Economic Adversity and Electoral Participation of Vulnerable Socioeconomic Groups

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Abstract

Do economic hardships affect electoral participation? Using cross-sectional data for 44 countries in Africa, Asia, Europe and Latin America between 1996 and 2013, we find that individual-level attributes and structural factors shape voters' reaction to economic adversity. This paper presents empirical evidence showing that economic downturns affect electoral participation. However, macroeconomic fluctuations have heterogeneous effects. While poorer and less educated citizens are more likely to increase their level of turnout during periods of economic adversity, the rate of participation of individuals with a higher socioeconomic status is not affected by economic downturns. Moreover, we demonstrate that the negative impact of economic hardships on the likelihood of electoral participation of the most vulnerable socioeconomic groups is mostly found in countries that are less inserted into the global economy and in states that offer weaker welfare protections.

1. Introduction

The voluminous literature on economic voting has established that economic fluctuations affect voters' behavior. Numerous studies show that support for incumbent parties declines during economic recessions. Much less is known about the relation between the economic conjuncture and electoral participation. The literature has produced conflicting arguments regarding the impact of the economy on voter turnout. In particular, there is a debate between scholars who argue that economic hardships mobilize citizens to express their grievances at the polls and other scholars who maintain that an economic recession depresses electoral participation. Most previous empirical tests of this relationship in cross-national analyses have produced null findings (Blais & Dobrzynska, 1998; Fornos, Power, & Garand, 2004; Kostadinova & Power, 2007; Lavezzolo, 2008).

Given the lack of scholarly consensus on the relationship between economic hardships and electoral participation at the aggregate level, this paper uses survey data to address whether an economic recession produces *heterogeneous* effects depending on citizens' socioeconomic status and on two structural factors: welfare spending and the integration of national economies in the global economy. First, we postulate that periods of economic crisis affect different socio-demographic groups asymmetrically. Young people and individuals in vulnerable economic conditions are more likely to suffer the negative consequences of economic downturns. As a result, we argue that they are the most likely to become mobilized during bad economic times. But this effect is further conditioned by welfare spending and globalization. We postulate that the mobilizing effect of economic downturns is stronger in countries with low welfare spending and less globalized economies.

Using aggregate macroeconomic data and individual-level data from the CSES (*Comparative Study of Electoral Systems*), we estimate a number of hierarchical linear models and show that economic adversity has heterogeneous effects on electoral participation which

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are contingent on individual characteristics (socioeconomic status) and structural factors (welfare spending and globalization). These findings qualify the null findings of previous cross-national studies. In particular, we show that macroeconomic fluctuations have an impact on citizens' turnout decisions, but they do not affect everyone equally.

This paper will proceed as follows. First, we discuss the theoretical importance of this research question for the study of democratic representation. Second, we present previous research on the link between macroeconomic fluctuations and electoral participation. Third, we discuss our theoretical expectations regarding the asymmetrical impact of economic hardships on citizens' turnout decisions. Fourth, we present the data and the model estimation. The following section presents and discusses the statistical results. The final section concludes and suggests possible avenues for further research.

2. Economic downturns and democratic representation

In representative democracies, voting is the most common way for citizens to participate in politics and influence political outcomes. As pointed out by Przeworski et al. (1999: 50), "governments make thousands of decisions that affect individual welfare; citizens have only one instrument to control these decisions: the vote." However imperfect, this institutional method is a critical aspect of democratic representation. Through elections, citizens can signal their preferences and hold governments accountable.

In order for elections to function effectively as mechanisms of democratic representation, participation must be widespread and everyone's voice must be heard and weighed equally (Dahl, 1971). In practice, however, there are important disparities in turnout across various segments of society which works against equal representation. In particular, young and poor citizens tend to participate less than older, more educated, and wealthier individuals (Lijphart, 1997; Schlozman, Verba, & Brady, 2012). While this was originally shown in the US context (Brady, Verba, & Schlozman, 1995; Wolfinger & Rosenstone, 1980),

more recent studies have demonstrated similar patterns of unequal participation in a variety of other regional contexts (Bratton, Chu, & Lagos, 2010; Carreras & Castañeda-Angarita, 2014; Kuenzi & Lambright, 2011; Norris, 2002). This is problematic for democratic representation because politicians tend to disregard the voices they do not hear, and make more determined efforts to represent the interests and preferences of politically active citizens (Lijphart, 1997; Lindblom & Woodhouse, 1993; Nooruddin & Simmons, 2015).

In this paper, we argue and empirically demonstrate that economic downturns alleviate the inequality of electoral participation. While people with a low socioeconomic status are more likely to abstain when the government is doing a good job managing the economy, they significantly increase their level of electoral participation when the economy is tanking. This paper will show that segments of society that are often unheard are able to express their grievances and to influence government formation during critical periods of economic duress. In other words, we qualify the conventional wisdom that the preferences of the poor and the poorly educated are not properly represented in representative democracies.

2.1. Previous Research

While the proposition that macroeconomic fluctuations shape election results is robust and supported by a voluminous body of research (Duch & Stevenson, 2008; Lewis-Beck & Stegmaier, 2000; Stegmaier & Lewis-Beck, 2013), the relationship between economic conditions and electoral participation is unclear and has received much less attention. The few studies that have analyzed this question have proposed competing theoretical expectations and produced mixed findings (Blais, 2006). Both a "mobilization" and a "withdrawal" effects are possible. On the one hand, economic downturns might lead to an increase in electoral participation by citizens who want to express and redress their grievances. On the other hand, economic hardships might alienate individuals and lead them to withdraw from the political process (Radcliff, 1992; Rosenstone, 1982).

The "withdrawal" hypothesis is based on the argument that economic adversity is stressful, and that citizens who are preoccupied with their personal financial situation cannot spend time and resources thinking about politics. In Rosenstone's (1982: 26) words, "when a person experiences economic adversity his scarce resources are spent on holding body and soul together 'surviving' rather than on remote concerns like politics." Moreover, during periods of economic duress, people might grow increasingly alienated and lose trust in political institutions. A negative economic performance suggests to the public that governments are not able to solve problems, which might lead to a loss of confidence in representative institutions and an increase in democratic dissatisfaction (Clarke, Dutt, & Kornberg, 1993; Mishler & Rose, 2001; Van Erkel & Van der Meer, 2016). In turn, electoral participation may decline when citizens become disenchanted with political institutions and with democratic performance (Cox, 2003; Grönlund & Setälä, 2007; Norris, 2002). For example, Galais and Blais (2014) show evidence that people were less inclined to consider voting as a civic duty following the recent economic recession in Spain.

The "mobilization" hypothesis is based on research that shows a "negativity" bias in political perceptions and political behavior (Kahneman & Tversky, 1979; Lau, 1982; Soroka, 2014). Lau (1982: 353) defines negativity as the "tendency for negative information to have more weight than equally extreme or equally likely positive information." Several studies have shown that the media gives much more coverage to negative economic news than to positive economic fluctuations (Harrington, 1989; Hetherington, 1996). The public reacts asymmetrically to an already biased media content and to the economy itself (Soroka, 2006). In other words, citizens become more aware of economic fluctuations during an economic downturn, and may be induced to become more engaged in the political arena in order to express their grievances and to seek remedies for the poor economic performance of the incumbent government (Burden & Wichowsky, 2014; Kern, Marien, & Hooghe, 2015).

These competing theories have been tested several times in cross-national analyses of electoral participation, and the findings are rather mixed. Pacek et al. (2009) show that turnout in post-Communist countries is lower when unemployment rates are higher (a "demobilizing" effect), while Panagopoulos (2008) reports that turnout in countries with compulsory voting systems is higher when GDP growth is lower (a "mobilizing" effect). However, most cross-national studies find no relationship between the macroeconomic situation in a country and aggregate turnout rates. In an analysis of 324 national elections held in 91 countries, Blais and Dobrzynska (1998) report a null finding. Their analysis shows that GNP per capita growth does not explain cross-national differences in electoral participation. Similarly, Kostadinova (2003), Fornos et al. (2004) and Lavezzolo (2008) find that the macroeconomic situation does not influence turnout in Eastern European and Latin American elections. In a comprehensive review of the determinants of voter turnout, Blais (2006: 117) concludes that "there is no clear relationship between the economic conjuncture and turnout."

3. Economic adversity and turnout: theoretical framework

We argue that macroeconomic fluctuations have heterogeneous effects on political engagement depending on citizens' individual attributes and two structural factors: welfare spending and the integration of a country's economy in the global economy. These heterogeneous effects have flown under the radar in most cross-national studies because those works assumed that the effect of macroeconomic fluctuations on turnout is direct and unconditional. In fact, most of these previous studies use aggregate data which does not allow researchers to explore more subtle relationships between economic hardships, contextual conditions, individual or group characteristics, and political engagement.

An economic downturn can have a mobilizing or a demobilizing effect depending on its impact on citizens' *motivation* to participate in the elections. Previous studies have identified a number of factors that might lead to a decrease in the propensity to vote during periods of

economic duress. In particular, citizens who cannot identify a viable political party to express their grievances (e.g. when all governing parties are seen as responsible for the crisis) might prefer to abstain during a recession (Rowe, 2015; Weschle, 2014). In a similar vein, citizens who identify with the incumbent party (or have a strong preference for the incumbent over the opposition) are more likely to abstain from the election altogether (Helgason & Mérola, 2017; Tillman, 2008).

3.1. Individual attributes, economic downturns, and electoral participation

In this paper, we build on this previous research on the heterogeneous effects of economic hardships. But we focus instead on the socioeconomic attributes and the structural factors that affect citizens' electoral engagement during an economic downturn. Both the withdrawal and the mobilization hypotheses discussed above assume that citizens are exposed to the negative consequences of an economic crisis. However, not everyone suffers equally from a bad economy. The main theoretical intuition in this paper is that an economic downturn should shape more strongly the electoral participation of voters who are more exposed to its deleterious effects. Our first task in this section is therefore to identify the individual attributes that make citizens more vulnerable to an economic recession. Then, we theorize about the link between economic vulnerability and electoral participation during difficult economic times.

When the economy grows more slowly and the level of unemployment increases, individuals with lower socioeconomic status are more exposed to external shocks and more likely to suffer the consequences. Certainly, poor citizens are less likely to have accumulated savings which could help them make ends meet during periods of economic duress. They also tend to have the most precarious jobs, which can be rapidly lost during bad economic times. Another reliable indicator of socioeconomic status is the level of education. In contemporary societies, diplomas have become a screening device and citizens with low education are less likely to access high-paying jobs and more likely to be unemployed (Bovens & Wille, 2017;

McNamee & Miller, 2009; Wilkinson & Pickett, 2010). When individuals who have not completed secondary school lose their jobs, they are likely to have a harder time finding another one given their lack of educational qualifications. They are therefore more likely to struggle during economic recessions. Even when low-income and poorly educated individuals are not directly affected by the economic hardships, they are more likely to have friends and family members who are financially strained. In sum, economic crises affect low-income and low-education groups faster and in more dramatic ways.

There is a long body of research showing that the poor and the working classes are more preoccupied with personal economic concerns and tend to perceive economic conditions more negatively than the rest of the population (Duch, Palmer, & Anderson, 2000; Rosenstone, 1982; Singer, 2011). These evaluations in turn affect political attitudes and political behavior. The level of political support of individuals with a low socioeconomic status exhibits more sensitivity to macroeconomic fluctuations than the political support of white-collar workers (Hibbs & Vasilatos, 1982). Similarly, another study finds that working class citizens in the United States "provide the bulk of the electoral response to economic recession" (Weatherford, 1978: 917).

Another group that is disproportionately affected during periods of economic duress is the youth. Young adults are the hardest hit when a country undergoes an economic recession. As pointed out in the 2011 UN World Youth Report (2011: 17), "during economic downturns, young people are often the 'last in' and the 'first out' - the last to be hired, and the first to be dismissed." Because they lack the work experience of older workers, young individuals have a much harder time finding a sustainable income in the formal economy during economic recessions. As a result, many young voters become discouraged and drop out of the formal job market altogether (UN, 2011). Similarly, several studies analyzing the impact of the recent global financial crisis on the youth show that young people are much more vulnerable to the

effects of the crisis. Young people are the most likely to be income-poor and they are disproportionately vulnerable to lay-offs (Junankar, 2014; Marcus & Gavrilovic, 2010; Verick, 2009). All this suggests that negative macroeconomic fluctuations might produce more anxiety among young voters than among other age groups.

In sum, we know that low-income, poorly educated, and young individuals are more likely to suffer negative consequences (e.g. lose their jobs) during periods of economic duress. But, are these sociodemographic groups more or less likely to vote during an economic downturn? As we discussed in the previous section, there are competing theories regarding the impact of a bad economy on electoral participation. The 'withdrawal' hypothesis holds that citizens are demobilized during economic recessions because they are preoccupied with providing for their basic needs and do not want to spend their scarce resources on remote concerns such as politics (Rosenstone, 1982). If this argument is correct, we should see a stronger demobilization effect among the youth and individuals with a low socioeconomic status. In fact, while the middle classes and the highly educated segments of society might survive an economic recession relatively unscathed, the youth and the poor might suffer the consequences of macroeconomic downturns more rapidly and more acutely. This discussion yields the following ('withdrawal') hypothesis.

Hypothesis 1: Economic downturns lead to a *decrease* in the level of electoral participation of individuals in a situation of economic vulnerability (young and low SES)

The 'withdrawal' hypothesis is not entirely convincing. It is well-known that voting is the most common and the least demanding political action (Dalton, Scarrow, & Cain, 2005; Milbrath, 1965; Teorell, Sum, & Tobiasen, 2007; Verba, Schlozman, & Brady, 1995). Participating in elections requires fewer resources (in terms of time, economic, and cognitive resources) than engaging in other political actions, such as contacting politicians or working for a political party (Burns, Schlozman, & Verba, 2001). If voting is a political action that does

not demand many resources, the argument that economic hardships depress participation because they reduce available resources is not convincing.

We favor a 'mobilization' argument which suggests that, on the contrary, citizens vote more during periods of economic duress because they want to express their frustration and sanction the incumbent government. If this hypothesis is correct, the mobilization effect should also be particularly strong for individuals who are more exposed to the negative consequences of an economic downturn. Individuals in a situation of economic vulnerability might have more intense grievances against the incumbent government. This, in turn, might mobilize them to participate in the political arena in both conventional and unconventional ways (Kern et al., 2015). This is the second ('mobilization') hypothesis of the paper.

Hypothesis 2: Economic downturns lead to an *increase* in the level of electoral participation of individuals in a situation of economic vulnerability (young and low SES)

3.2. Economic downturns, structural factors, and electoral participation

The hypotheses outlined above assume that the effects of an economic downturn on the electoral participation of young and low-SES voters is homogeneous across different contexts. In this section, we relax this assumption and argue that the impact of macroeconomic conditions on electoral participation is further conditioned by two structural factors: welfare spending and the integration of a country's economy in the global economy.

We postulate that individuals with a low socioeconomic status and young people are more likely to suffer the negative consequences of an economic downturn when they live in countries that have less generous welfare protections. When welfare spending is low, the youth and lower-income groups are not protected against the effects of economic downturns. According to Radcliff (1992: 446), "in the absence of security programs, the potential human costs of poor economic performance are much greater." We therefore expect economic dislocations to have a stronger mobilizing effect in countries with weaker welfare programs

because the stakes of macroeconomic fluctuations are much higher. This argument is in line with the theoretical framework developed by Ragsdale and Rusk (2017) to explain how the political and economic environment affects turnout. These scholars argue that high levels of external uncertainty (i.e. economic and political "crises that jar the ordinary course of events") lead people who would otherwise abstain to pay more attention to the electoral contest and vote. Since the stakes are higher, individuals want to make sure that they vote for the candidates or parties that will effectively address the external uncertainty. On the contrary, economic recessions in countries with more developed welfare programs should not lead to an increase in the electoral participation of young and low-income citizens (Lavezzolo, 2008; Pacek & Radcliff, 1995; Radcliff, 1992).

A second structural factor that is key in our theoretical framework is exposure to the world economy (i.e. globalization). We rely mainly on Hellwig's arguments regarding the impact of globalization on the "room to maneuver" of national governments in the economic arena (Hellwig, 2015). Hellwig demonstrates that in more globalized economies voters are more likely to attribute responsibility for economic fluctuations at home to external economic shocks. Since they tend not to blame national governments for economic problems, citizens in more globalized settings are also less likely to sanction incumbents for economic downturns (Hellwig, 2008, 2015; Hellwig & Samuels, 2007). This has important implications for our study because it might affect the motivation to participate in elections during periods of economic duress. In countries that are less well integrated into the global economy, younger and low-SES citizens tend to blame the government for economic hardships and are more likely to go to the polls to sanction the poor performance of the incumbent government. On the contrary, an economic downturn in more globalized countries should have a much smaller impact on citizens' turnout rate. The theoretical discussion in this section yields the following hypotheses:

Hypothesis 3: Economic downturns are more likely to lead to an increase in the level of electoral participation of individuals in a situation of economic vulnerability (young and low SES) *in countries with low welfare spending*.

Hypothesis 4: Economic downturns are more likely to lead to an increase in the level of electoral participation of individuals in a situation of economic vulnerability (young and low SES) *in countries with less globalized economies*.

4. Data and methods

We study the effect of macroeconomic adversity on voter turnout using cross sectional data for 44 countries in Africa, Asia, Europe, and Latin America.[1] In particular, we examine the relation between economic hardships and voter turnout in presidential and legislative elections across countries between 1996 and 2013, and investigate how individual-level attributes and two structural factors (welfare spending and globalization) shape the effect of economic adversity on electoral participation. We rely on individual-level and macro-level data on voting, socio-demographic, and macroeconomic variables provided by the *Comparative Study of Electoral Systems (CSES)*. This research initiative is coordinated by the *Center for Political Studies* and the *GESIS - Leibniz Institute for the Social Sciences*, and brings together first-hand data from election study teams from around the world. The CSES dataset offers high-quality information about public opinion, vote choice, citizens' attitudes, standardized sociodemographic measures, and turnout. The dataset also includes information about macroeconomic performance and human development at the country level. As will be detailed below, we complement these data with institutional and contextual information from a variety of datasets. To examine our argument, we estimate a number of hierarchical linear models (HLM) to account for the layered structure of the data.

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[1] The list of countries and elections in the sample is presented in Table A1 in the online Appendix.

4.1. Dependent variable: electoral participation

This paper analyzes the effect of fluctuations in economic growth and unemployment on the individual propensity to participate in elections. The main dependent variable is reported turnout in the last national elections (presidential or parliamentary). We use a dichotomous measure of electoral participation in the last national elections (0: no, did not vote; 1: yes, did vote).

Although over-reporting turnout may be a problem (Granberg & Holmberg, 1991; Swaddle & Heath, 1989), in this article, we follow conventional practice and analyze reported turnout. Almost all cross-national studies of electoral participation at the individual level - including all the works cited in this article - use surveys and analyze reported turnout, because these are the data available. A recent study of the determinants of electoral participation using reported and validated vote in the United States suggests that it is not problematic to use reported turnout because explanatory factors behave similarly in validated and reported turnout models (Achen & Blais, 2016). Using reported turnout would be problematic for our purposes if respondents' inclination to lie about their turnout decisions varied with macroeconomic fluctuations, but there are no valid theoretical reasons to support that possibility.

Validated turnout data only exists for a few elections in five countries: New Zealand, Norway, United Kingdom, United States, and Sweden (Karp & Brockington, 2005). Unfortunately, these national election studies use different measures of the key variables in our analysis (i.e. education and income) so it was impossible to construct a merged database to analyze the impact of economic hardships in these countries.

4.2. Independent variables

The main independent variable in our analysis is *economic adversity*. We postulate that periods of economic duress shape the electoral participation of the youth and individuals with a low socioeconomic status. We measure macroeconomic fluctuations by using two common

indicators: the economic growth rate and change in unemployment.[2] These data were obtained from the World Bank Indicators. To eliminate endogeneity concerns and to allow for information processing, the macroeconomic indicators in the model are lagged one year (Hellwig, 2015; Murillo & Visconti, 2017; Pacek et al., 2009). Due to space constraints, we focus mainly on the results of the unemployment models in the paper; but the growth models produce similar results and are discussed briefly in section 5.3. below.

The two key contextual predictors in our model are a measure of *globalization* and a measure of *welfare spending*. To capture how inserted a country's economy is in the global economy, we use Dreher's (2006) index of an economy's objective level of exposure to world markets (KOF index of globalization). This indicator combines information on foreign direct investment, foreign trade in goods and services, portfolio investment, and income payment to foreign nationals. Welfare spending is captured through a welfare effort variable which measures social transfers as the after-tax change in the Gini coefficient (Solt, 2016).

Our model specifications also include a series of individual-level variables that comparative political behavior scholars have previously identified as strong predictors of electoral participation (Carreras & Castañeda-Angarita, 2014). In particular, we focus on the individual factors that shape voters' resources and capacity to participate in the electoral process: age, gender (measured as a dummy variable with a value of 1 if the respondent is male), education (measured as a 1-8 scale where 1 is primary and 8 is post-graduate), household income (measured from the lowest household income quintile to the highest household income quintile), labor force status (measured as a dummy variable with value of 1 if the respondent is active in the labor market), and satisfaction with democracy (measured as a 1-4 scale from not

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[2] *Change* in unemployment is a better measure of economic fluctuations than the *level* of unemployment, and is often used in empirical analyses of the impact of macroeconomic changes on political engagement or vote choice (Arzheimer & Carter, 2006; Hernández & Kriesi, 2016; Kern et al., 2015). Using the level of unemployment is problematic in large cross-national analyses (including observations from different world regions) because differences in measurement and in the size of the informal sector might complicate direct comparisons between developed and developing economies.

satisfied to very satisfied). As in the case of the individual propensity to vote, for these individual level variables we rely on data provided by CSES.

Given the structure of our dataset and our methodological approach, we also include some country-level and election-level variables to control for relevant contextual factors. For the country-level of analysis, we control for institutional and economic predictors of voter turnout. Blais and Dobrzynska (1998) show that turnout is higher in more developed countries, so we include a logged measure of GDP per capita (obtained from the World Bank indicators). Many institutional factors can also influence electoral participation. In particular, it is well known that compulsory voting significantly increases electoral participation (Carlin & Love, 2015; Franklin, 2004; Hirczy, 1994). In our model, compulsory voting is measured as a dummy variable coded as 1 if voting is compulsory. The information to create this variable comes from the *International Institute for Democracy and Electoral Assistance*'s (IDEA) compulsory voting database. We also evaluate the effect of democratization on voter turnout by including a measure of the degree of democracy based on the Polity IV index.

For the election-level of analysis, we control for different types of elections. Previous research suggests that presidential and concurrent elections (i.e. when presidential and legislative contests occur simultaneously) should result in higher turnout rates (Carreras, 2018; Fornos et al., 2004). In order to test such effects, we include in our model two dummy variables 'presidential-only elections' and 'concurrent elections', and use 'legislative-only elections' as the excluded baseline category. Finally, the electoral system might also affect voter turnout (Jackman, 1987; Powell, 1986) so we include a dummy variable coded as 1 where majoritarian electoral systems are in place. Data on electoral systems was extracted from the database on democratic electoral systems built by Bormann and Golder (2013).

4.3. Method

To test our hypotheses, we use a stratified sample of 44 countries and estimate a number of models combining both aggregate and individual-level data (please see Table 1, and Tables A2 to A7 in the online Appendix). As mentioned above, our data has a hierarchical or clustered structure. In the pooled CSES dataset, for each country, there is information from various elections, and for each election, there is information on many individuals. Multilevel models have the advantage that separate residual components can be specified at each level, and therefore, they adjust for the correlation of these error components of the various levels when estimating the coefficients (Gelman & Hill, 2007; Steenbergen & Jones, 2002). In particular, we estimate a number of mixed-effects random intercept model specifications for binary responses (because voter turnout is coded as a dummy variable) in which the first-level are individual-level predictors, the second-level are election-level predictors, and the third-level are country-level predictors. Random intercept models are helpful for our analysis because they allow us to estimate separate intercepts for each level of the hierarchy (country-level and election-level), and consequently, we can account for country-specific and election-specific factors that affect voter turnout (Gelman, 2006; Gelman & Hill, 2007). In these hierarchical models, the second level captures country characteristics that change over time, such as economic conditions, and the third level captures country factors that remain stable over time, such as compulsory voting.

We begin with a non-conditional, mixed-effects logistic model that evaluates the "mobilization-withdrawal" hypotheses by testing the possible effects of economic adversity on the likelihood of voting. In order to evaluate our conditional hypotheses (i.e. "mobilization-withdrawal" is conditional on objective individual attributes and structural factors), we estimate a number of conditional effects, mixed-effects logistic regression models.

5. Findings

5.1. Non-conditional models

We first present the results of non-conditional models in Table 1. These models estimate the effect of economic hardships on respondents' willingness to vote. The estimates presented in Table 1 suggest that worsening economic conditions do not necessarily trigger electoral participation. In line with the findings of previous research (Blais & Dobrzynska, 1998; Fornos et al., 2004), the non-conditional effect of economic adversity on electoral participation is almost negligible (the coefficients for adverse macroeconomic conditions –economic growth and change in unemployment– are not statistically significant).

[Table 1 here]

The estimated effects of the individual-level variables are quite consistent with the expectations of the literature on voter turnout. The estimates presented in Table 1 suggest that older, more educated, and economically active individuals are more likely to vote. The results also show that, as predicted by different theories of voter turnout, satisfaction with democracy is a positive and significant predictor of electoral participation. At the country-level, the non-conditional model suggests that the degree of democracy and GDP per capita are not strong predictors of individual willingness to vote. In other words, individuals in richer and more democratic countries are not necessarily more likely to participate in elections. The model presented in Table 1 rather suggests that, at the country-level of analysis, institutional factors are better predictors of individual propensity to vote. For example, in line with the results of previous studies, the likelihood of voting is significantly higher in countries where voting is compulsory. At the election-level of analysis, our estimations suggest that individuals are more likely to vote in concurrent elections than in legislative-only or presidential-only elections.

5.2. Heterogeneous effects

Our theoretical expectation is that the effect of economic adversity on voter turnout is conditional on individual-level attributes and two structural factors: exposure to globalization and welfare spending. In particular, we argue that the impact of macroeconomic downturns on citizens' electoral engagement is contingent on their sociodemographic characteristics. If periods of economic duress mobilize or demobilize voters, the effects should be stronger among citizens who are more vulnerable to economic adversity (i.e. the youth and individuals with low socioeconomic status). We start by testing the 'withdrawal' and 'mobilization' hypotheses focusing on these specific sociodemographic groups.

In order to test these conditional hypotheses, we estimate multilevel mixed-effects logistic regression models designed to evaluate how individuals' socio-demographic attributes (age, education, and income) shape their electoral response to worsening unemployment. Since we expect that the effect of economic downturns on electoral participation is stronger among the most vulnerable sociodemographic categories, our models include dummy variables to capture these groups (age category 18-24 to capture youth, lower income quintile to capture low income, and primary education to capture low education[3]) rather than continuous variables measuring age, income, and education. In the first model presented in Tables A2-A7 in the Appendix, we include interaction terms between our measure of change in unemployment and vulnerable sociodemographic categories (youth, low education, and low income).

In line with our theoretical intuitions, the two-way interactions (low education*Δ in unemployment, low income*Δ in unemployment) in model 1 in Tables A2-A5 are statistically significant which suggests that economic crises have a more robust effect on the decision to turnout of individuals with a low socioeconomic status. By contrast, the two-way interactions youth*Δ in unemployment are not statistically significant in Tables A6-A7. While the models

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[3] The low-education dummy captures the first three categories of the 1-8 CSES education scale: no formal education, incomplete primary education, and complete primary education.

show that young people are considerably less likely to vote than other age groups, this finding is not contingent on the macroeconomic situation before an election.

To have a better sense of the magnitude and the direction of the interactive effects of economic downturns on turnout, we estimated predicted probabilities of electoral participation for low-income (education) and high-income (education) respondents. The predicted probabilities are presented in Figures 1-2. These estimations show that citizens with a low socioeconomic status are more likely to vote as the level of unemployment increases. For instance, the predicted probability that citizens with a low level of education vote increases from 80% when the measure of change in unemployment is at its mean to 83% when there is a high increase in the level of unemployment (+2 SD). The size of the effect is similar in the income models. As expected, the predicted probabilities also reveal that a change in the level of unemployment does not affect the turnout rate of individuals with a high-SES status.

[Figure 1 and 2 about here]

In sum, the results of these models suggest that periods of economic duress have a mobilization effect among the most vulnerable socioeconomic groups and no effect on the electoral participation of high-SES individuals. We also hypothesized that the effects of economic downturns on the electoral participation of vulnerable populations are further conditioned by structural factors such as the integration of a country's economy in the global economy and welfare spending. In Tables A2 to A7, we also report the results of hierarchical models estimating the effect of economic growth on the electoral participation of young and low-SES individuals given different levels of exposure to globalization and different degrees of welfare protection. These models include three-way interactions to assess the empirical validity of these heterogeneous effects.

The results of models 2 and 3 in Tables A2 to A5 suggest that the effects of economic adversity on the electoral participation of low-SES groups are indeed contingent on

globalization and welfare spending. In fact, most of the three-way interactive terms are statistically significant and many of the two-way constitutive terms are also statistically significant. However, interpreting the coefficients of complex interactive models is challenging and several scholars suggest that the best way to observe interactive effects is to show them graphically presenting marginal effects or predicted probabilities (Brambor, Clark, & Golder, 2006; Hanmer & Kalkan, 2013).

Figures 3-4 show the predicted probabilities of electoral participation for low-income and low-education individuals at different levels of change in unemployment, welfare spending, and exposure to globalization. The predicted probabilities reveal that the mobilizing effect of macroeconomic downturns on the electoral participation of citizens with low income and low education is stronger in countries that are less exposed to globalization. In less globalized countries (-1 SD in the KOF globalization index), we see a steep increase in electoral participation among low-SES voters. In countries more exposed to globalization (+1 SD in the KOF globalization index), the line for low-income and low-education respondents is almost flat and the confidence intervals are wider. This suggests that economic downturns do not influence electoral participation in those contexts.

[Figures 3-4 here]

The predicted probabilities presented in Figures 3-4 also show that low-SES citizens are more likely to vote when economic conditions are adverse if welfare policies are less generous. There is a clear increase in the predicted probability that low-income and low-education citizens vote as unemployment goes up in countries with low welfare spending (-1 SD in welfare effort). By contrast, in generous welfare states (+1 SD in welfare effort) an increase in unemployment has no effect on the likelihood of voting of low-SES citizens.

In line with our theoretical intuitions, an economic downturn does not influence the level of participation of high-income and well-educated voters. This is true regardless of

contextual factors such as the level of globalization and welfare spending. These null effects can be observed in Figures A1-A2 in the online Appendix. An implication of the patterns reported in all these figures is that we should observe a decrease in the participation gap between low income (education) and high income (education) citizens in elections that take place during periods of economic duress in countries that are less inserted in the global economy and have less generous welfare state provisions. We estimated the contrasts between the predicted probability of voting of low-income and high-income citizens in less globalized settings and in countries with less generous welfare states. These estimations are reported in Figure 5.[4] The results show that the size of the electoral participation gap between low-income and high-income citizens markedly decreases as unemployment goes up when elections take place in countries that are not well integrated into the global economy and in countries where welfare spending is low. During periods of severe economic downturn (+2 SD in change in unemployment), the difference in electoral participation between poor and wealthy individuals is barely distinguishable from 0 (i.e. loses statistical significance).

[Figure 5 about here]

5.3. Robustness models

Macroeconomic fluctuations can be measured in different ways. While we use one of the most standard measures in this paper (change in the unemployment rate), we also replicate the models in Tables A2-A7 using an alternative indicator: the GDP growth rate. The results of these robustness models are presented in Tables A8-A13 and the predicted probabilities based on these models are shown in Figures A4-A7 in the online Appendix.

The results are very similar to the ones reported above. First, there is little evidence suggesting that young voters shift their level of electoral participation as the economic situation

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[4] We also made similar estimations contrasting the predicted probability of electoral participation of low-education and high-education voters in non-globalized settings and in countries with low welfare spending. The results are very similar and are reported in Figure A3 in the online Appendix.

worsens, regardless of the level of globalization and of how generous the welfare state is. Second, the two-way interaction terms low education*GDP growth in Tables A10-A11 are statistically significant suggesting again that people who are not well educated are more likely to vote during periods of economic duress. One important difference is that these models do not show a similar effect for low-income individuals (the interaction terms low income*growth in Tables A8-A9 are not statistically significant).

However, the main finding of the paper (i.e. that low-SES respondents are mobilized during economic downturns in contexts of low globalization and low welfare spending) is robust to this alternative way of measuring macroeconomic fluctuations. The predicted probabilities reported in figures A4-A5 show that low-income and low-education voters tend to vote more during periods of slow or negative GDP growth in countries that are not well integrated into the global economy and in states that offer weak welfare provisions. This effect disappears in highly globalized economies and in strong welfare states. The contrasts of predicted probabilities reported in Figures A6-A7 again suggest that the gap in electoral participation between low-SES and high-SES respondents narrows during economic downturns in countries that are not well integrated into the global economy and in states where welfare spending is low.

In sum, both the "growth" and the "change in unemployment" models show that the likelihood of turning out to vote of individuals with a low socioeconomic status is shaped more strongly by macroeconomic fluctuations. But the size of these effects is conditioned by two structural factors: welfare spending and globalization. Low-income and less educated voters are more likely to be mobilized during bad economic times when they live in countries with low welfare protections and in less globalized settings. On the contrary, economic downturns do not have an impact on the electoral participation of the same sociodemographic groups in more globalized countries and in generous welfare states.

6. Concluding remarks

We have shown that the impact of economic hardships on electoral participation depends on individual attributes and structural factors. In other words, economic downturns have a stronger mobilizing effect on voters who are in a situation of economic and social vulnerability (in particular people with a low socioeconomic status) when they live in countries that are less globalized (i.e. less inserted in global markets) and in states that offer weaker welfare protections. In those settings, less educated and lower-income citizens suffer more acutely from the dislocations generated by an economic downturn and have a stronger incentive to sanction national governments for poor economic performance.

How do these findings fit into the broader literature on the link between economic downturns and electoral participation? As mentioned above, the existing literature has produced mixed (but mostly null) findings. Large cross-national analyzes have failed to find a consistent effect of macroeconomic fluctuations on aggregate turnout. This is puzzling from the perspective of the findings presented in this article. Since low-SES voters constitute a sizable group in all countries, we should still be able to observe an increase in turnout at the aggregate level during periods of economic duress. One possibility is that other groups in society demobilize during an economic crisis, leading to null results at the aggregate level. In fact, the literature has demonstrated that citizens who identify with the incumbent are less likely to participate in elections when economic times are bad (Helgason & Mérola, 2017; Tillman, 2008). It has also been shown that voters are more likely to abstain during economic downturns if they have a hard time identifying the party responsible for the economic problems (Rowe, 2015; Weschle, 2014). In parliamentary systems with multiparty coalitions, citizens might have a particularly hard time identifying who is to blame for an economic downturn. In sum, there are individual-level and contextual effects that might offset the mobilizing effect of economic downturns reported in this paper. This paper and the recent literature cited here suggest that the

null effects in aggregate analyses should be interpreted cautiously. The lack of correlation between GDP growth and electoral participation at the aggregate level might hide sizable effects for particular sociodemographic groups in particular contexts; and those are the most theoretically interesting questions to address in future research.

One of the motivations of our paper was to assess the impact of economic adversity on the inequality of electoral participation between different sociodemographic groups. Although our paper confirms the unequal voice of different sociodemographic groups in contemporary democracies, the findings suggest that economic hardships produce a participatory boost precisely among the segments of society which are often ignored in the political arena during "normal" times. This is especially the case when these sociodemographic groups are not protected by generous welfare programs and when they live in countries that are relatively isolated from global markets. We are then less pessimistic regarding the lack of representation of low-income and low-education groups in a wide variety of democratic systems. It appears that these groups tend to vote in greater numbers when it matters most to them.

An unexpected finding in this paper is that economic downturns do not lead to an increase in the level of electoral participation of young voters. Why do young citizens remain demobilized during an economic crisis even in less globalized settings and in countries that offer only weak welfare protections? We contend that this result may be related to the fact that younger generations are less likely to become politically active in conventional ways within formal institutional channels. Previous research has indeed shown that younger generations are more likely than other age groups to express their grievances in unconventional ways, such as street demonstrations (Dalton, 2011; Martin, 2012). While younger generations tend to distrust electoral politics, they are more ready to confront elites with demands from below (Dalton & Welzel, 2014). It is therefore possible that, among young citizens, the participation boost observed during economic downturns is expressed through participation in social movements

and street demonstrations. These forms of political engagement allow participants to express their grievances in the public arena and to make direct demands on governmental institutions perceived as ineffective. There is significant anecdotal evidence showing that young people have joined social movements and mass demonstrations (such as the *Indignados* in Spain and the Occupy Wall Street movement in the United States) as a response to the last global recession in 2009. Future research should address this possibility in a more systematic way.
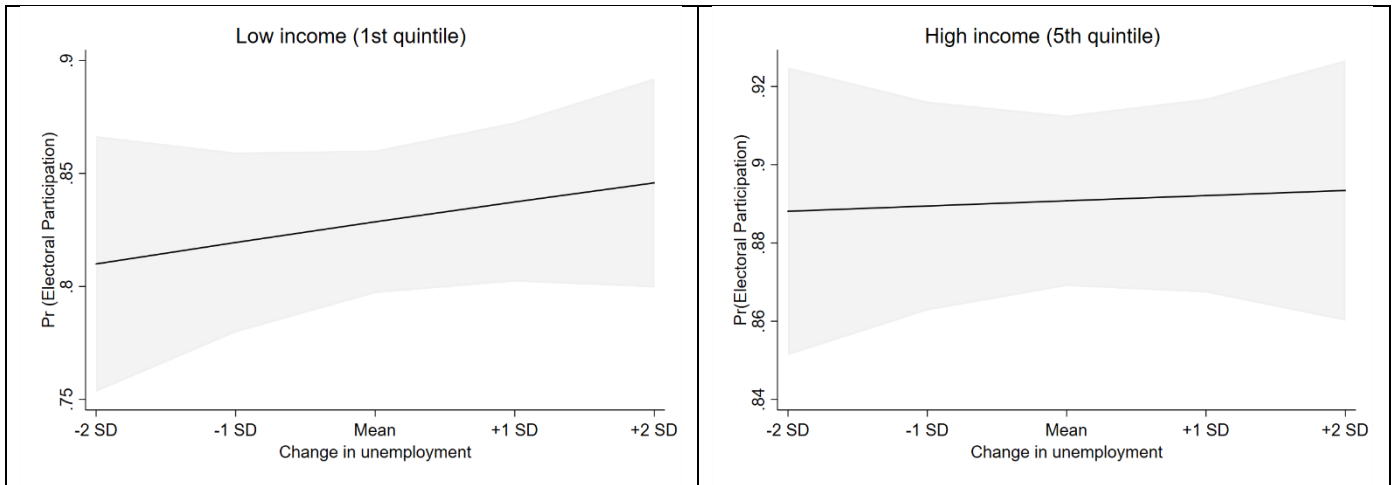
TABLES

Table 1. Estimates for mixed-effects (multi-level), logistic, and non-conditional models for voter turnout

	(1) Voter turnout *b/(se)*	(2) Voter turnout *b/(se)*
MACROECONOMIC CONDITIONS		
Change in unemployment rate	0.069	
	(0.28)	
Lagged GDP growth		-0.004
		(0.02)
INDIVIDUAL LEVEL		
Age (from young to old groups)	0.383***	0.381***
	(0.01)	(0.01)
Education (from elementary to postgraduate)	0.198***	0.198***
	(0.00)	(0.01)
Gender (male = 1)	0.063***	0.065***
	(0.01)	(0.01)
In the labor market (yes = 1)	0.094***	0.090***
	(0.02)	(0.02)
Satisfaction with democracy (from low to high)	0.322***	0.325***
	(0.01)	(0.01)
COUNTRY LEVEL		
Compulsory voting (yes = 1)	0.645***	0.645***
	(0.24)	(0.24)
Level of democracy (Polity IV score)	0.140	0.131
	(0.13)	(0.13)
GDP per capita (log)	-0.015	-0.008
	(0.12)	(0.12)
ELECTION LEVEL		
Concurrent election (yes = 1)	0.852***	0.858***
	(0.28)	(0.29)
Presidential elections (yes = 1)	0.738	0.741
	(0.50)	(0.50)
Majoritarian election (yes = 1)	0.052	0.049
	(0.35)	(0.35)
Constant	-2.508*	-2.465*
	(1.22)	(1.20)
Level two (country) random effects		
Estimate	-0.579***	-0.587***
Standard error	(0.20)	(0.20)
Level three (election) random effects		
Estimate	-0.402***	-0.401***
Standard error	(0.10)	(0.10)
N	167,285	165,895

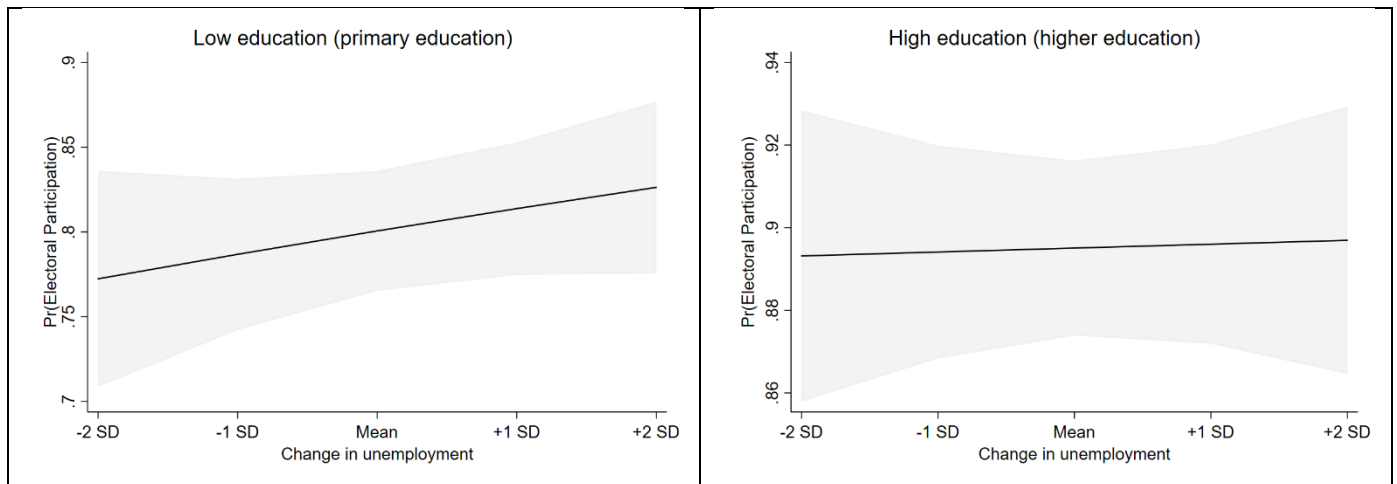p-values * 0.10 ** 0.05 *** 0.01

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FIGURES

Figure 1. Magnitude of the effect of change in unemployment on electoral participation (low-income and high-income individuals)
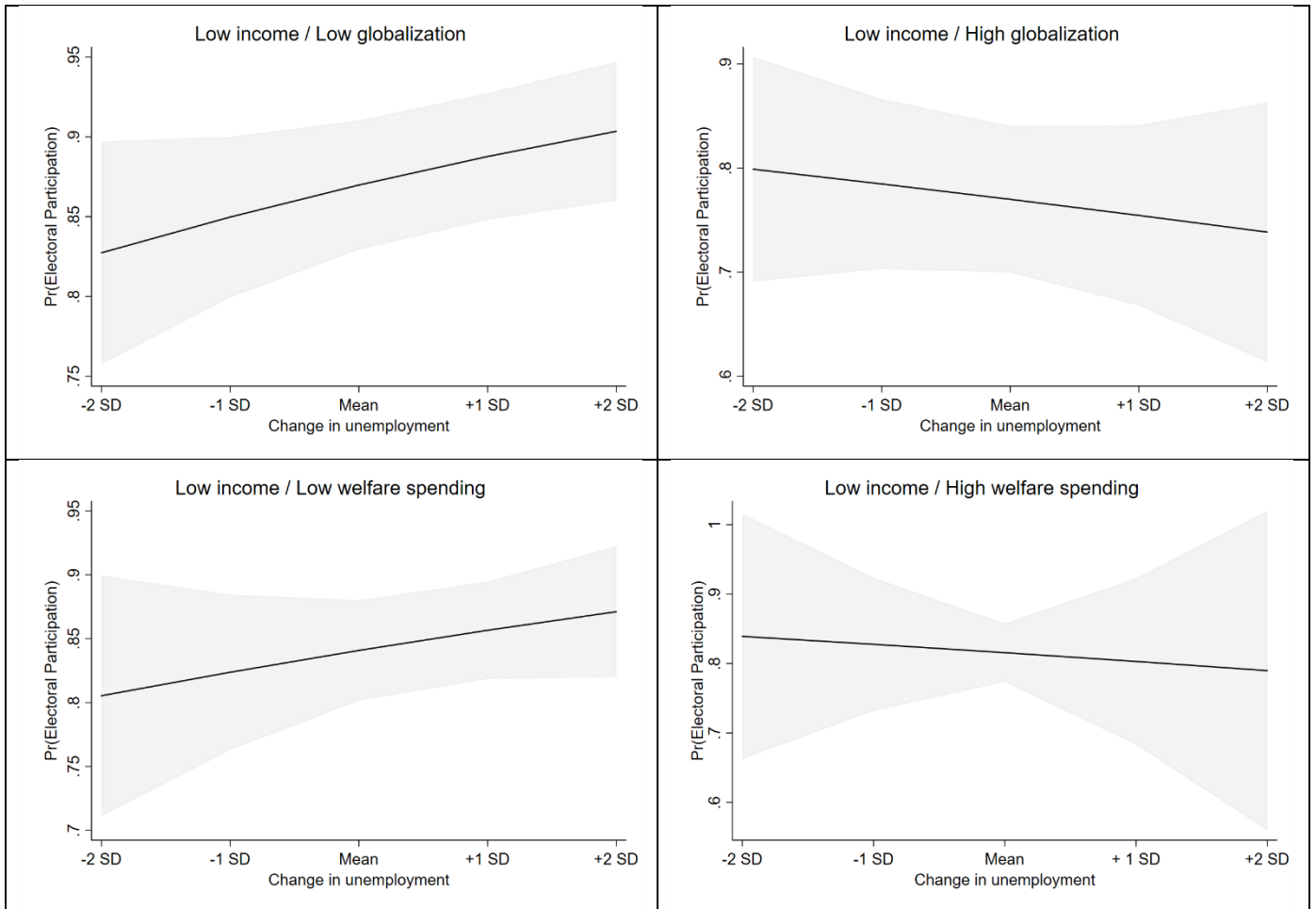

Note: entries are predicted probabilities based on model interactions of model 1 in Table A3. Shaded areas are 95% confidence intervals.

Figure 2. Magnitude of the effect of change in unemployment on electoral participation (low-education and high-education individuals)
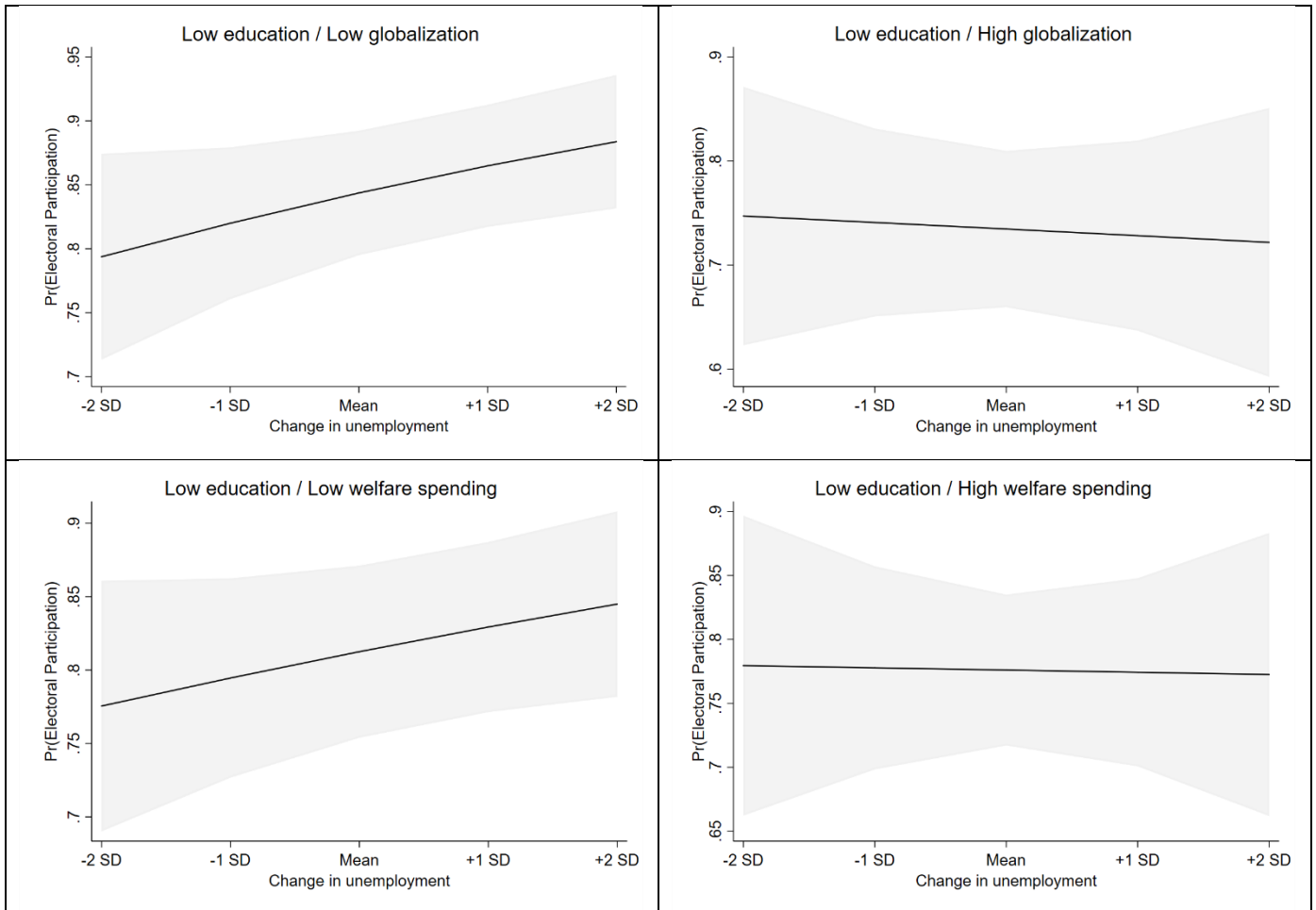

Note: entries are predicted probabilities based on model interactions of model 1 in Table A5. Shaded areas are 95% confidence intervals.

Figure 3. Magnitude of the effect of change in unemployment on the electoral participation of low-income individuals
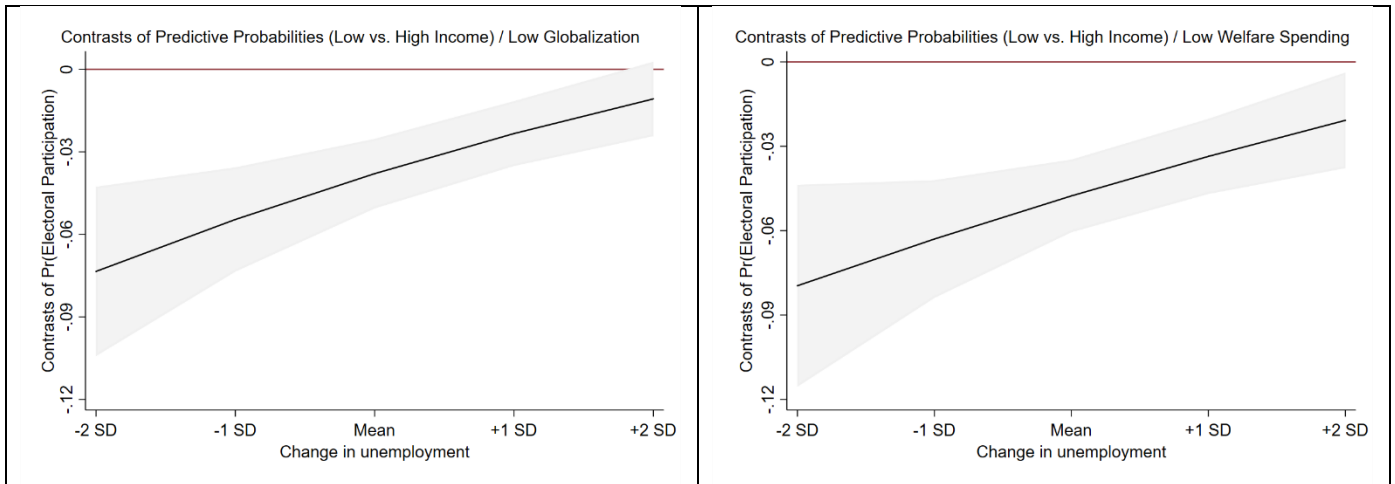

Note: entries are predicted probabilities based on model interactions of model 2-3 in Table A3. Shaded areas are 95% confidence intervals.

Figure 4. Magnitude of the effect of change in unemployment on the electoral participation of low-education individuals

Note: entries are predicted probabilities based on model interactions of models 2-3 in Table A5. Shaded areas are 95% confidence intervals.

Figure 5. Contrasts of predicted probabilities of turnout: comparison of low-income (quintile 1) and high-income (quintile 5) respondents

Note: entries are contrasts of predicted probabilities based on model interactions of models 2-3 in Table A3. Shaded areas are 95% confidence intervals.

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