to exert political influence this way is also mediated by the quality of (democratic) institutions (see the previous hypothesis).

8. **Economic inequality** (\uparrow) \Leftrightarrow **participation** (\downarrow) \Leftrightarrow **democratic stability** (\downarrow)

Economic inequality matters for the stability of democracies because it may incline certain population groups to reduce their political participation, which is a crucial element to any democracy. This implies that people do not participate in elections or in the democratic process itself. Lower political participation can threaten democratic stability as it is one of the core components of democracy (see Crouch 2012: pp. 8 f.). What is more, this behavior may further increase the actual political influence of wealthy elites, since it is closely interrelated with the previous hypothesis, especially when causality running from democratic stability to economic inequality is also considered.

9. **Democracy** (\uparrow) \Leftrightarrow **political competition** (\uparrow) \Leftrightarrow **economic inequality** (\downarrow)

Democracy enables organized political competition among political parties. With the intent to gain votes, politics is orientated towards the interests of the general population and becomes less prone to individual pressures and nepotism (see Collier 1999: p. 191; Bollen and Jackman 1985: p. 439). Reversing the argument, high levels of economic inequality distort the basis for equal political competition, therefore, reducing the quality of democracies (see Dahl 1971: p. 103).

10. **Economic inequality** (\uparrow) \Rightarrow **polarization** (\uparrow) \Rightarrow **democratic stability** (\downarrow) / (\uparrow)

Economic inequality, which can be perceived as a consequence of the failure of mainstream parties, provokes more extreme policy stances by political parties and the general public (see Milanović 2018; Pontusson and Rueda 2008: p. 314). This may result in declining support for mainstream political parties (see EIU 2018: pp. 3, 22). However, the effects of polarization on democracy can also be interpreted very differently. Is polarization eroding democracy in terms of a left-ward or right-ward shift of politics that moves away from the

3 Distilling the main hypotheses

interests of the majority, or does it foster democratic stability because it creates a more intense form of political discussion and political competition for established parties? The overall observed effect certainly depends on the other channels at work, too.

The ten different hypotheses and the additional interrelations between them through common variables can be summarized in two figures. Fig. 1 shows on the more general level how democracy – including democratization processes and the backsliding into an authoritarian regime – are connected with economic inequality. Taking a closer, more detailed look, Fig. 2 shows the more intricately linked variables and mechanisms at play in the relationship between economic inequality and democratic stability. In both figures, arrows indicate the direction of causality as suggested by the hypotheses. In Fig. 1, where the connections are easier to track, the associated (+) or (-) signs further indicate whether the variable at the beginning of the arrow positively or negatively affects the other variable at its end. In Fig. 2, solid arrows highlight the primarily discussed chains of causation, whereas dashed arrows show further branches in the extensive nexus of interrelations. The graph highlights that the interaction between economic inequality and democratic stability is primarily mediated by the interplay of democratic responsiveness as mutually affected by political participation and disproportionate political influence. Additional variables, often closely related to those in the center of the figure, further affect the relationship.

Figure 1: Interrelations between economic inequality and democracy (broad perspective). Own illustration.

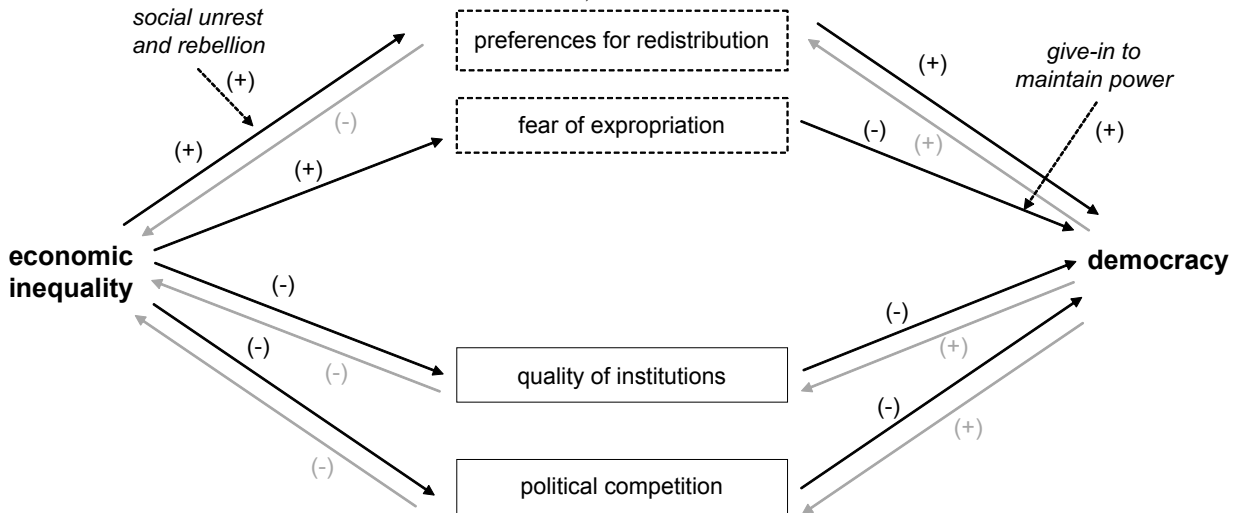
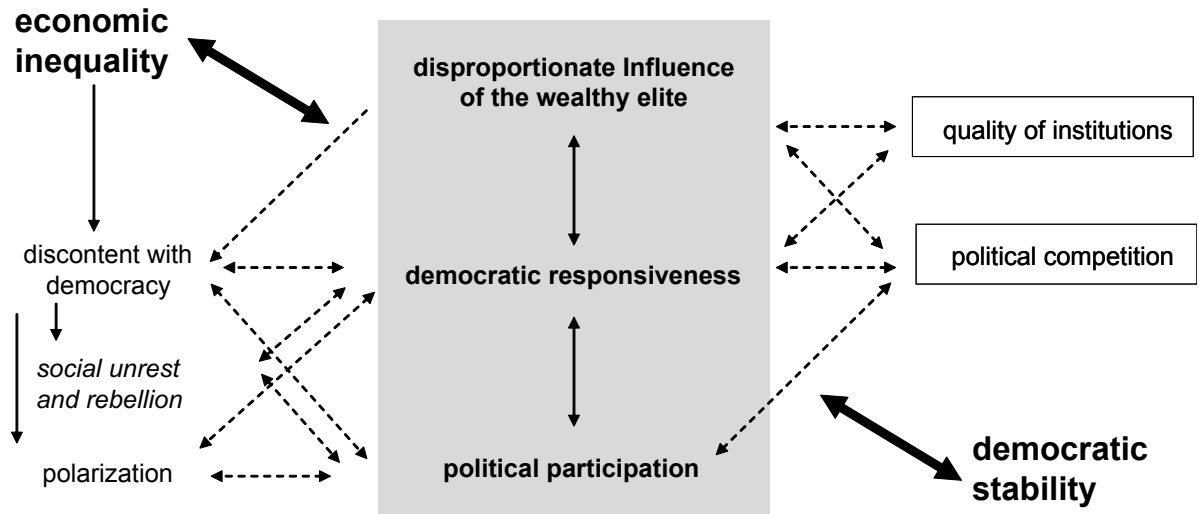


Figure 2: Interrelations between economic inequality and democratic stability.
Own illustration.



As the literature survey in the previous section as well as its schematic summary in the above hypotheses and figures has shown, different contributions have highlighted various aspects of the relationship between economic inequality and democracy, and tackled analyzing them by different theoretical models and empirical methods. Building on these insights, the next section provides an outline of a unified approach to empirical research on the democracy-inequality-relationship, by taking into account the different strands of research, and also considering what data are actually available to engage in a comprehensive empirical analysis.

4 Cursory notes on empirics

In general and irrespective of the specific focus and particular hypothesis that is analyzed, any empirical research on the relationship between democracy and economic inequality needs to take four dimensions into account. The first concerns the countries of interest. Here, a frequent distinction in the literature is between established democracies on the one hand, and political regimes which may be prone to democratization or a backsliding into an autocratic system on the other hand. While there may be similar forces at play in both groups of countries, the specific factors at work arguably differ. Furthermore, countries within both groups are far from homogeneous: There is not just one default democratic system that is the same in every country, but indeed there are large differences between countries. Much of the existing research on established democracies has focused on the United States. Therefore, expanding the sample could bear considerable merit.

The second important dimension is the time frame that is considered. This is intimately linked to the country sample, too: Many of today's established democracies had a very different institutional structure and setup over a century ago, so if that period is considered, focus might be more on democratization than on democratic stability. What is more, the time dimension also contains another very important aspect, namely the

question of which time *unit* should be considered. When analyzing democratic regimes, year-to-year changes may be less pronounced than changes between different legislative periods. Furthermore and more generally, there is certainly some lag in most political decisions, especially in a democracy. Therefore, rising economic inequality might not bear immediate political repercussions, but it could greatly affect the next elections and thus policies designed and put into action during the next legislative period.

The other two relevant dimensions are, of course, economic inequality and democracy. Here, the problem of a proper operationalization of any related research question becomes evident in the fact that an appropriate empirical measure of the respective variables needs to be identified first. Concerning economic inequality, various established measures exist which bear different implications: For example, should economic inequality be defined as income or wealth inequality? If income inequality is the variable of choice, post-tax income is arguably the better measure of actual inequality, but at the same time data coverage for this variant is far less comprehensive. Furthermore, the precise statistical measure of choice is another question. The Gini coefficient, for example, has the advantage of condensing the whole distribution into one number, but other measures such as percentile income shares can also provide additional insights.

For the fourth dimension – democracy – the choices to be made during operationalization of any empirical work on the inequality-democracy-relationship are probably the most challenging ones. This is due to the fact that properly quantifying institutional variables for use in empirical research is a very daunting task. And even then, finding one that best captures the theoretical model or relationship of interest poses another challenge. The classic measures of democracy, the Freedom House or Polity scores, for example, differentiate between various regimes types, such as democracies and autocracies, but do not allow to distinguish between different degrees of democracy (see Geissel et al. 2016: p. 571). On the other hand, the World Bank’s World Governance Indicators provide various measures of institutional quality (see Kaufmann et al. 2011; The World Bank Group 2018). Even though the focus in this database is not on democracies, it contains some potentially relevant variables, especially “Government Effectiveness”, “Control of Corruption” (which can serve for proxies of disproportionate influence) and “Voice and Accountability” (which could operationalize democratic responsiveness). Another useful data source could be the Democracy Index of the Economist Intelligence Unit (see EIU 2017; EIU 2018; Geissel et al. 2016), with indicators such as “Functioning of Government” (a similar category to the World Bank’s “Government Effectiveness”) and “Political participation”. Further measures for similar theoretical ideas can be taken from the Democracy Barometer (see Bühlmann et al. 2012; Merkel et al. 2016). Here, the indicators “Transparency”, “Representation” and “Participation” can cover different aspects of the inequality-democracy-relationship. Last but not least, some concepts may of course also be operationalized by more simple variables, e. g. voter turnout. Naturally, however, qualifying limitations need to be considered here, e. g. that authoritarian regimes may have the highest voter turnouts due to compulsory voting (on the predominant party).

5 Summary and outlook

This paper has provided an overview of existing research in economics and other social sciences on the interrelations between economic inequality and democratic political systems. Both the relationship between economic inequality and democratic stability, as well as between economic inequality and the, as it were, extreme points of democratic stability, namely democratization or the backsliding from democracy to an authoritarian regime, were surveyed. While the review cannot constitute a clear consensus on the research question of how economic inequality and democracy are interrelated, it has highlighted the many different and at times opposed hypotheses that are discussed in the literature. What is more, various empirical approaches were also discussed, which has shown that not only are the hypotheses of interest quite varied, but so are the methods and tools employed in works aimed at empirically testing them. In order to not just structure previous literature, but also provide avenues for further research, this survey has particularly highlighted the challenges faced in this line of research: The relationship between economic inequality and democracy is very complex, many channels through which that relationship acts are prone to causality in both directions and intertemporal dependencies, and the operationalization of theoretical constructs is a crucial task that can be as difficult as finding the right (and available) data.

Despite the discourse in the available literature and disparities between different contributions, some points stand out as notably less contested than others. For example, the channel of economic inequality negatively affecting democratic stability respectively democratic institutions by, for example, a disproportionate influence of richer parts of the population and lowering democratic responsiveness and participation is frequently supported in both theoretical and empirical contributions. Nonetheless, however, further research, particularly more detailed empirical analyses, are crucial, especially in order to also account for the question of pinning down a direction of causality. One potentially promising avenue for further research may lie in not just broadening the scope of countries in general (as pointed out in various contexts throughout this paper), but to also take a closer look and consider differences within a country. This allows for an even more zoomed-in analysis of some crucial points within a very homogeneous sample. A clear advantage of this approach is that many factors can be held constant, especially with regards to the institutional setup. Two prime candidates here may be the United States of America or the Federal Republic of Germany, which feature both a uniform federal democratic system, as well as democratic processes linked to parliaments and governments on state levels. Due to their respective authorities and competences, the latter may be less relevant in the context of many of the channels discussed in this survey. However, at the same time this holds the potential benefit of providing a control for the direction of causality. Unfortunately, data availability will be a major limiting factor for empirical analyses on this level, though.

Either way, however, it is clear that there are many open avenues for further theoretical and empirical contributions. Considering both global developments as well as those in many Western countries over the past years, this research promises important insights into highly relevant questions related to pressing present issues that may well be worth

References

facing the challenges which need to be overcome in order to gain a better understanding of the political implications of economic inequality.

References

- Acemoglu, D., S. Johnson, and J. A. Robinson (2005). Institutions as a Fundamental Cause of Long-run Growth. In P. Aghion and S. N. Durlauf (Eds), *Handbook of Economic Growth*, Volume 1A, Chapter 6, 385–472. Elsevier.
- Acemoglu, D., S. Naidu, P. Restrepo, and J. A. Robinson (2015). Democracy, Redistribution, and Inequality. In A. B. Atkinson and F. Bourguignon (Eds), *Handbook of Income Distribution*, Volume 2B, Chapter 21, 1885–1966. Elsevier.
- Acemoglu, D. and J. A. Robinson (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. and J. A. Robinson (2006). *Economic Origins of Dictatorship and Democracy*. New York: Cambridge University Press.
- Alesina, A. and R. Perotti (1996). Income Distribution, Political Instability, and Investment. *European economic review* 40(6), 1203–1228.
- Barro, R. J. (1999). Determinants of Democracy. *Journal of Political Economy* 107(S6), S158–S183.
- Bartels, L. M. (2009). Economic Inequality and Political Representation. In L. Jacobs and D. S. King (Eds), *The Unsustainable American State*, Chapter 7, 167–196. New York: Oxford University Press.
- Bartels, L. M. (2016). *Unequal Democracy: The Political Economy of the new Gilded Age* (2nd ed.). Princeton University Press. Russel Sage Foundation.
- Bartels, L. M. (2017a). Political Inequality in Affluent Democracies: The Social Welfare Deficit. Working Paper 5, Department of Political Science Vanderbilt University, Available at: <https://www.vanderbilt.edu/csdi/research/papers.php> [Accessed 05.02.2018].
- Bartels, L. M. (2017b). Political Inequality in Affluent Democracies. Social Science Research Council. Available at: <http://items.ssrc.org/political-inequality-in-affluent-democracies/> [Accessed 05.02.2018].
- Boix, C. (2003). *Democracy and Redistribution*. Cambridge University Press.
- Bollen, K. A. and R. W. Jackman (1985). Political Democracy and the Size Distribution of Income. *American Sociological Review* 50, 438–457.

References

- Brady, H. E. (2004). An Analytical Perspective on Participatory Inequality and Income Inequality. In K. Neckerman (Ed.), *Social inequality*, Chapter 17, 667–702. New York: Russell Sage Foundation.
- Bühlmann, M., W. Merkel, L. Müller, and B. Weßels (2012). The democracy barometer: a new instrument to measure the quality of democracy and its potential for comparative research. *European Political Science* 11(4), 519–536.
- Campbell, A., G. Gurin, and W. E. Miller (1954). *The Voter Decides*. Row, Peterson, and Co.
- Carothers, T. (2002). The end of the transition paradigm. *Journal of democracy* 13(1), 5–21.
- Collier, R. B. (1999). *Paths toward democracy: The working class and elites in Western Europe and South America*. Cambridge University Press.
- Crouch, C. (2012). *Postdemokratie*. Suhrkamp Verlag.
- Cutright, P. (1967). Inequality: A Cross-National Analysis. *American Sociological Review* 32(4), 562–578.
- Dahl, R. A. (1971). *Polyarchy: Participation and opposition*. Yale University Press.
- Diamond, L. (2015). Facing up to the Democratic Recession. *Journal of Democracy* 26(1), 141–155.
- EIU (2006-2017). Democracy Index. The Economist Intelligence Unit Limited. Available from: <http://www.eiu.com/> [Accessed 01.03.2018].
- EIU (2018). Democracy Index 2017. Free speech under attack. The Economist Intelligence Unit Limited. Available at: http://pages.eiu.com/rs/753-RIQ-438/images/Democracy_Index_2017.pdf [Accessed 02.02.2018].
- Engerman, S. L. and K. L. Sokoloff (2002). Factor endowments, inequality, and paths of development among new world economics. NBER Working Paper 9259, National Bureau of Economic Research.
- Frank, R. H. (2014). The Vicious Circle of Income Inequality. The New York Times Company. Available at: <https://www.nytimes.com/2014/01/12/business/the-vicious-circle-of-income-inequality.html> [Accessed 22.03.2018].
- Freeman, D. (2017). De-Democratisation and Rising Inequality: The Underlying Cause of a Worrying Trend. Working paper 12, Department of Anthropology and International Inequalities Institute, LSE, Available at: <http://www.lse.ac.uk/International-Inequalities/Working-Papers> [Accessed 07.02.2018].
- Galbraith, J. K. (2012). *Inequality and Instability: A Study of the World Economy just Before the Great Crisis*. Oxford University Press.

References

- Geissel, B., M. Kneuer, and H.-J. Lauth (2016). Measuring the Quality of Democracy: Introduction. *International Political Science Review* 37(5), 571–579.
- Gilens, M. (2005). Inequality and Democratic Responsiveness. *Public Opinion Quarterly* 69(5), 778–796.
- Gilens, M. (2012). *Affluence and Influence: Economic Inequality and Political Power in America*. Princeton University Press.
- Gilens, M. and B. I. Page (2014). Testing Theories of American Politics: Elites, Interest Groups, and Average Citizens. *Perspectives on politics* 12(3), 564–581.
- Goodin, R. and J. Dryzek (1980). Rational Participation: The Politics of Relative Power. *British Journal of Political Science* 10(3), 273–292.
- Gradstein, M. and B. Milanović (2004). Does liberté = égalité? A Survey of the Empirical Links between Democracy and Inequality with some Evidence on the Transition Economies. *Journal of Economic Surveys* 18(4), 515–537.
- Houle, C. (2009). Inequality and Democracy: Why Inequality Harms Consolidation but Does Not Affect Democratization. *World Politics* 61(4), 589–622.
- Huntington, S. P. (1993). *The Third Wave: Democratization in the Late Twentieth Century*, Volume 4. University of Oklahoma Press.
- Jackman, R. W. (1974). Political democracy and social equality: A comparative analysis. *American Sociological Review*, 29–45.
- Jacobs, L. R. and B. I. Page (2005). Who influences US Foreign Policy? *American Political Science Review* 99(1), 107–123.
- Kaufmann, D., A. Kraay, and M. Mastruzzi (2011). The Worldwide Governance Indicators: Methodology and Analytical Issues. *Hague Journal on the Rule of Law* 3(2), 220–246.
- Kenworthy, L. and J. Pontusson (2005). Rising Inequality and the Politics of Redistribution in Affluent Countries. *Perspectives on Politics* 3(3), 449–471.
- Krugman, P. (2011). Oligarchy, American Style. Available at <http://www.nytimes.com/2011/11/04/opinion/oligarchy-american-style.html> [Accessed 15.01.2018].
- Lenski, G. E. (1966). *Power and Privilege. A Theory of Social Stratification*, Volume 96. McGraw-Hill New York.
- Levin-Waldman, O. M. (2013). Income, Civic Participation and Achieving Greater Democracy. *The Journal of Socio-Economics* 43, 83–92.
- Lipset, S. M. (1959). Some Social Requisites of Democracy: Economic Development and Political Legitimacy. *American Political Science Review* 53(1), 69–105.

References

- Lipset, S. M. (1960). *Political Man: The Social Bases of Politics*. Doubleday&Company.
- Meltzer, A. H. and S. F. Richard (1981). A Rational Theory of the Size of Government. *Journal of Political Economy* 89(5), 914–927.
- Merkel, W. (2015). Ungleichheit als Krankheit der Demokratie. In S. Mau and N. Schöneck (Eds), *Un-) Gerechte (Un-) Gleichheiten*. Suhrkamp Verlag.
- Merkel, W., D. Bochsler, K. Bousbah, M. Bühlmann, H. Giebler, M. Hänni, L. Heyne, L. Müller, S. Ruth, and B. Wessels (2016). Democracy Barometer. Methodology. Version 5. Available at: http://www.democracybarometer.org/documentation_de.html [Accessed 15.02.2018].
- Milanović, B. (2018). Konzentration des Kapital rückgängig machen. IPG Internationale Politik und Gesellschaft. Available at: (<http://www.ipg-journal.de/schwerpunkt-des-monats/kapitalismuskritik/artikel/detail/konzentration-des-kapitals-rueckgaengig-machen-2657/>) [Accessed 05.04.2018].
- Muller, E. N. (1988). Democracy, Economic Development, and Income Inequality. *American Sociological Review* 53(1), 50–68.
- Muller, E. N. (1995). Economic Determinants of Democracy. *American Sociological Review* 60(6), 966–982.
- Page, B. I., L. M. Bartels, and J. Seawright (2013). Democracy and the Policy Preferences of Wealthy Americans. *Perspectives on Politics* 11(1), 51–73.
- Pengl, Y. (2013). Strong Theories, Weak Evidence: The Effect of Economic Inequality on Democratization. *Living Reviews in Democracy* 4.
- Piketty, T. (2014). *Capital in the 21st Century*. Harvard University Press Cambridge, MA.
- Pontusson, J. and D. Rueda (2008). Inequality as a Source of Political Polarization: A Comparative Analysis of Twelve OECD Countries. *Democracy, inequality, and representation*, 312–353.
- Rodrik, D. (1999). Democracies Pay Higher Wages. *The Quarterly Journal of Economics* 114(3), 707–738.
- Rosenstone, S. J. (1982). Economic Adversity and Voter Turnout. *American Journal of Political Science*, 25–46.
- Rubinson, R. and D. Quinlan (1977). Democracy and Social Inequality: A Reanalysis. *American Sociological Review*, 611–623.
- Savoia, A., J. Easaw, and A. McKay (2010). Inequality, Democracy, and Institutions: A Critical Review of Recent Research. *World Development* 38(2), 142–154.

References

- Schäfer, A. (2010). Die Folgen sozialer Ungleichheit für die Demokratie in Westeuropa. *Zeitschrift für vergleichende Politikwissenschaft* 4(1), 131–156.
- Schlozman, K. L., S. Verba, and H. E. Brady (2012). *The Unheavenly Chorus: Unequal Political Voice and the Broken Promise of American Democracy*. Princeton University Press.
- Solt, F. (2008). Economic Inequality and Democratic Political Engagement. *American Journal of Political Science* 52(1), 48–60.
- Stiglitz, J. E. (2012). *The Price of Inequality: How Today's Divided Society Endangers Our Future*. WW Norton & Company.
- Taylor, C. (2017). Is Democracy Slipping Away? Social Science Research Council. Available at: <http://items.ssrc.org/is-democracy-slipping-away/> [Accessed 15.01.2018].
- The World Bank Group (2018). Worldwide Governance Indicators (WGI). Available at: <http://info.worldbank.org/governance/wgi/#home> [Accessed 20.02.2018, Database].
- United Nations (2015c). Inequality and the 2030 Agenda for Sustainable Development. Development Issues No. 4. Available at: <https://www.un.org/development/desa/dpad/publication/no-4-inequality-and-the-2030-agenda-for-sustainable-development/> [Accessed 04.04.2018, Report of the Development Strategy and Policy Analysis Unit of the United Nations Department of Economic and Social Affairs].
- United Nations (2016). Inequality - a defining challenge of our time. Available at: <https://www.un.org/development/desa/en/news/ecosoc/inequality-defining-challenge.html> [Accessed 28.03.2018].
- Uslaner, E. M. and M. Brown (2005). Inequality, Trust, and Civic Engagement. *American Politics Research* 33(6), 868–894.
- Verba, S., K. L. Schlozman, and H. E. Brady (1995). *Voice and Equality: Civic Voluntarism in American Politics*. Harvard University Press.
- Winters, J. A. and B. I. Page (2009). Oligarchy in the United States? *Perspectives on Politics* 7(4), 731–751.
- York, J. W. (2017). Does Rising Income Inequality Threaten Democracy? Available at: <http://www.heritage.org/poverty-and-inequality/report/does-rising-income-inequality-threaten-democracy> [Accessed 11.01.2018].

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University of Hohenheim
Dean's Office of the Faculty of Business, Economics and Social Sciences
Palace Hohenheim 1 B
70593 Stuttgart | Germany
Fon +49 (0)711 459 22488
Fax +49 (0)711 459 22785
wiso@uni-hohenheim.de
wiso.uni-hohenheim.de