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Abstract

This paper analyzes which institutional features contribute to poverty reduction when countries democratize. For this, theories and data are used that distinguish between different areas of democratic institutions – namely electoral, liberal, participatory, deliberative, and egalitarian democratic institutions. The data analysis uses semi-parametric treatment effects estimates to estimate average treatment effects of democratization on poverty reduction and estimates this separately for countries with relatively weaker and stronger institutions at the time of democratization. The estimations reveal no clear pattern of a specific, predominant area of institutions while others are remain less important. In each area of institutions, some of its features contribute to poverty reduction and some do not. Especially, the hypothesis that stronger institutions lead to poverty reduction cannot confirmed. Stronger institutions only lead to significant poverty reduction for the institutions of executive and legislative being elected, and judicial constraints on the executive. For most other significant effects, weaker institutions lead to poverty reduction. This is likely due to triggered changes in institutions by democratization that only occur when institutions are still relatively weak, rather than due to growth or inequality changes. When the effect of democratization on poverty reduction is significant, it is meaningful in size (ranging from around 12 to 25 percent during the first five years after democratization, depending on the specific mid- and low-level institution). The pattern is the clearest for deliberative, participatory, and egalitarian institutions and less clear for electoral and liberal democratic institutions. This illustrates that institutions which capture how responsive policymaking is to its constituencies are more important for poverty reduction than institutions that capture formal aspects of democracy.

Keywords: Poverty, Democracy, Human Development

JEL Codes: I32, O15, P48

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1 Introduction

Democracy is often portrayed as a desirable political system because it is associated not only with more individual freedoms and enjoyed liberties, but also with higher living standards and less poverty. Thus, it is important to understand the mechanism through which democracy contributes to the welfare of individuals (if it does at all). However, there is still only a rudimentary understanding of how democratic institutions contribute to human welfare and poverty. Economically, this relates to the question of whether stronger institutions are associated with better economic and welfare outcomes. This paper analyzes the effect of democratization on human welfare in terms of the poverty rate (fraction of the population living below $1.90). Although Sustainable Development Goal (SDG) No. 1 explicitly targets poverty rates (United Nations, 2015), which makes it directly relevant for policy-makers, it has received only minor attention in the academic literature.

This paper is connected to recent research by Dörffel and Freytag (2021) who look at the effect of democratization on poverty rates and find that democracy leads to a reduction in poverty rates after about 10-15 years.[1] In this paper, I build on Dörffel and Freytag (2021) but disaggregate institutional features into a finer set of mid- and low-level institutions to see which democratic institutions are associated the most with poverty reduction. To illustrate this, Dörffel and Freytag (2021) and most other papers in the literature use measures that capture high-level institutions (namely democracy). For example, Gerring et al. (2005) and Ross (2006) use the Polity2 index from the Polity IV dataset, which aggregates many different aspects of democratic institutions into one index; Acemoglu et al. (2019) and Dörffel and Freytag (2021) use a dichotomous democracy dummy (based on the Polity2 index and the Freedom House index) that

[1] Other effects of democratization include higher levels of education (in terms of higher education expenditure and enrollment rates) better health outcomes, higher government taxation and revenue, structural transformation (share of GDP and population not in agriculture) and redistribution towards the middle (Acemoglu et al. 2015). Doucouliagos and Ulubaşoğlu (2008) and Tavares and Wacziarg (2001) find positive evidence for the effects of democratization on growth being channeled mostly through increasing human capital.

captures the electoral aspect of democracy and civil liberties. However, using these aggregated indices limits the insights to be gained because they are quite general rather than specific. Thus, to broaden our understanding, I analyze mid- and low-level democratic institutions and analyze which institutional aspects are associated with changes in poverty rates. The mid-level institutions stem from different theories of democracy and are institutions that are related to electoral, liberal, participatory, deliberative and egalitarian democracy (Coppedge et al. 2016; Cunningham, 2002; Held, 2006). The low-level institutions dissect each of these five mid-level institutions into even more specific institutional aspects. For example, according to democracy theory, electoral democracy can be divided into institutional aspects of free and fair elections without fraud or systematic irregularities, freedom of association, freedom of expression, suffrage and the whether chief executive and the legislature is appointed through elections. Data from the V-Dem project delivers direct measurements of these mid- and low-level institutions which allows to investigate this empirically.

Section 2 of the paper puts the topic in perspective to the literature, explains theories of democratic institutions, mechanisms for poverty reduction and develops hypotheses. Section 3 introduces the method and data. Section 4 presents and discusses the results and section 5 concludes.

2 Democracy Theory and Mechanisms for Poverty Reduction

2.1 Related Literature

As part of the literature that researches the effects of institutions, democratization is an important and well researched topic. A large body of literature exists on the effects of democratizations.[2] The link between democracy and growth/GDP has received the most attention (Doucouliagos and Ulubaşoğlu, 2008; Gerring et al. 2005; Przeworski et al. 1995, 2000; Rodrik and Wacziarg, 2005 and more recently Acemoglu et al. 2019

[2] A small selection is: Acemoglu and Robinson, 2006; Bernhard et al. 2001; Boix, 2003; Haggard and Kaufman, 2020; Miller, 2016; Ross, 2006; Svolik, 2008; Teorell, 2010.

and Colagrossi et al. 2020) with mixed results but often with weak empirical strategies that are unlikely to capture causal effects, though there are some exceptions.

Other strands of the literature look at effects other than on GDP/growth. There is a long standing critique of GDP as a meaningful measure for welfare and human development, especially for the poorer parts of societies. Many studies look more directly at outcomes that are associated with human well-being or human development. This literature finds democracy to be associated with less infant mortality (Gerring et al. 2021; Ross, 2006), higher life expectancy and more calories consumed, higher school enrollment rates, higher education spending (see Acemoglu et al. 2015; Besley and Kudamatsu, 2006; Blaydes and Kayser, 2011; Brown and Hunter, 1999; Deacon, 2009; Gerring et al. 2012, 2021; Navia and Zweifel, 2003; Przeworski et al. 2000; Ross, 2006; Stasavage, 2005). Similar to the literature on GDP, not all of these studies find positive effects of democracy (e.g. Halleröd et al. 2013; Holmberg and Rothstein, 2011; Miller, 2015; Norris, 2012; Ross, 2006) and many have problems regarding clear causal identification. Besides this, poverty rates, capturing the fraction of the population living below the poverty line, have not received much attention as an outcome variable in this literature. This is in spite of being a target Sustainable Development Goal (SDG) No. 1 which makes poverty rates a likely policy target, and poverty are an important policy issue for citizens (Bermeo, 2009). As an illustration, Gerring et al. (2021) take an extensive look at the connection between electoral democracy and human development (which they capture by infant mortality rates) and do not even mention poverty rates as possible candidate.

2.2 Theories of Democracy

Table 1 gives an overview over the theories of mid- and low institutions and specifically which low-level institutions make up the mid-level institutions of electoral, liberal, participatory, deliberative, and egalitarian democracy. Table A2 in the appendix additionally includes a description of what each low-level institutional feature captures.[3] Below, I briefly describe each democracy theory.

Table 1: Overview Over Disaggregation of Democracy into Mid- and Low-Level Institutions

Mid-level institution	Low-level institutions
Electoral Democracy	Clean elections (index) Elected officials (index) Freedom of association Freedom of Expression and Alternative Sources of Information index Share of population with suffrage
Liberal democracy	Equality before the law and individual liberties (index) Judicial constraints on the executive (index) Legislative constraints on the executive (index)
Participatory democracy	Civil society participation (index) Local government (index) Regional government (index) Direct popular vote (index)
Deliberative Democracy	Reasoned justification Common good Respect counterarguments Range of consultation Engaged society
Egalitarian Democracy	Equal protection (index) Equal access (index) Equal distribution of resources (index)

Note: Grouping roughly based on (Coppedge et al. 2016); Variable descriptions from V-Dem 11.1 Handbook (Coppedge et al. 2021).

Electoral Democracy

Electoral democracy is the concept that is most fundamentally and most widely associated with democracy. It evolves around citizens electing their leaders. According to Dahl (1989)'s formulation of this democracy theory, elections have to be free, fair and held regularly; citizens must have freedom of expression and access to multiple sources of information, as well as freedom of association and universal suffrage (Coppedge et

[3]Note that many low-level institutions are themselves aggregated indices from even finer data. However, analyzing an even more disaggregated level of institutions is beyond the scope of this paper.

al. 2016, p. 582).

Liberal Democracy

The theory of liberal democracy evolves around the idea that elections alone are not sufficient but that the state must guarantee extensive citizen rights and civil liberties such that the individual is protected against arbitrary repression from the state and other citizens to make those who govern pursue policies in the interest of all citizens. This is associated with a strong rule of law, checks and balances that limit executive power as well as constitutionally protected civil liberties (Coppedge et al. 2016, p. 582; Cunningham, 2002, pp. 27-29; Held, 2006, pp. 44,48).

Participatory Democracy

The theory of participatory democracy emphasizes direct and active participation by citizens as opposed to delegating the decision-making to representatives. Important here is participation in the political process by civil society organizations and elements of direct decision making by direct democracy, developing political efficacy and a natural concern for collective problems to make citizen able to participate in the governing process (Coppedge et al. 2016, p. 583; Cunningham, 2002, p. 123; Held, 2006, pp. 253).

Deliberative Democracy

The concept of deliberative democracy evolves around the ideal that political decisions are reached by free and reasoned dialogue and consent among citizens. To reach a decision to a collective problem, the proposed solution must be justifiable to the citizenry. Decision and institutions are legitimate if they are the outcome of process where those involved in the process could participate free and equally in discursive will formation (Coppedge et al. 2016, p. 583; Cunningham, 2002, p. 163; Held, 2006, p. 253).

Egalitarian Democracy

Egalitarian democracy focuses on how distributional aspects influence political decisions. When material and immaterial inequalities influence the exercise of power on political decisions, equalizing it improves political decisions. Inequalities can be based on class, ethnicity, sexual orientation, or social groups. Equality of resources, education and health are major aspects that influence equal exercise of political power (Coppedge et al. 2016, p. 583; Cunningham, 2002, p. 95f.; Sigman and Lindberg, 2019).

2.3 Mechanisms for Poverty Reduction, Counterarguments and Hypotheses

In this subsection I briefly explain why the improvement in certain democratic institutions can be expected to reduce poverty, and why there might be a reason be skeptical.

Electoral Democracy

Meltzer and Richard (1981) formulate a median voter model where only part of society has suffrage and analyze the distributional effects of extending suffrage to larger parts of society. Democratization does exactly this: It gives voting rights to more citizens. Their model predicts that the extensions of voting rights shifts the median voter down on the income distribution to someone who is relatively poorer than the former median voter. As a consequence, policies should become relatively more pro-poor (e.g., by increasing transfers, extending social security programs and similar). Furthermore, the electoral process that has not existed before democratization should enable poor people to directly punish governments that do not produce public goods and redistribute to them (Sen, 1981, cited by Ross, 2006).

Many authors argue that electoral institutions, because elections induce accountability, lead to governments producing more public goods and to redistribute more (Deacon, 2003; Lake and Baum, 2001; McGuire and Olson, 1996; Niskanen, 1997; Ross, 2006). Furthermore, freedom of the press allows better information flow in democracies. This makes it easier for political decision-makers to be informed about the needs of the poor and this will lead to more pro-poor policies (Sen, 1981, cited by Ross, 2006).

Gerring et al. (2021) argue that two features of electoral democracy affect human development and should thus affect poverty rates.[4] These two elements are the selection of leaders and under which incentives they operate. They argue first that leaders who put a relatively higher weight on human development are more likely to succeed in a democratic regime than in an autocratic one. Second, accountability enforced by regular elections will lead to leaders orienting their policies towards their constituencies once they are in office. Then, if the electorate is interested in reducing poverty, leaders will implement redistributive policies or provide public goods to that end.

One core element of electoral democracy is freedom of association, which explicitly includes the freedom to form and organize political parties. Naturally, parties should exert less influence on policies in autocracies than in democracies. Bizzarro et al. (2018) argue that the strength of political parties is connected to policy outcomes. Stronger parties constrain leaders from implementing predatory policies and they are more likely to favor public goods and services that benefit the larger parts of society (e.g. health and education). Thus, democratization should lead to stronger parties which then put a higher weight on poverty reduction.

H1: As outlined, theory predicts positive effects are likely to come from institutions of electoral democracy (because elections shift political power relatively towards the poorer part of society)

Liberal and Egalitarian Democracy

Liberal democracy highlights equal protection against repression from powerful actors. Without this protection before democratization, it is argued that the politically powerful will enact barriers to mobility for the poorer part of society working in the agricultural sector. Such policies keep wages down and thus exacerbate inequality. Lifting these barriers (after democratization due to protection against repression) would lead to increased mobility, higher wages and a more equal distribution and is therefore likely to reduce poverty (Acemoglu et al. 2015, pp. 1888, 1893).

Olson (1993) argues that the protection of private property rights, which is connected to the rule of law, leads to higher economic output which in turn can result in poverty

[4] They explicitly theorize that the other institutional features therefore have a weaker connection to human development.

reduction. Bermeo (2009) argues that foreign aid is often conditional on good governance or institutional change, which can be linked to the concept of liberal democracy.[5] Hence, after a transition to democracy, countries are likely to receive more funds through foreign aid which can be used to directly reduce poverty, or to be invested in public goods that indirectly reduce poverty.

On the other hand, a more egalitarian society may lead to an alleviation of poverty in two ways: one is through material distribution and second through immaterial distribution. A more equal material distribution (of incomes and wealth to acquire material possessions) has a mechanical effect on poverty rates because a more equal distribution means fewer individuals under the poverty line Bourguignon, 2004. Reducing immaterial inequalities based on ethnicity, sexual orientation, or social groups increases the relative power of these marginalized groups of people in the political process. When policies are responsive to his relative shift in power, this should lead to less poverty as marginalization is also often associated with poverty.

However, there is also reason to be skeptical about whether democratization leads to better institutions. Most of these arguments developed in the literature rely on some variation of powerful actors being able to side-step rules or set rules in their favor. This class of arguments is connected to liberal democracy (weak rule of law) but also to idea of egalitarian democracy because of the unequal power distribution.

Acemoglu and Robinson (2008) argue that powerful actors, who favor less redistribution, can capture democracy. Firstly, the wealthier part of society can make investments to keep their *de facto* power after democratization even if they might lose their *de jure* powers. *De facto* power might be exerted through lobbying, repression, control of law enforcement or other armed actors to control political parties or controlling the media to manage political ideology (Acemoglu et al. 2015, p. 1895). Similarly, rent-seeking behavior of interest groups leads to institutional sclerosis (irresponsiveness of institu-

[5]There is no universal definition of good governance, but it can be linked to the absence of corruption, rule of law (and also to democracy and government efficiency) (Rothstein, 2012). Hence, it can be linked to the concept of liberal democracy described above and its ideals of rule of law and protection of rights and liberties.

tions to public interests) which can lead to economic stagnation and therefore limit the scope for redistribution (Olson, 1982). The costs of redistribution can be increased by a threat of capital flight from richer actors (Acemoglu et al. 2015, p. 1897).

Furthermore, when old elites can influence the architecture of the democracy during the transition process towards democracy, the new democracy might be dysfunctional or captured in the worst case (Acemoglu et al. 2015, p. 1896). Obstacles to redistribution can also be enacted via constitutional provisions which explicitly limit it and thus limit pro-poor polices (Acemoglu et al. 2015, p. 1897).

A modified "Director's law" argues that democratization mostly empowers the middle-class which uses its power to redistribute resources towards them, i.e. redistribution flows from the poor and the rich towards the middle rather than to the poorer parts (Acemoglu et al. 2015, p. 1898). Consequently, this would decrease the likelihood of poverty reduction.

Another argument proposes that increasing market opportunities after democratization leads to lower wages in the low-skilled (poorer) part of society (Acemoglu et al. 2015, p. 1897). Higher income inequality in the lower part of the distribution would then lead to an increase in the poverty rate (*ceteris paribus*).

A further argument emphasizes social cleavages. Economic classes or ethnic cleavages between groups in society might be aligned in a way that decreases the likelihood for redistributive policies. They are more likely to be enacted if economic class and ethnicity are aligned because this results in larger groups that can put pressure on governments. If class and ethnicity differ, voting blocs for redistributive policies might be split because they are often split by ethnic divisions (Acemoglu et al. 2015, p. 1895; Varshney, 2005).

H2: Theory predicts negative effects (increasing poverty) are attached to weak of liberal and egalitarian democratic institutions (because de facto powerful actors bend the rules in their favor). Reversing the argument, stronger liberal and egalitarian institutions should decrease poverty.

Deliberative and Participatory Democracy

For the remaining mid-level democracy concepts of deliberative and participatory democracy, the literature is less extensive. Regarding participatory democracy, Tavares and Wacziarg (2001) argue that democracies give more weight to interests of labor through unions which leads to higher wages and in turn should lead to lower poverty. Hence, redistribution to poorer people can be a result of civil society organizations, such as unions, having more influence in the political process. Furthermore, Gerring et al. (2021) argue that one channel of democratization affects human development through the empowerment of citizens and civic associations where the mechanisms are free media, civil society, and popular participation in politics. However, they are overall skeptical towards this channel and argue that the main effect relates to electoral institutions (as argued above).

Lastly, a mechanism in which stronger deliberative democratic institutions leads to poverty reduction seems quite natural: In a (better) deliberative democracy, political decision-makers have consultations with a larger range of (groups of) citizens, do publicly deliberate policy proposals with the citizens and must be able to justify them. Assuming that reducing poverty is a policy issue for constituents (which it is, as Bermeo (2009) shows) deliberation should lead to policy proposals incorporating the requests for poverty reduction.

H3: Although theoretically less clear, it is likely that better deliberative and participatory democratic institutions are associated with poverty reduction.

Overall, when looking at democracy as a high-level concept, there is no clear hypothesis about whether democratization leads to lower or higher poverty because theory predicts some positive and some negative consequences which can, in practice, cancel each other out. But when disaggregating this high-level concept into mid-level democratic institutions, theory has some observations to offer. This also illustrates the value the approach taken in this paper analyzing disaggregated mid- and low-level institutional aspects.

3 Method and Data

3.1 Method

The empirical approach follows Acemoglu et al. (2019) and Dörffel and Freytag (2021) in using semi-parametric treatment effects estimations to causally identify the effect of democratization on poverty rates. In addition, I use data on the quality of mid- and low-level institutions from the V-Dem project (Coppedge et al. 2021) to split the sample of democratizers into two groups, one with above median institutional quality and one with below median institutional quality. This allows an assessment of whether the quality of institutions at the time of democratization affects subsequent poverty reduction paths.

The effect is estimated via the equation

$$\beta^s = E(\Delta H^s_{it}(1) - H^s_{it}(0) | D_{it} = 1, D_{it-1} = 0), \tag{1}$$

where β^s is the causal effect of a transition to democracy at time t on the poverty headcount rate s years after the democratization, ΔH^s_{it} is the change in the poverty rate between the year of democratization and s years afterwards. Thus, the equation captures the difference between the change in the poverty rates between the year of democratization and s years afterwards between countries that democratized and countries that remained a non-democracy. In other words, it calculates the average treatment effect on the treated (ATET) for democratization.

Using treatment effects estimations rather than a more traditional regression-based approach has several advantages. First, it does not rely on the assumption of a linear relationship between poverty and democracy, allowing flexibility in the functional form which makes it robust to misspecification of the data-generating process (Jordà, 2005). If the effect has nonlinearities, i.e., increases or decreases over time or interacts with other, unobserved variables, this would not be captured by a regression estimator.

Second, it allows for the possibility that countries reverse back to nondemocracy over time and it does not impose that the effect of transitioning to and away from democracy has the same size (as regression estimators do). Absent a way to distinguish between successful and failed democratizations, it seems more appropriate to include failed democratization into the estimation of the effect to assess the "true" effect, rather than assuming that democratizations are always successful, as is the case when using regression estimators. Given evidence that many democratizations do end up in reversals (Kapstein and Converse, 2008; Wilson et al. 2020) this should be taken into account.

Most importantly, this approach does not restrict the time pattern of the effect. In regression-based estimates, the assumption is that the effect occurs within the one period and the long-run effect is then extrapolated from this. Treatment effects estimates directly calculate long-run effects by projecting the effect for different time horizons separately. While this seems naturally advantageous, there also is support in the literature for using this approach. Gerring et al. (2012, 2021) argue that democracy is likely to have both short- and long-term effects on human development. For example, vaccinating infants has immediate societal effects (by reducing infant mortality) and some policies such as public good provision, direct cash transfers, tax credits or food programs are likely to affect poverty rates quickly. However, many policies that involve investments, e.g. in infrastructure, education or health, might only affect poverty rates indirectly and thus are likely to take a longer time to produce observable results. Support for this comes also from Gerring et al. (2005, 2021) who find evidence that the stock (rather than the level) of democracy increases GDP, that is to say, democratic experience plays an important role. Regression estimators would not capture these long-run effects, but the treatment effects used in this paper do.

Calculating treatment effects involves forming a counterfactual of non-democratizers for comparison.[6] Following Jordà (2005), this involves specificizing a regression model

[6]Forming this counterfactual is necessary to distinguish the effect of democratization from the general downward trend of global poverty rates (irrespective of their institutions).

to adjust for non-random selection into democratization (the estimation of the effect itself is still non-parametric). Like Acemoglu et al. (2019) and Dörffel and Freytag (2021), I use a linear regression adjustment with past levels of poverty, GDP and inequality (all 4 lags) and fixed effects to form a counterfactual for countries that do not transition to democracy to estimate the ATET (Acemoglu et al. 2019; Jordà, 2005; Kline, 2011). Estimating counterfactuals in this way is consistent if the model for selection into democracy is based on fixed effects, and lags of GDP, poverty and inequality is correct (Kline, 2011). The underlying issue is that countries that democratize might be different than countries that do not. This difference can be addressed by a selection-model conditioning on past values of poverty, GDP and inequality, since they influence selection into democracy. Furthermore, the assumption must hold that there are no other confounding factors (omitted variables) among non-democracies that influence the likeliness to democratize and that are related to subsequent poverty reduction at the same time. In other words, treatment effect estimations impose that either omitted characteristics that affect both the likelihood of democratizations and poverty are fully captured by including lags of poverty, GDP and inequality or fixed effects, or that any such omitted characteristics are common to all nondemocracies at time t-1 (which would be the case for institutional features in nondemocracies), so that the countries that democratize are not on a different trend relative to other nondemocracies with similar levels of poverty in the recent past (Acemoglu et al. 2019; Dörffel and Freytag, 2021).[7]

3.2 Data and Summary Statistics

Data to identify democratization data are taken from Acemoglu et al. (2019) and are based on the Polity2 index from Polity IV (Marshall et al. 2014) and the Freedom House regime classification (capture electoral institutions and civil liberties) and other

[7] This assumption is similar to the parallel trends assumption in fixed effects regressions where one would condition on past lags of poverty, GDP and inequality to remove the influence of these factors before democratization. However, regression assume that the poverty process is linear, and the effect occurs within the same year.

sources Boix et al. 2013; Cheibub et al. 2010 in case the main sources are missing. For poverty data I use the poverty headcount rate, i.e. the fraction of the population living under $1.90 per day, from World Development Indicators (WDI) (World Bank, 2016). Inequality data (the Gini coefficient) also comes from the WDI. The dataset contains 40 cases of democratization for which there is sufficient poverty data.[8] Because data on poverty and inequality are sparse, (i) they are interpolated to fill gaps and (ii) the sample contains a more recent set of democratizations because poverty rates are only widely available after 1980.

Lastly, data on mid- and low-level institutions comes from the V-Dem dataset (Coppedge et al. 2021). The theoretical features of democratic institutions are disaggregated into over 400 questions which are then coded by experts for each country and year (each country year observation is coded by multiple and different experts). Their answers are aggregated by Bayesian item response modeling techniques into the mid- and low-level indices to account for uncertainty in the experts answers (Coppedge et al. 2016).

For liberal, participatory, deliberative and egalitarian institutions, the respective indices are directly available from the dataset and are simple averages of their respective lower-level institutional features. For electoral institutions, I calculate this simple averaged index. These simple-averaged indices assume perfect substitutability among their lower-level features. For example, a country that has a very low score on clean elections but a high score for freedom of expression can receive the same index value as country with well-functioning elections but no freedom of expression. However, Gerring et al. (2021) make the case that these institutional features complement each other (have interaction effects), i.e. countries should only receive a high value for electoral democracy if they have both clean elections and freedom of expression. Using a multiplicative version of the electoral democracy index they find robust evidence for a positive effect on human development (infant mortality rates), which they do not find for simple averaged indices. Hence, in addition to the five simple averaged mid-level

[8] Table A1 in the Appendix lists all 40 cases.

institutional indices that come with the V-Dem dataset, I calculate their multiplicative counterparts.

Table 2 shows the average poverty rates among countries split by their median value of each institutional feature, as well as the minimum, maximum and median value for each institutional feature itself.[9] It reveals that for some institutional features (e.g. mid-level electoral democracy), poverty rates do not differ much between the half with better institutions and the lower half with weaker institutions. For others, such as mid-level deliberative or egalitarian institutions, poverty rates differ substantially between the upper and lower half (by around 10 percentage points or 25 percent). The same applies to low-level institutional features: For some (e.g. free and fair elections, legal constraints on the executive, direct democracy) there is basically no difference in poverty rates between the two groups, and for others (such as freedom of expression, suffrage, civil society participation, equal access and distribution) there are highly pronounced differences in poverty rates between subsamples. Table 2 also illustrates the usefulness of looking at the lower-level institutional features: While there is no (big) difference in poverty rates for mid-level institutions (such as electoral democracy), there are differences when the mid-level institutions are disaggregated (such as freedom of expression). Table 2 also shows the effect of different forms of aggregation: Allowing for substitutability results in generally much higher index values and also leads to different sample splits and therefore to different average poverty rates in these subsamples (e.g. for deliberative democracy they are is a pronounced difference). Lastly, Table 2 also shows one caveat for the data. The data on suffrage and officials being elected through elections do not allow meaningful sample splits because they are already so prevalent among most countries that the median value coincides with the maximum value.[10]

[9] The average poverty rate for all 40 cases of democratization (at the respective time at democratizations) is 31.8.

[10] For suffrage the lower sample consists of the 3 cases: Brazil and Thailand (twice). For elected officials the lower sample consists of the 10 cases: Bangladesh (twice), Burundi, Cote d'Ivoirce, Guinea, Kenya, Lesotho (twice), Nepal, Niger.

Table 2: Poverty Rates at Democratic Transition and Index Values for Mid- and Low-Level Institutions

	Mean poverty rate at transition			Index values		
	Upper half	Lower half	Difference	Min	Max	Median
Mid-level Institutions						
Electoral democracy (additive)	30.91	32.63	-1.72	0.43	0.91	0.73
Electoral democracy (multipl.)	31.05	32.57	-1.52	0.00	0.60	0.12
Liberal (additive)	29.51	34.28	-4.77	0.25	0.82	0.51
Liberal (multiplicative)	34.39	29.15	5.24	0.01	0.56	0.16
Participation (additive)	27.21	36.33	-9.12	0.26	0.65	0.46
Participation (multiplicative)	30.55	32.99	-2.44	0.00	0.08	0.002
Delibaration (additive)	26.61	36.93	-10.32	0.16	0.62	0.27
Delibaration (multiplicative)	30.06	33.48	-3.42	0.00	0.16	0.03
Eqalitarian (additive)	25.79	37.15	-11.36	0.23	0.78	0.57
Eqalitarian (multiplicative)	27.86	35.28	-7.42	0.01	0.50	0.17
Low-level Institutions						
Freedom of Expr.	38.51	25.03	13.48	0.33	0.91	0.69
Freedom of Ass.	29.98	33.56	-3.58	0.31	0.86	0.67
Suffrage	33.64	9.90	23.74	0.80	1.00	1.00
Free & Fair Elections	30.39	33.30	-2.91	0.00	0.83	0.33
Elected Officals	24.02	48.55	-24.53	0.00	1.00	1.00
Equ. before the law and ind. Lib.	34.18	29.59	4.59	0.30	0.87	0.64
Jud. Constraints	33.80	29.74	4.06	0.12	0.85	0.58
Legal Constraints	30.86	32.78	-1.92	0.06	0.90	0.49
CS Particip.	41.96	21.57	20.39	0.33	0.93	0.72
Direct Democ	31.19	32.41	-1.22	0.00	0.28	0.07
Local Election	27.11	36.43	-9.32	0.00	0.99	0.52
Regional election	26.40	37.74	-11.34	0.00	0.99	0.17
Reasoned justification	31.36	32.18	-0.82	0.25	0.71	0.50
Common good	31.04	32.49	-1.45	0.22	0.83	0.59
Counterarguments	26.89	36.64	-9.75	0.30	0.79	0.60
Consultation	25.89	37.64	-11.75	0.11	0.72	0.48
Engagement	24.97	38.56	-13.59	0.25	0.87	0.57
Equal protection	29.98	33.38	-3.40	0.14	0.86	0.65
Equal acess	36.97	26.56	10.41	0.21	0.86	0.60
Equal distribution	22.59	40.95	-18.36	0.12	0.90	0.42

Note: The first two columns of the table show the average poverty rate among countries with a below/above median level of institutions at the time of democratic transitions for each mid-level and low-level institutions separately (shown in the rows). Columns three shows the difference between columns 1 and 2. Columns four and five shows the minimum and maximum value of each institution among all countries in the sample and column six shows the median value which used to split the sample.

4 Results

4.1 Mid-Level Institutions

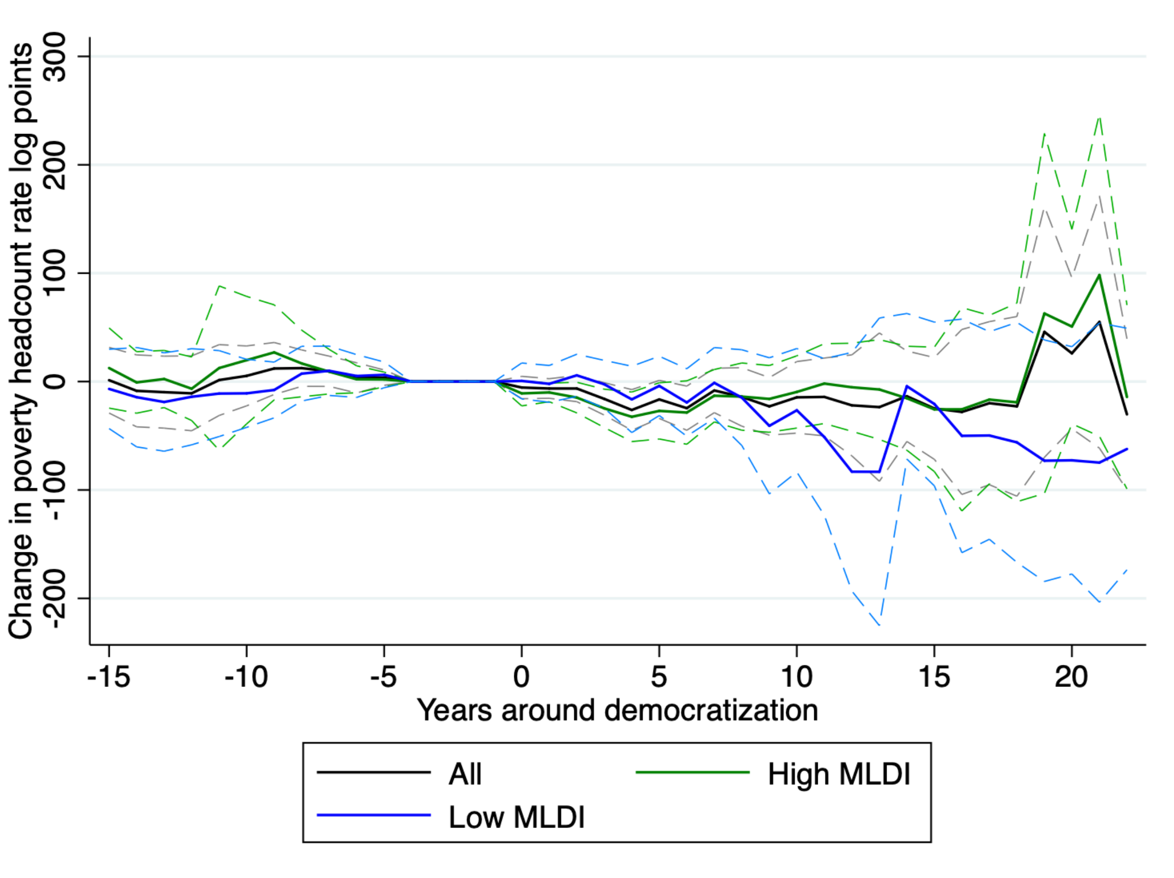
Table 3 below shows the main results for the mid-level institutions indices. It shows the effect for all 40 cases of democratizations in the first row (for comparison) and for the sample splits below. Furthermore, it does not show the coefficient for each year separately, but five-year averages of coefficients and standard errors.

In the first column, the average effect for the five years before democratization is shown. There should be no significant effect of subsequent democratization on poverty rates before democratization. The lack of a significant effect shown in the table indicates that there are no differential trends in poverty rates between democratizers and non-democratizers which indicates that the regression adjustment model is correctly specified and can adequately form a counterfactual. Furthermore, there are no significant effects in columns 3-5 which indicate that estimations reveal no significant long-run effects on poverty rates but only rather immediate effects in the first five years. This does not necessary mean that there is no effect. First, it can be the result of the sample split having lower sample sizes for estimation which results in larger standard errors (which is likely because Dörffel and Freytag (2021) find effects for longer time horizons for the complete sample) and second, democracy might reverse after some years resulting in poverty reduction in the first few years but not after the reversal (which is unlikely as argued below).

There is no significant effect of **electoral** democracy on poverty rates, irrespective of the method of aggregation (thus Hyp. 1 cannot be confirmed). For liberal democracy there is also no effect when subcomponents are aggregated additively but when they are aggregated multiplicatively. There, poverty rates are 18.5% percent lower for the subsample with stronger liberal democracy but there is no significant effect for the subsample with weaker liberal democracy. This indicates that good liberal democratic institutions (rule of law, protection of freedoms and liberties, etc.) at the time of democratization affects leads to poverty reduction.

Interestingly, liberal **democratic** institutions are the only area where better institutions at the time of democratization lead to lower poverty when aggregated multiplicatively (weakly confirming of hyp. 2). This is also illustrated in Figure 1, showing the impulse response of democratization on poverty for liberal democratic institutions (in their multiplicative version). The green line represents the sample with stronger institutions at the time of democratization, the blue line the weaker sample and the black line the full sample. It shows that the subsample with better institutions can reduce poverty more than the subsample with weaker institutions in the first 5 years. After 5 years, the effect basically reverses but also becomes insignificant.

Figure 1: Impulse-Responses of Democratization on Poverty, Split by Multiplicative Liberal Democratic Institutions (MLDI) with 90% confidence intervals



For **participatory, deliberative, and egalitarian** democratic institutions, the subsample with weaker institutions exhibits significant poverty reduction afterwards, while the subsample with better institutions does not (thus hyp. 3 cannot be confirmed). Specifically, weaker participatory institutions (aggregated additively) lead on average to 15.5% poverty reduction, weaker deliberative institutions lead to 23.8% (additive) or 20.1% (multiplicative) lower poverty in the five years after transitioning to democracy, and less egalitarian institutions (aggregated additively) lead to around 13.7% lower poverty rates. Except for the effect of deliberative democracy, significances are at the 90% level. These effects are also meaningful in size: Taking the lowest effect of 13.7% and the average poverty rate in our sample of 31.8%, the poverty rate would be reduced to 27.44%. In a hypothetical country with a population of one million people this amounts to around 44 thousand people.

The observation that the significant poverty reduction happens in the subsample with weaker institutions is also an observation that recurs when looking at the low-level institutions in the next subsection, where this will also be addressed in more detail.

4.2 Low-Level Institutions

Results for low-level institutional features are shown in two tables for a better overview. Table 4 shows the results for electoral and liberal democracy and Table 5 for participatory, deliberative, and egalitarian democracy. Again, the first row shows the effect for all countries without splitting the sample.

Looking at the low-level institutional features, one can already see that the insignificant results for the mid-level institution of e.g., **electoral** democracy, does not mean electoral institutions are irrelevant for poverty reduction. Rather, disaggregating the institutions suggest differential impacts from different institutional aspects. While clean elections and freedom of expression do not seem to directly impact poverty rates, freedom of association, heads of states being chosen by election and suffrage does. However, suffrage and, to a lesser extent, elected official cannot deliver even split sample because the median is also the maximum value. Ignoring suffrage, the upper subsample for

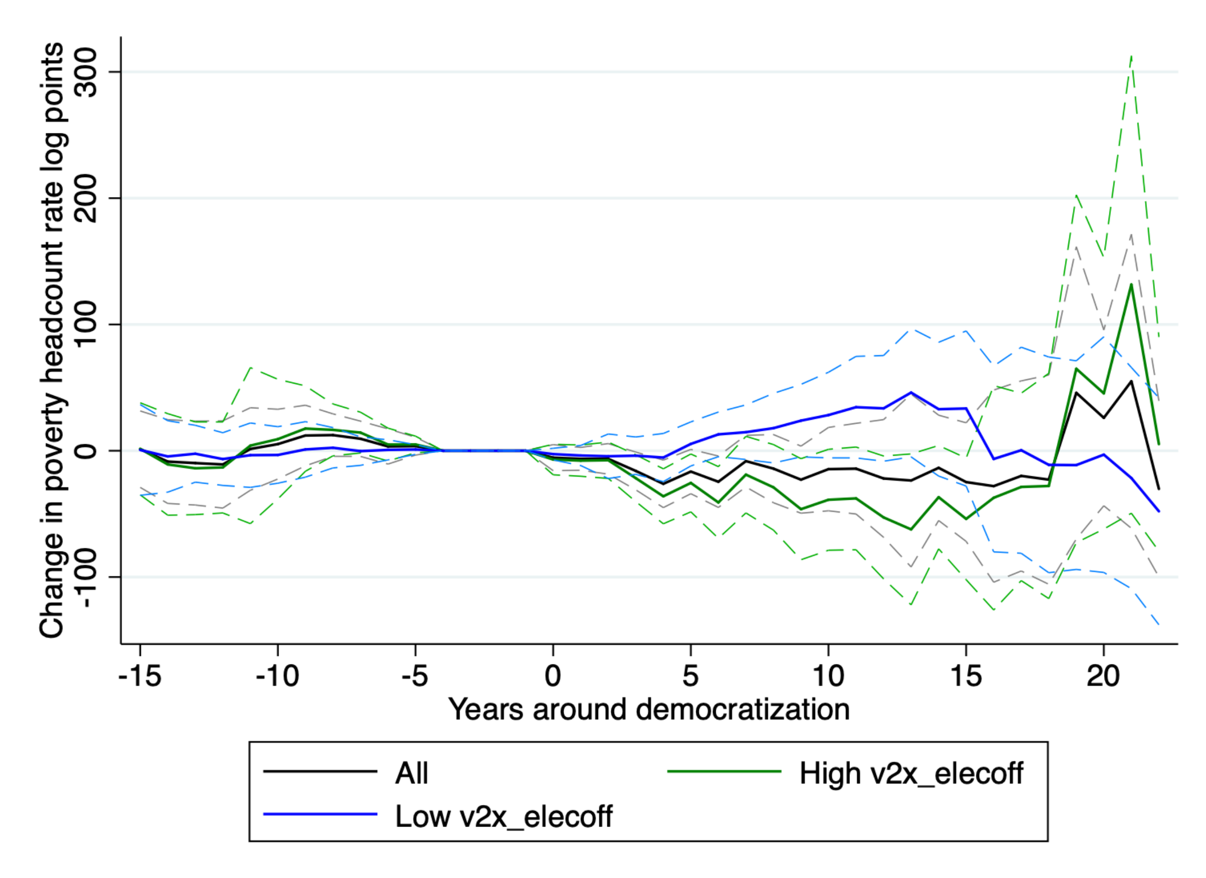
Table 3: Average Effect of Democracy on Log Poverty for Mid-Level Institutions

Average Effects from	(1) -5 to -1 years	(2) 0 to 4 years	(3) 5 to 9 years	(4) 10 to 14 years	(5) 15 to 19 years
All countries	0.727	-12.098*	-17.257	-17.551	-9.958
	(0.859)	(6.238)	(12.408)	(24.212)	(37.810)
Electoral Democracy					
High additive electoral democracy index	-0.374	-9.177	-21.883	-18.273	2.707
	(1.627)	(9.442)	(18.339)	(24.483)	(40.631)
Low additive electoral democracy index	0.776	-16.206	-11.454	-14.841	-79.972
	(1.031)	(12.781)	(25.047)	(52.026)	(99.810)
High multiplicative electoral democracy index	0.721	-12.936	-18.470	-20.106	25.766
	(0.868)	(11.345)	(19.405)	(35.734)	(46.055)
Low multiplicative electoral democracy index	0.733	-14.329	-11.465	-14.841	-79.972
	(1.321)	(12.407)	(26.912)	(51.856)	(97.386)
Liberal Democracy					
High additive liberal component index	1.087	-12.290	-16.731	-19.652	-6.237
	(0.938)	(11.029)	(20.854)	(25.335)	(49.557)
Low additive liberal component index	0.316	-11.828	-17.741	-14.131	-19.630
	(1.155)	(10.572)	(24.761)	(36.408)	(46.850)
High multiplicative liberal component index	0.386	-18.583*	-19.707	-7.863	-4.837
	(0.826)	(7.782)	(15.921)	(23.513)	(44.954)
Low multiplicative liberal component index	1.239	-2.939	-16.029	-49.678	-40.163
	(1.444)	(8.747)	(19.904)	(45.689)	(54.517)
Participatory Democracy					
High additive participation index	0.189	-5.110	-14.626	-4.218	33.355
	(0.879)	(8.726)	(14.914)	(28.395)	(37.612)
Low additive participation index	1.198	-15.485*	-20.073	-32.527	-68.851
	(1.032)	(8.427)	(20.292)	(31.305)	(51.401)
High multiplicative participation index	1.372	-4.126	-8.212	-2.796	23.688
	(0.855)	(6.483)	(14.524)	(28.059)	(38.695)
Low multiplicative participation index	0.082	-19.929	-26.724	-31.773	-52.395
	(0.833)	(10.867)	(19.956)	(27.492)	(54.216)
Deliberative Democracy					
High additive deliberation index	1.142	-2.245	-4.523	0.762	-0.832
	(0.852)	(10.866)	(19.645)	(28.061)	(55.059)
Low additive deliberation index	0.184	-23.679***	-29.403	-28.876	-25.455
	(1.177)	(8.128)	(18.738)	(28.216)	(42.395)
High multiplicative deliberation index	1.119	-5.607	-11.415	-10.002	13.029
	(0.789)	(9.260)	(18.787)	(28.592)	(55.788)
Low multiplicative deliberation index	0.214	-20.138*	-23.272	-23.811	-41.431
	(1.099)	(9.021)	(19.718)	(34.150)	(48.095)
Egalitarian Democracy					
High additive egalitarian index	1.221	-10.499	-7.454	-19.734	11.205
	(1.067)	(8.370)	(19.981)	(46.694)	(49.106)
Low additive egalitarian index	0.233	-13.700*	-24.705	-15.697	-40.699
	(0.836)	(7.980)	(17.133)	(27.552)	(47.317)
High multiplicative egalitarian index	1.537	-14.192	-18.522	-32.240	-9.475
	(1.111)	(10.213)	(19.070)	(38.835)	(46.334)
Low multiplicative egalitarian index	-0.082	-9.868	-15.828	-2.976	-24.609
	(0.782)	(7.728)	(16.303)	(26.382)	(43.869)

Note: The first row shows effect for all countries in the sample that democratized. From the second row on, countries are split into halfs along the median of the institutional feature (e.g. electoral democracy) at the time of democratization).

the elected officials index indicates that poverty rates are reduced significantly by 16% in the first five years, by 32% in the second five years and by 45% in years 10-15, while the lower subsample shows no significant results. This is illustrated in Figure 2, showing the impulse response for the elected officials index. Here, the differential impact of weaker vs. stronger institutions at the time of democratization is clearly visible and lasts for around 15 years after democratization, after which estimations become unreliable.

Figure 2: Impulse-Responses of Democratization on Poverty, Split by Elected Officials Index (v2x_elecoff) with 90% confidence intervals



Returning to Table 4, countries with weaker freedom of association significantly reduce poverty rates by 28.7% in the first five years and by 37.6% in years 5-10. Overall, it seems important that heads of state and the legislature are elected rather than how they are elected (cleanly or not) and that freedom of association plays a larger role than freedom of expression. Furthermore, hypotheses 1 cannot be confirmed since countries with weaker institutions seem to drive poverty reduction rather than those with stronger ones.

Moving on to the institutions of liberal democracy, we again see opposing results. Relatively stronger judicial constrains on the executive and relatively weaker legislative constraints are associated with poverty reduction while the rule of law (equality before the law and individual liberty) is not. Countries in the subsample with lower judicial constraints were able to reduce poverty rates by around 20% while countries in the subsample with higher legislative constraints reduced poverty by 16% in the first five years. Results beyond the first five years are insignificant throughout.

In Table 5, which contains estimates for participatory, deliberative, and egalitarian democratic institutions, a more consistent pattern is visible. If effects are significant, it is always for the subsample with the weaker institutions. This is the case for (the participatory features of) civil society participation, local government, direct popular vote, (the deliberative features of) range of consultation and engaged society, and (the egalitarian features of) equal protection and equal distribution of incomes. Effects for the subsamples with stronger institutions are insignificant throughout. Furthermore, the significant results are all in the range between 12.3% (equal distribution of resources) to 20.7% (civil society participation) and are only significant for the 5 years immediately after democratization. The only exception is civil society participation where effects are significant also for the periods of 5-10 years and 10-15 years after democratization and the effect size is immense with a poverty reduction of 52.7% in years 5-10 and 90% in years 10-15 after democratization. Civil society participation captures how important civil society organizations are for policymaking and whether they are driven by citizen, as well as whether women are excluded from participation and whether party candidates are chosen by an open or closed process. These results do not occur due to level effects. Table 2 shows that countries with stronger civil society institutions have twice the poverty rate compared to countries with weaker civil society institutions at the time of democratization. Hence, this cannot possibly

Table 4: Average Effect of Democracy on Log Poverty for Low-level Institutions (Electoral and Liberal Institutions)

Average Effects from	(1) -5 to -1 years	(2) 0 to 4 years	(3) 5 to 9 years	(4) 10 to 14 years	(5) 15 to 19 years
All countries	0.727	-12.098*	-17.257	-17.551	-9.958
	(0.859)	(6.238)	(12.408)	(24.212)	(37.810)
Electoral Democracy					
High additive clean elections index	1.593	-13.138	-26.940	-27.677	-10.691
	(1.053)	(8.917)	(18.087)	(26.337)	(45.301)
Low additive clean elections index	0.065	-11.018	-5.909	-6.114	-32.222
	(0.695)	(7.765)	(18.965)	(38.780)	(79.248)
High elected officials index	0.992	-16.012**	-32.112*	-45.662*	-16.564
	(0.801)	(7.535)	(16.831)	(24.598)	(42.410)
Low elected officials index	0.197	-4.005	14.961	35.058	9.122
	(0.469)	(6.589)	(12.946)	(24.823)	(38.493)
High Freedom of Association	0.958	-0.324	-4.325	-0.218	-1.445
	(0.878)	(9.302)	(16.879)	(25.927)	(50.677)
Low Freedom of Association	0.496	-28.768**	-37.620*	-48.063	-56.318
	(1.036)	(11.235)	(22.757)	(37.768)	(72.100)
High Freedom of Expression	0.593	-10.634	-13.093	0.507	-5.541
	(0.761)	(8.649)	(15.432)	(21.877)	(51.085)
Low Freedom of Expression	0.881	-14.246	-23.849	-51.620	-20.897
	(1.130)	(10.848)	(19.935)	(44.011)	(65.208)
High share of population with suffrage	0.796	-10.180*	-14.815	-10.268	7.421
	(0.636)	(5.773)	(14.017)	(26.111)	(45.787)
Low share of population with suffrage	-0.232	-51.271***	-67.554***	-114.203***	-224.070***
	(2.051)	(11.266)	(25.143)	(38.353)	(59.276)
Liberal Democracy					
High equality before the law and individual liberty	0.651	-10.756	-7.327	6.842	13.500
	(0.832)	(9.196)	(18.344)	(25.062)	(39.508)
Low equality before the law and individual liberty	0.815	-13.899	-28.419	-52.012	-62.663
	(1.173)	(9.653)	(21.409)	(45.150)	(68.536)
High judicial constraints on executive	0.370	-20.617**	-19.236	-16.394	-16.043
	(0.803)	(9.438)	(17.681)	(27.323)	(39.978)
High judicial constraints on executive	1.135	-1.495	-16.411	-19.272	-3.095
	(1.119)	(8.792)	(21.244)	(31.501)	(42.372)
High legislative constraints on executive	0.914	-9.023	-6.039	9.688	2.779
	(0.651)	(9.060)	(19.469)	(31.125)	(50.755)
Low legislative constraints on executive	0.447	-16.057*	-30.554	-53.369*	-43.505
	(1.203)	(9.154)	(21.759)	(32.111)	(50.744)

Note: The first row shows effect for all countries in the sample that democratized. From the second row on, countries are split into halfs along the median of the institutional feature (e.g. clean elections) at the time of democratization).

explain the effect for the subsample with weaker institutions. Furthermore, treatment effect estimates in Tables 3-5 do not directly compare the subsamples to each other, but each subsample is compared to a counterfactual of non-democratizers. This means, the countries with weaker institutions and lower poverty rates can significantly reduce poverty rates after democratization compared to non-democratizers while countries with stronger civil society institutions who also have much higher poverty rates are not. The reason for this pattern is investigated in the next subsection.

Among the other low-level institutions of participatory democracy, local governments (are there elected local representations?) and direct popular vote (is it possible to conduct ballot measures?) are significant for the subsamples with the weaker institutions while regional government is not. Thus, participatory institutions that let citizen directly influence policy-making and policy measures can lead to poverty reduction after democratization (if these institutions are relatively weak at the time of democratization).

For deliberative institutions, the range of consultations (do elites consult a wide range of actors?) and engaged society (are there wide and independent public deliberations?) are significant for the subsamples with the weaker institutions while the institutions of reasoned justification for policy proposals, justification of policies in terms of the common good and respect for counterarguments do not seem to play a role. This suggests, similar to the results from participatory institutions, that the influence of the public on policymakers can drive poverty reduction. However, the quality of such deliberations in terms of reasoning and justification of policy proposals is not as important.

Thus, hypothesis 3 cannot be confirmed, because for participatory and deliberative institutions, significant effects are only in the subsamples with weaker institutions but not in those with stronger ones.

Lastly, within egalitarian democratic institutions, the subsamples with weaker institutions of equal protection (of rights and freedoms across social groups) and equal distribution of resources (material and immaterial) show a significant effect while the effect of equal access (to power across groups in society) is not significant. Hence, *de facto* access to power has no influence while *de jure* protection and an equal distribution of resources does.

Thus, hypothesis 2 can be mostly rejected, except for judicial constraints on the executive, since all other significant effects are in the subsamples with weaker liberal and egalitarian institutions, for which theory predicts poverty increases rather than decreases.

Tables 3-5 show that many for many of the mid- and low-level institutions there is no significant effect of democratization on poverty reduction. This is, on the one hand, likely due to a small sample which results in large confidence bands and on the other hand, theory predicts many reasons why democratizations fail to deliver significant changes in terms of redistribution, income changes or spending on public goods. Most of the arguments argue in some form that powerful actors in society can influence the rules in their favor or side-step them, thus “capturing democracy”. Kavasoglu (2020) and Miller (2021) find empirical support for this theory. Kavasoglu (2020) finds evidence that strong autocratic rulers implement reforms to pre-empt opposition to stay in power or exercise a large amount of control after transitioning to democracy. In his sample, 26% of democratizations are such incumbent-led democratizing while rest is sparked by protest, civil war, etc.. Similarly, Miller (2021) argues that in two thirds of democratizations, the ruling party stays in power. In those cases where the transition is incumbent-led and old elites are able to grasp a significant amount of power after the transition it is more likely that democracy is “captured” and redistribution effects are small or non-existent because extractive institutions remain after democratization.

4.3 Discussion: Why Do Weaker Institutions Lead to Poverty Reduction?

The observed pattern, especially in low-level institutions, that the subsamples with weaker institutions experience poverty reduction while the subsamples with stronger

Table 5: Average Effect of Democracy on Log Poverty for Low-level Institutions (Participatory, Deliberative and Egalitarian Institutions)

Average Effects from	(1) -5 to -1 years	(2) 0 to 4 years	(3) 5 to 9 years	(4) 10 to 14 years	(5) 15 to 19 years
All countries	0.727	-12.098*	-17.257	-17.551	-9.958
	(0.859)	(6.238)	(12.408)	(24.212)	(37.810)
Participatory Democracy					
High civil society participation	0.226	-6.159	6.579	22.610	23.979
	(0.546)	(7.571)	(10.424)	(24.514)	(40.853)
Low civil society participation	1.383	-20.690**	-52.688**	-90.466**	-87.315
	(1.445)	(10.301)	(21.895)	(38.295)	(64.444)
High local gov. index	1.739	-7.951	-25.094	-15.503	19.461
	(1.104)	(9.450)	(18.624)	(31.491)	(47.916)
Low local gov. index	-0.158	-15.969**	-9.121	-20.431	-51.150
	(0.728)	(7.823)	(12.794)	(26.964)	(55.282)
High regional gov. index	1.237	-13.677	-21.182	2.406	30.370
	(0.936)	(8.616)	(17.532)	(28.999)	(48.470)
Low regional gov. index	0.218	-10.505	-14.489	-30.080	-47.782
	(0.881)	(9.471)	(15.963)	(30.932)	(43.746)
High direct popular vote index	0.492	-6.108	-4.509	-9.501	-12.665
	(0.970)	(7.805)	(18.096)	(30.743)	(26.654)
Low direct popular vote index	0.996	-18.851*	-28.726	-24.972	-32.445
	(1.006)	(9.842)	(18.898)	(27.799)	(55.041)
Deliberative Democracy					
High reasoned justification	1.678	-9.102	-11.955	-8.487	14.759
	(0.976)	(10.937)	(19.749)	(26.983)	(45.518)
Low reasoned justificatio	-0.360	-15.123	-23.241	-26.932	-42.356
	(0.721)	(10.292)	(23.661)	(38.890)	(43.774)
High common good justification	1.533	-16.647	-28.944	-26.033	-16.368
	(1.052)	(9.271)	(19.996)	(29.353)	(63.756)
Lpw common good justification	0.022	-7.497	-6.608	-11.366	-20.112
	(0.792)	(8.053)	(18.672)	(37.562)	(43.646)
Low respect for counterarguments	0.006	-7.505	0.671	18.165	-8.517
	(0.676)	(9.248)	(15.714)	(29.775)	(62.625)
Average effect of democracy on log poverty	1.808	-17.515	-34.992	-45.278	-17.761
	(1.465)	(9.769)	(19.579)	(35.999)	(56.614)
High range of consultation	0.741	-5.375	-2.351	-8.776	-33.274
	(0.673)	(10.579)	(21.651)	(36.918)	(54.257)
Low range of consultation	0.707	-18.314*	-27.803	-22.657	-12.394
	(1.200)	(8.444)	(21.241)	(33.626)	(39.376)
High engaged society	1.129	-4.957	-6.440	-0.223	-0.832
	(0.637)	(9.345)	(20.733)	(35.661)	(60.046)
Low engaged society	0.202	-20.592*	-25.929	-27.524	-25.455
	(1.249)	(9.669)	(19.420)	(32.402)	(46.683)
Egalitarian Democracy					
High equal protection	0.948	-8.147	-16.235	-32.086	-9.475
	(0.780)	(8.103)	(19.572)	(37.108)	(48.044)
Low equal protection	0.506	-15.823*	-18.293	-2.976	-24.609
	(1.025)	(9.112)	(14.425)	(24.447)	(55.960)
High equal access	0.835	-12.049	-7.351	3.981	-3.892
	(0.834)	(7.881)	(15.762)	(21.872)	(39.262)
Low equal access	0.619	-12.148	-27.876	-40.892	-36.036
	(1.129)	(9.986)	(20.687)	(37.752)	(52.398)
High equal distr. of resources	1.544	-11.846	-15.019	-24.671	-11.208
	(1.097)	(9.594)	(19.098)	(36.745)	(47.264)
Low equal distr. of resources	-0.089	-12.301*	-19.202	-11.405	-23.688
	(0.603)	(7.237)	(15.128)	(23.483)	(46.413)

Note: The first row shows effect for all countries in the sample that democratized. From the second row on, countries are split into halfs along the median of the institutional feature (e.g. clean elections) at the time of democratization).

institutions do not requires further exploration.

Firstly, as argued before, these results are not driven by level effect of poverty, i.e. that the subsample with a significant effect has higher poverty rates at the time of democratization and thus reap "low hanging fruit" of poverty reduction.[11] This is in contrast the rationale found by Dorsch and Maarek (2019) who find that inequality effects of democratization depend on the level of inequality before democratization because nondemocracies tend to have very high or very low inequality while democracies tend to take the middle ground. The empirical tests conducted in this paper do not test for this mechanism but exclude the possibility that results are driven by it.

Secondly, these results are also not driven by reversals of democratizations. If many of the democratizations would end up in reversals, one could argue that the "true" effect of permanent democratization would be higher in terms of poverty reduction. However, in the sample of 40 democratizations, only 3 are reversed after 5 years. Hence, the results are likely not impacted much by these few reversals.Mean institutional level at the time of democratization for reversers and non-reversers is on average 0.01 points higher for non-reversers.[12]

Rather, these results are most likely due to changes in institutions triggered by democratization in the subsample with weaker institutions at the time of transition but not in the subsample with stronger institutions. Table 6 shows some reasoning for this. When calculating the change in institutions from the time of democratization to five-year afterwards separately for all 30 sample splits of mid- and low-level institutions from Tables 3-5, I find that countries with stronger institutions at the time of democratization do essentially not improve their level of institutions during the first five years

[11] Apart from the treatment effects estimates excluding this possibility by design because the adjustment model includes lags of the poverty rates, this can also be seen in Table 2 above: Among low-level the 20 low-level institutions I find 12 significant effects (10 for the subsamples with the weaker institutions and 2 for the subsample with the stronger institution). Of those with weaker institutions, poverty rates are sometimes much larger than the other subsample (e.g. for suffrage, civil society participation), sometimes much lower (e.g. for range of consultation, equal distribution of resources or engaged society) and sometimes almost equal (e.g. for direct popular vote or legal constraints).

[12] Mean institutional level at the time of democratization for reversers and non-reversers is on average 0.01 points higher for non-reversers.

but the countries with weaker institutions do.[13] The subsamples with the stronger institutions improve their institutions by 0.032 in the first five years after democratization while the subsamples with the weaker institutions improve them by 0.111 (on a 0 to 1 scale). A T-test on the difference between these two groups is statistically significant on the 99% level (see Table 6).[14] Additionally, Table 6 shows that the found effect of poverty reduction is not indirectly going through GDP or inequality changes: (negative) GDP changes are higher in the subsamples with weaker institutions (which should lead to more poverty, c.p.) but the difference between groups is not significant according to the T-test. The same holds for inequality: in subsamples with stronger institutions income inequality increases a bit more (which should lead to more poverty, c.p.) than in subsamples with weaker institutions but the difference is not significant. Although this is not causal proof, the most plausible explanation according to the data presented is that poverty reductions in subsamples with weaker institutions found in main results are triggered by institutional changes after democratization.

Table 6: T-Tests for Differences in 5-Year Changes in Institutions, GDP p.c. and Inequality After Democratization

Variables	Observations Group 1 + 2	Mean Group 1	Mean Group 2	Difference	90% CI	
Institutions (Δ 5-year)	60	0.111	0.032	0.072	0.491	0.11
log GDP p.c. (Δ 5-year)	60	-23.365	-18.694	-4.67	-13.31	3.964
log Gini coeff. (Δ 5-year)	60	7.021	7.653	0.631	-1.605	0.343
	t-value	Pr(|T| > |t|) (Diff. $\neq$ 0)	Pr(T<t) (Diff. < 0)	Pr(T>t) (Diff. > 0)		
Institutions (Δ 5-year)	4.38	0	1	0		
log GDP p.c. (Δ 5-year)	-0.904	0.37	0.185	0.815		
log Gini coeff. (Δ 5-year)	-1.084	0.283	0.1415	0.8585		

Note: log GDP and Gini coeff. are multiplied by 100. Group 1 contains countries with above median level institutions at the time of democratization, Group 2 countries with below median level of institutions. The 5-year changes of variables correspond to changes from the time of democratization to 5 years afterwards.

To offer an interpretation for this result it is helpful to recall what the split into weak and strong institutions at the time of democratization implies. Since democratizations are identified with a dummy variable, this dummy change can be considered the event

[13] The general pattern also holds for other time horizons, e.g. to 10 years after transition (tests not shown).

[14] Using an “unpaired” version of the T-test that assumes independent samples because by splitting the sample beforehand we create basically independent subsets of the data.

of formal democratization. However, even in non-democracies, the democratic ideals inherent to electoral, liberal, participatory, deliberative and egalitarian democratic institutions can be achieved to varying degrees; independent from the formal status of democracy. These different degrees are captured by the sample split. Thus, the subsamples with stronger institutions already have relatively well-functioning democratic institutions before formal democratization. In subsamples with weaker institutions however, democratic ideals are less ingrained into day-to-day functioning of society. Thus, democratizations in subsamples with weaker democratic institutions can be seen as a bigger leap forward where the strengthening of underlying democratic institutions and ideals will likely come in the years after the formal event of democratization.

Thus, all the benefits of democratizations that the literature finds are more likely to occur when democratic institutions are relatively weak at the time of formal democratization, while gains are more likely to have already been realized when democratic institutions are already strong at the time of formal democratization. To summarize, these benefits are increased tax revenues, less population in working in agriculture, higher education spending and school enrollment rates, higher life expectancy, more calories consumed, less infant mortality (Acemoglu et al. 2015) and lower poverty rates (Dörffel and Freytag, 2021). This offers a rationale for the finding that poverty rates tend to decrease in the subsamples with weaker institutions.

This is also in line with findings from Dorsch and Maarek (2019) who find that inequality changes after democratization are actually caused by redistribution of market opportunities rather than fiscal redistribution. Arguably, weak institutions leave more scope for an increase in market opportunities that can result in higher incomes and poverty reduction. In countries with strong institutions on the other hand, there are stricter rules and constraints for market activity which leaves less scope for a dynamic realignment that increases market changes. At the same time, poverty reduction through fiscal redistribution does not seem to play an important role.

5 Conclusion

This paper analyzed which institutional features contribute to poverty reduction when countries democratize. For this, theories and data are used that distinguish between different kinds of democratic institutions – namely electoral, liberal, participatory, deliberative, and egalitarian democratic institutions. The data analysis applies semi-parametric treatment effects estimates which reveal no clear pattern of some institutions being predominant while others are not. In each area of institutions some of its features contributes to poverty reduction and some do not.[15] Especially, the hypotheses that stronger institutions lead to poverty reduction cannot be confirmed. This can be due to small sample sizes as well as democracies being captured by elites leading to persistence in extractive institutions. Only for the institutions of executive and legislative and judicial constraints on the executive, stronger institutions lead to significant poverty reduction. For all other significant effects, weaker institutions lead to poverty reduction. When the effect of democratization on poverty reduction is significant, it is meaningful in size (ranging from around 12 to 25 percent during the first five years after democratization, depending on the mid- and low-level institution). This is likely due to triggered changes in institutions due to democratization which only occur when institutions are still relatively weak, rather than due to growth or inequality changes. Reaping the benefits that come along with democratization are more likely to occur when democratic institutions are relatively weak at the time of formal democratization, while they are more likely to have already been realized when democratic institutions are already strong at the time of formal democratization. This pattern is the clearest with deliberative, participatory, and egalitarian institutions but less clear with electoral and liberal democratic institutions. This illustrates that institutions which capture how responsive policymaking is to its constituencies are more important for poverty reduction than the institutions which capture more formal aspects of democracy.

[15]This also indicates that institutions on an aggregate level (or high-level institutions) consist of institutional feature that work well together and reinforce each other (as also argued e.g. by Gerring et al. (2021).

As already mentioned, sparse data is one of the biggest limitations of this paper and the largest obstacle for future research. With time progressing, future research can benefit from more data being available which means estimates are likely to become more reliable. Conceptionally, future research could also not only make use of all democratizations but make an effort to identify differences between successful and failed episodes of democratizations. Wilson et al. (2020) provide a useful conceptualization and dataset as well as successful and failed democratizations that might be helpful for this avenue.

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Appendix

Table A1: Sample of Democratizations

Burundi 2003	Lesotho 1993
Burkina Faso 2015	Lesotho 1999
Bangladesh 1991	Madagascar 1993
Bangladesh 2009	Madagascar 2011
Brazil 1985	Mexico 1997
Bhutan 2008	Mauritania 2007
Cote d'Ivoire 2000	Malaysia 2011
Cote d'Ivoire 2011	Niger 1999
Algeria 2011	Niger 2010
Fiji 2014	Nigeria 1999
Gabon 2011	Nepal 2006
Ghana 1996	Pakistan 2008
Guinea 2010	Panama 1994
Guinea-Bissau 1999	Russia 2011
Guinea-Bissau 2005	Senegal 2000
Indonesia 1999	Thailand 1992
Iraq 2011	Thailand 2008
Kenya 2002	Tunisia 2011
Kyrgyz Republic 2005	Tanzania 2015
Kyrgyz Republic 2010	Yemen 2012

Note: The Table shows the countries in the sample of democratizations used in Tables 2-6 and the corresponding year of democratization.

Table A2: Mid- and Low-Level Institutions and Their Description

Mid-Level	Low-Level	Description
Electoral Democracy	Clean elections index	To what extent are elections free and fair? (Free and fair connotes an absence of registration fraud, systematic irregularities, government intimidation of the opposition, vote buying, and election violence.)
	Elected officials index	Is the chief executive and legislature appointed through popular elections?
	Freedom of association	To what extent are parties, including opposition parties, allowed to form and to participate in elections, and to what extent are civil society organizations able to form and to operate freely?
	Freedom of Expression and Alternative Sources of Information index	To what extent does government respect press and media freedom, the freedom of ordinary people to discuss political matters at home and in the public sphere, as well as the freedom of academic and cultural expression?
	Share of population with suffrage	What share of adult citizens as defined by statute has the legal right to vote in national elections?
Liberal Democracy	Equality before the law and individual liberties index	To what extent are laws transparent and rigorously enforced and public administration impartial, and to what extent do citizens enjoy access to justice, secure property rights, freedom from forced labor, freedom of movement, physical integrity rights, and freedom of religion?
	Judicial constraints on the executive index	To what extent does the executive respect the constitution and comply with court rulings, and to what extent is the judiciary able to act in an independent fashion?
	Legislative constraints on the executive index	To what extent are the legislature and government agencies e.g., comptroller general, general prosecutor, or ombudsman capable of questioning, investigating, and exercising oversight over the executive?
Participatory Democracy	Civil society part. index	Are major CSOs routinely consulted by policymakers; how large is the involvement of people in CSOs; are women prevented from participating; and is legislative candidate nomination within party organization highly decentralized or made through party primaries?
	Local government index	Are there elected local governments, and - if so - to what extent can they operate without interference from unelected bodies at the local level?
	Regional government index	Are there elected regional governments, and - if so - to what extent can they operate without interference from unelected bodies at the regional level?
	Direct popular vote index	To what extent is the direct popular vote utilized? (Direct popular voting refers here to an institutionalized process by which citizens of a region or country register their choice or opinion on specific issues through a ballot.)
Deliberative Democracy	Reasoned justification	When important policy changes are being considered, i.e. before a decision has been made, to what extent do political elites give public and reasoned justifications for their positions?
	Common good	When important policy changes are being considered, to what extent do political elites justify their positions in terms of the common good?
	Respect counterarguments	When important policy changes are being considered, to what extent do political elites acknowledge and respect counterarguments?
	Range of consultation	When important policy changes are being considered, how wide is the range of consultation at elite levels?
	Engaged society	When important policy changes are being considered, how wide and how independent are public deliberations?
Egalitarian Democracy	Equal protection index	How equal is the protection of rights and freedoms across social groups by the state?
	Equal access index	How equal is access to power? (The Equal Access subcomponent is based on the idea that neither the protections of rights and freedoms nor the equal distribution of resources is sufficient to ensure adequate representation. Ideally, all groups should enjoy equal de facto capabilities to participate, to serve in positions of political power, to put issues on the agenda, and to influence policymaking.)
	Equal distribution of resources index	How equal is the distribution of resources? (This component measures the extent to which resources - both tangible and intangible - are distributed in society.)

Note: Grouping roughly based on (Coppedge et al. 2016); Variable descriptions from V-Dem 11.1 Handbook (Coppedge et al. 2021).

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