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The Importance of Endogeneity Arguments

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Abstract*

This article challenges recent findings that democracy has sizable effects on economic growth. As extensive political science research indicates that economic turmoil is responsible for causing or facilitating many democratic transitions, the paper focuses on this endogeneity concern.

Using a worldwide survey of 165 country-specific democracy experts conducted for this study, the paper separates democratic transitions into those occurring for reasons related to economic turmoil, here called endogenous, and those grounded in reasons more exogenous to economic growth. The behavior of economic growth following these more exogenous democratizations strongly indicates that democracy does not cause growth. Consequently, the common positive association between democracy and economic growth is driven by endogenous democratization episodes (i.e., due to faulty identification).

JEL classifications: E02, E20, N40

Keywords: Democracy, Growth, Democratic transitions, Endogeneity

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“[P]anel estimates imply that on average democratisations are associated with a 1% increase in annual per capita growth. ... [Yet], the key issue of causality in the democracy-growth nexus remains open.” Papaioannuo and Siourounis (2008)

1 Introduction

Does democracy *cause* more economic prosperity and growth? This question dates back to Plato and Aristotle’s debate regarding which form of government brings about the greatest political and economic gains. After more than two millennia, there seems to be no clear consensus about whether democracy (in and on itself) indeed delivers more economic growth compared to other more autocratic forms of governments.

Skeptical arguments about the effect of democracy on economic growth include the fear of populist demands (e.g., Plato; Tocqueville, 1835; Huntington, 1968), agency problems between people and politicians (Buchanan and Tullock, 1962), and “excessive” redistribution which may turn detrimental for growth (e.g., Persson and Tabellini, 1994). On the other hand, several channels have been put forward regarding the positive effect of democratic rule on economic growth. First, relying on redistribution arguments, tax revenues are used to subsidize education (e.g., Saint-Paul and Verdier, 1993; Bourguignon and Verdier, 2000) and ameliorate capital market imperfections (e.g., Galor and Zeira, 1993). Second, democratic rule can be more efficient by reducing transaction costs, commitment constraints, and information asymmetries of political organization (e.g., Wittman, 1989; Olson, 1993; Sen, 1999). Also, democracy can increase economic growth due to its positive effect on political stability and democratic institutions (e.g., Alesina and Perotti, 1996; Acemoglu, Johnson, Robinson, and Yared, 2005).

Based on cross-country analysis, early empirical studies (several of which use instrumental variables) have pointed to negligible effects of democracy on economic growth (e.g., Sirowy and Inkeles, 1990; Przeworski and Limongi, 1993; Helliwell, 1994; Barro, 1996; Tavares and Wacziarg, 2001). However, more recent panel-data based research has found evidence of more sizable effects (e.g., Rodrik and Wacziarg, 2005; Papaioannou and Siourounis, 2008; Persson and Tabellini, 2009; Acemoglu, Naidu, Restrepo, and Robinson, 2014). Indeed, Figure 1 shows that average annual per capita growth rate increases about half a percentage point following a democratic transition.

The empirical literature on the effect of democracy on economic growth has also advanced on many other fronts. As discussed above, the use of panel data analysis (as opposed to cross-country analysis) has made it possible to control for important country characteristics that are time-variant (e.g., human and physical capital) and time-invariant (e.g., natural resources, social norms, and colonization history). Moreover, the literature has also significantly advanced methodologically in the measurement of democracy (e.g., Bollen and Paxton, 2000; Munck and Verkuilen, 2002; Cheibub, Gandhi, and Vreeland, 2010).

In spite of the aforementioned advances, endogeneity considerations remain a genuine concern. This

occurs, to a large extent, due to the difficulty of finding proper instrumental variables in the context of panel data (i.e., instruments that are time-varying). This endogeneity concern seems to be well-grounded in light of extensive evidence and political science research indicating that economic turmoil is responsible for triggering or facilitating many democratic transitions (e.g., O'Donnell, 1973; Linz, 1978; Cavarozzi, 1992; Remmer, 1993; Gasiorowski, 1995; Haggard and Kaufmann, 1995). For example, in reference to the 1980s democratization wave in Latin America, Remmer (1993: 8-10) argues:

In terms of the international system, the critical changes affecting Latin America were economic rather than political or ideological in origin.[...] [Moreover, U.S.] foreign policy represented more of an obstacle than an asset. As Thomas Carothers (1991, page 108) has pointed out, "In the early 1980s, when most of the democratic transitions in South America took place, the Reagan administration was trying to support the military governments that were on the way out."[...] Structural changes in the international economy offer a far more plausible explanation for the onset of the process of democratization.

In particular, Remmer (1993) as well as many other scholars point to the oil shocks of the 1970s, the related expansion of international lending, and the subsequent debt crisis as the origin of the 1980s wave of democratization in Latin America. Under this view, which emphasizes the importance of economic turmoil for triggering or facilitating many democratic transitions, the lower (and negative!) average growth rate depicted in Figure 1 before the democratic transition may be rationalized as an indication of reverse causality (i.e., bad economic performance pushing or catalyzing the end of autocratic regimes) rather than a symptom of the positive causal effects of democracy on economic growth.

This paper aims at addressing this potential source of endogeneity. For this purpose, and building upon an already existing measure of democratization (i.e., our contribution is not on the measurement front), we propose a novel identification strategy based on a new worldwide survey of 165 country-specific democracy experts for the purpose of this study. While described in great detail later in the paper, in a snapshot, our identification strategy relies on democracy experts' answers to a series of categorical and open-ended questions regarding the underlying forces that gave rise to democracy in each country. While the appearance of democratic rule is in most transitions a confluence of several political, institutional, social, and economic factors, political science research and democracy experts tend to agree that in most democratization episodes some dimension(s) are more relevant than others. Based on democracy experts' answers, and complementing (not substituting) such information with background material from numerous history books and academic articles, democratic transitions are classified into those occurring for reasons related to economic turmoil, which we categorize as endogenous, and those grounded in more exogenous (to economic growth) reasons including, among others, the death of an autocratic leader and political/institutional arguments. Since the main objective of the paper is to address genuine reverse causality concerns, the identification strategy developed prefers to err on the safe side in order to confidently guarantee that economic factors are not behind those more exogenous democratic transitions. For this reason, endogenous democratic transitions include

cases where economic factors are identified by experts as the foremost determinant of the democratic transition as well as those processes where economic elements represent some of the main determinants triggering or facilitating the transition towards democratic rule. Based on this new worldwide survey of 165 country-specific democracy experts, about 30 percent of the democratic transitions considered are classified as endogenous and 70 percent are associated with more exogenous (to economic growth) reasons.

Armed with this democratic transitions classification, we then use those more exogenous (to economic growth) democratizations to properly estimate the effect of democracy on economic growth. For completeness, we also use those endogenous (to economic growth) democratizations to help reconcile our findings with those of previous panel-data based studies. While, to the best of our knowledge, this is the first instance in the democracy and economic growth literature in which such an approach has been followed, this identification strategy has been extensively used in the macroeconomic literature. For example, in seminal work by Romer and Romer (2010), the authors investigate the impact of tax changes in the United States on economic activity. For this purpose, they use the narrative record, such as presidential speeches and Congressional reports, to crucially identify the principal motivation for all major postwar tax policy actions. This analysis is then used to, first, separate legislated changes into those taken for reasons related to current or prospective economic conditions and those taken for more exogenous reasons and, second, evaluate the impact of those more exogenous tax changes on economic activity. Riera-Crichton, Vegh, and Vuletin (2016) and Gunter, Riera-Crichton, Vegh, and Vuletin (2016) have also used this narrative identification strategy to estimate tax multipliers for a larger sample of OECD and developing countries. For this larger sample of countries, the authors use contemporaneous International Monetary Fund documents, OECD Economic Surveys, and news articles to gather evidence about policymakers' intentions and primary motivations for tax rate changes.¹ While similar in essence, the implementation of this type of identification strategy for our study is (as briefly described earlier in this section) substantially different from that typically used in macroeconomic articles. Instead of attempting to classify democratizations into endogenous and more exogenous (to economic growth) based on our own interpretation of the main forces involved in each democratization, we rely on a new worldwide survey of 165 country-specific democracy experts for the purpose of this study.² The reliance on country-specific democracy experts is key for the credibility and validity of our identification strategy.

Panels A and B in Figure 2 show a bird's-eye view of our main findings by replicating Figure 1 for those more *exogenous* and *endogenous* democratizations, respectively. Panel A in Figure 2 shows that when properly identified (i.e., when based on more exogenous democratizations) democracy has

¹In a similar vein, Coibion (2012) and Federico, Vegh, and Vuletin (2016) use this narrative approach to evaluate the impact of monetary policy in the United States and macroprudential policy in the Southern Cone countries, respectively.

²Democracy experts were identified based on their research credentials and, crucially for our purpose, their deep knowledge regarding country-specific democratizations. In terms of their research credentials, they are affiliated with or direct the most prominent political science departments, research institutes, and think tanks in each of the studied countries or around the world. Crucially, they show a deep knowledge regarding country-specific democratizations, which is reflected by their numerous publications in the subject matter including journal articles and books.

no effect on economic growth. Depicted by thicker red lines in Panel A in Figure 2, we cannot reject the null hypothesis that mean growth before the democratization (i.e., 0.77) is statistically the same as that observed after the transition (i.e., 0.54) at the 5 percent level.

In light of the findings for exogenous transitions in Panel A in Figure 2, it should not be surprising that common panel-data based literature findings (i.e., democracy is associated with higher growth) depicted in Figure 1 are solely driven, as shown in Panel B in Figure 2, by endogenous democratization episodes (i.e., due to faulty identification). On the basis of this finding, depicted by thicker red lines in Panel B in Figure 2, we reject the null hypothesis that mean growth before the democratization (i.e., -2.03) is statistically the same as that observed after the transition (i.e., -0.75) at the 5 percent level. To sum up, when properly identified, *democracy does not cause growth* and, moreover, the common finding that democracy has positive effects on economic growth is driven by faulty identification.

The rest of the paper is organized as follows. Section 2 briefly summarizes some key methodological advances regarding the measurement of democracy, surveys some important limitations of standard democracy measures and discusses the criteria considered for the selection of the benchmark metric used in this study. Section 3 evaluates the effect of democracy on economic growth using the empirical approach of recent panel data-based research studies. Section 4 presents the novel identification strategy based on a new worldwide survey on democracy. It also provides some complementary evidence which supports democracy experts' opinions using a novel economic turmoil in media index. Relying on the novel identification strategy, Section 5 shows that, when properly identified, democracy has no effect on growth and that the common finding that democracy has positive effects on economic growth is driven by faulty identification. Section 6 performs several relevant additional empirical exercises and robustness tests including i) the potential role of anticipation of democratic transitions, ii) the extent to which the degree of political and civil right freedoms, democratic accountability, and bureaucracy quality in periods of democracy affects the impact of democracy on economic growth, iii) the relevance of modernization theory arguments (which posit social progress as a necessary but not sufficient condition for the establishment of a democratic political system), iv) whether the effect of democracy on economic growth depends upon the main underlying factor identified by democracy experts, and v) a better understanding of the transmission mechanism by focusing on key underlying variables of economic growth such as investment, education, and productivity.

As discussed before, virtually all panel-data studies do not address endogeneity considerations. A notable exception is a recent paper by Acemoglu, Naidu, Restrepo, and Robinson (2014). The authors i) show that democratizations tend to occur in regional waves (i.e., democratic transitions tend to be highly synchronized at the regional level) and ii) argue that such regional democratic waves do not seem to be explained by regional economic common factors or trends but rather by the demand for democracy spreading from one country to another. Based on these two premises, and controlling for proper macro control variables at the regional level to ameliorate possible violations of premise ii), the authors instrument democratic transitions using regional waves of democratization and find that

democracy indeed seems to cause more economic growth.³ Section 7 aims at reconciling our findings with those of Acemoglu, Naidu, Restrepo, and Robinson (2014). In particular, we take a stand against the universal validity of exogeneity assumption ii) used in their study and show that, for the regions where such strategy seems to be granted, democracy shows a negligible effect on economic growth. In other words, the positive effect obtained in their study is driven by an endogenous source of variation as opposed to an exogenous one (i.e., due to faulty identification).

2 Measuring Democracy

In spite of the inherent challenge associated with measuring a concept that “has meant different things to different people in different periods” (Dahl, 2000), the empirical literature on democracy has significantly advanced methodologically on the measurement of democracy in terms of conceptualization (i.e., identification of attributes that are constitutive of the concept), the criteria used for the selection of indicators, and the level and rule of aggregation, as well as regarding dichotomous versus polychotomous measurement (e.g., Bollen and Paxton, 2000; Munck and Verkuilen, 2002; Cheibub, Gandhi, and Vreeland, 2010). This section briefly summarizes some key methodological advances regarding the measurement of democracy, surveys some important limitations of standard democracy measures and discusses the criteria considered for the selection of the metric used in this study.

2.1 Conceptualization

An emerging consensus suggests that constitutive attributes should avoid the extremes of including theoretically irrelevant or even misleading attributes (i.e., maximalist definitions) or excluding theoretical relevant attributes (i.e., minimalist definitions). Maximalist definitions in standard democracy measures include, for example, the polychotomous Freedom House (FH) index due to the inclusion of attributes such as “socioeconomic rights,” “freedom from gross socioeconomic inequalities,” “property rights,” and “freedom from war” (Gastil, 1991; Ryan, 1994). In contrast, the polychotomous Polity index has been criticized for not including the key attribute of participation, particularly in terms of universal suffrage. This key exclusion pose an important limitation for the study of democracy in recent times. Similarly, the metric of Alvarez, Cheibub, Limongi, and Przeworski (1996, 2000), henceforth ACLP, mainly requires contested elections but does not consider their quality. For example, Brazil’s transition to democracy is recorded in 1979, “even though the head of state was chosen by the state and ratified by an electoral college designed to ensure subservience to the military’s choice” (Mainwaring, Brinks and Pérez-Liñán, 2000).

Essential attributes commonly noted for the concept of democracy include participation and contestations. Participation encompasses to the right to vote, the competitiveness and fairness of the voting process, and the extent of suffrage so that no sizeable portion of the population is excluded from the

³The authors also use, alternatively, a semiparametric propensity score matching estimator to ameliorate endogeneity concerns.

franchise. Contestation encompasses citizens' rights to freedom of assembly or association, the right to form political parties, actual transfers of power resulting from the elections, and repeatability (i.e., regular and known nature) of the electoral process.

2.2 Type of Measurement: Dichotomous versus Polychotomous

Proponents of continuous measures (e.g., Dahl, 1971; Bollen and Paxton, 2000) such as Polity and FH criticize dichotomous measures for being simpler and less rich in nature. Supporters of dichotomous measures (Huntington, 1993; ACLP; Cheibub, Gandhi, and Vreeland, 2010, henceforth CGV) argue that, first, although FH and Polity are polychotomous, their distributions are actually bimodal, with a high concentration of cases at their low and high ends. Second, and more importantly, as CGV argue “the matter is not whether one should choose to measure democracy with a categorical or with a continuous instrument. The issue is whether one believes that political regimes come in types (e.g., democracies and dictatorships) or whether democracy is an (continuous) attribute of all political regimes.[...] The belief that democracy is an attribute that can be measured in all political regimes leads to assertions that would appear to violate common sense. According to FH, democracy improved in China in 1978, when its political rights score changed from seven to six; democracy in Bahrain between 1973 and 2007 ranged from between seven and four; in 1977 it had the same democracy score—four—as Brazil, which was then ruled by the military. The level of democracy in Chile between 1974 and 1980, averaged -7 according to the Polity scale, and 11.6 according to the combined FH scale. None of these regimes was a democracy, and to argue that one was more democratic than the other makes little sense. Yet if one believes that democracy can be measured over all regimes, one has to be prepared to argue that it makes sense to speak of positive levels of democracy in places like Bahrain, China in the 1970s, Chile under Pinochet or Brazil during the military dictatorship; that it makes sense to speak of a change from one value to another along these scales, even when the regime did not change; and, finally, that we can meaningfully interpret scores across countries.”

2.3 Selection of the Benchmark Metric

We use a dichotomous measure mainly because of two reasons. First, based on solid conceptual grounds, we believe, as articulated before, that democracy is not a continuous attribute of all political regimes (democracies and autocracies). Second, it is crucial given our novel identification strategy which relies on surveys of country-specific democracy experts. As briefly described in the Introduction (Section 4 will provide the details), our identification strategy relies on democracy experts' answer to a series of questions regarding the underlying forces that gave rise to democracy in each country. For this purpose, it is crucial to identify the beginning of each democratization process. It would not be possible to proceed with such a survey-based strategy if a continuous measure of democracy were used instead. It is important to note that, while our benchmark metric is dichotomous, we also allow for differences between democratic transitions. For example, in Section 6.4, we allow the degree of political

freedom, democratic accountability, or bureaucracy quality in periods of democracy (i.e., when the democratization dichotomous variable is equal to one) to affect the performance of democracy on economic growth.

In particular, we rely on the dichotomous measure by Papaioannou and Siourounis (2007 and 2008), PS hereafter, for our benchmark measure because it addresses several measurement errors present in standard measures described in Section 2.1. For this purpose, PS balance minimalist definitional methods and broad methods that confound democracy with other institutional structures. Their approach captures four key aspects of representative government: i) free, competitive, and fair elections (avoiding elections that do take place but are either marked by fraud or monopolized by the party in power); ii) the occurrence of actual transfers of power resulting from elections,⁴ iii) no sizeable parts of the population excluded from the franchise (requiring that at least a third of the population should be eligible to vote),⁵ and iv) regime stability (imposing a relatively low five-year stability condition) to ignore very short-lived episodes.⁶ PS operationalize their strategy relying, on one hand, on the use of standard measures such as FH, Polity, and ACLP to identify large jumps/drops in these indicators and, on the other hand, and very importantly, to reduce measurement errors and purge spurious changes in democracy scores, a detailed examination of political archives, historical resources, and election databases, to identify the timing and characterize the nature of each transition precisely. The texture provided by this case study type of approach coupled with a solid identification of key attributes makes their strategy very sound and credible.

2.4 Description of Papaioannou and Siourounis Data

PS constructed a new dataset of democratic transitions in the 1960-2005 period for 174 countries, which we update until the year 2013. This includes democratizations during the so-called Third Wave of Democratization and the democratization that followed the collapse of the communism in the early 1990s. Table 1 shows the sample of countries grouped based on political regimes and transitions (the year of democratic transition is given in parenthesis). There are seven categories: (1) “Always authoritarian” are those countries that are throughout the sample period autocratic. (2) “Always democratic” countries are throughout the sample period democratically ruled. (3) “Always intermediate” countries get a far from perfect democratic score but have not experienced a regime change. (4) “Reversals” indicate countries that experienced a political setback, moving from a relatively stable democracy to autocratic status for at least 5 years. (5) Following PS terminology, the “full” democratization group includes countries that abandoned autocratic rule in the period 1960-2013 and in addition get moderate to high scores in civil rights and political liberties protection. These are “liberal” democracies

⁴For example, while Bolivia held relatively free and impartial elections in 1980, the military did not recognize the outcome until 1982; therefore the transition year to democracy is 1982.

⁵Consequently, South Africa during the apartheid era is classified as a non-democracy.

⁶This stability requirement is in line with most theories of political organization that focus on the determinants and/or aftermath of permanent regimes.

with a substantial array of civil liberties and freedoms, as opposed to just “electoral” democracies. (6) Following PS terminology, the “partial” democratization group includes countries that abandoned autocracy in the period 1960-2013, but the level of civil rights protection tends to be low or meager. (7) In a similar vein, but a notch below, “borderline” democratization countries implemented political reforms towards democratic rule, but civil liberties and freedoms are still at a very low level. In other words, “partial” and “borderline” democratizations are more closely linked to the concept of “electoral” democracy than to that of “liberal” democracy. This distinction is very important because, if one considers that moderate to high degree of civil liberties and freedoms are essential attributes to democracy as opposed to supplementary attributes, then the concept of “liberal” democracies seem to be of particular relevancy. Some poster-child cases of these low-intensity democracies with tenuous levels of civil liberties include Russia (classified as “partial” democratization), especially since Vladimir Putin took power in 2000, and Central African Republic (classified as “borderline” democratization), especially since François Bozizé took power in 2003.

Out of the 174 countries, 60 are always autocratic (e.g., Angola, China, and Saudi Arabia), 40 are always democratic (e.g., India, Namibia, and United States), 3 are classified as always intermediate, only 4 countries experienced reverse transitions from relatively stable democracies, 38 incidents are classified as full-liberal democratizations (e.g., Argentina, Korea, Spain, and South Africa), and 29 episodes involve more electoral type of democratizations where civil liberties and freedoms are at a low level (23 partial and 6 borderline).⁷ Based on the aforementioned conceptual arguments, we focus our attention on full-liberal democratizations (hereafter, democratizations), as opposed to those transitions where civil liberties and freedoms are low or meager, as in the cases of Russia and Central African Republic. From a measurement error and validity of the measure point of views, and given the significant importance of allowing the concept of democracy to encompass moderate to high levels of civil liberties and freedoms, we consider that the benefits of reducing the risk of type II error (false negative) more than compensates the risk of incurring a type I error (false positive). We also think that this strategy is crucial given our survey-based strategy where we contact country-specific democracy experts who would strongly disagree with calling some of these low-intensity episodes as transitions to democracy, such as in the cases of Russia and Central African Republic.

3 The Effect of Democracy on Economic Growth: Evidence from the Traditional Approach

This section evaluates the effect of democracy on economic growth using the empirical approach of recent panel-data based studies. For this purpose, we rely on a regression commonly used in this literature:

$$\Delta y_{it} = \alpha + \beta D_{it} + \sum_h \delta_h x_{it}^h + \mu_i + \eta_t + \varepsilon_{it}, \quad (1)$$

⁷Extending PS classification from 2005 to 2013 involve only six changes: Djibouti from partial democracy to autocratic, Ethiopia from partial democracy to reversal, Fiji from democratic to intermediate, Thailand from full to partial democracy, Iran from borderline democracy to autocratic, and Liberia from authoritarian to borderline.

where i and t capture country and year, respectively. The variable Δy is the annual real GDP per capita growth rate and μ_i and η_t are country and year fixed effects, respectively. The main variable of interest, D , is a dummy variable that adopts the value of one in the year a democratization episode occurs and in all subsequent years (i.e., democratization countries represent the “treated” group).⁸ Furthermore, x denotes additional time-varying control variables such as investment, education, human capital, government spending, openness, terms of trade, and lag of income growth (i.e., Δy_{it-1}).^{9,10,11} Residuals are calculated using robust variances and relaxing the assumption of independence within groups by allowing the presence of error autocorrelation within countries.

Table 2 shows the findings. Column 1 shows the effect of democratization without control variables. Similar to findings from previous panel data-based research, democratizations are associated with an increase of about 1 percent in annual per capita growth.¹² Because of the extensive economic reforms implemented by former socialist countries around the time of democratization in the 1990s as well as due to questionable data quality before 1990, a common sensitivity check excludes this group of countries. Column 2 shows that the findings strongly support this exclusion. This evidence also holds in Column 3 when including the control variables mentioned above. In short, democracy is robustly associated with higher economic growth.

4 Identification Strategy: Evidence from a New Worldwide Survey on Democracy

As discussed in the Introduction, reverse causality considerations remain a genuine concern in this literature. This concern seems to be well-grounded in light of extensive evidence and political science research indicating that economic turmoil is responsible for triggering or facilitating many democratic transitions (O’Donnell, 1973; Linz, 1978; Remmer, 1993; Gasiorowski, 1995; Haggard and Kaufmann,

⁸As detailed in Section 2.3, we extend the original dichotomous measure of Papaioannou and Siourounis’s (2007 and 2008) until the year 2013, identifying 38 full-liberal democratization episodes. They include the following countries: Argentina, Benin, Bolivia, Brazil, Bulgaria, Cape Verde, Chile, Croatia, Czech Republic, Dominican Republic, Ecuador, El Salvador, Estonia, Ghana, Greece, Grenada, Guyana, Honduras, Hungary, Republic of Korea, Latvia, Lithuania, Mali, Mexico, Mongolia, Panama, Peru, Philippines, Poland, Portugal, Romania, Sao Tome and Principe, Senegal, Slovak Republic, Slovenia, South Africa, Spain, and Uruguay.

⁹See Appendix 9 for a definition and sources of all variables.

¹⁰As in Papaioannou and Siourounis (2008), we include the two-year lag of the level and the contemporaneous and one-year lag of the difference of each control variable (except for lag of income growth). These coefficients are not reported in regression tables for brevity.

¹¹Arellano and Bond (1991) show that the estimation of dynamic panel data models lead, by construction, to inconsistent standard estimators as the unobserved panel-level effects are correlated with the lagged dependent variables. To overcome this limitation Arellano and Bond (1991) and Blundell and Bond (1998) propose the use of alternative consistent GMM estimators based on the use of internal instruments. These estimators do not come free of limitations as the initial conditions and moment requirements are not necessarily satisfied in all cases. Relying on Monte Carlo simulations these authors also show that this bias rapidly decreases as the number of observations per group (country in our case) increases; in particular when reaching about 20 observations of the dependent variable. The average number of observations per country in our regression analyses ranges for our study between 25 and 51 observations. Moreover, all 38 democratization countries have at least 22 observations. For this reason we do not use the GMM estimators. Similar results are obtained if countries with less than 20 observations of the dependent variable are excluded; results are not shown for brevity.

¹²In fact, we cannot reject the null hypothesis that $\beta = 1$ at the 5 percent level.

1995).

To address this potential limitation, we propose a novel identification strategy which allows us to classify democratic transitions into those occurring for reasons related to economic turmoil, which we categorize endogenous, and those grounded in more exogenous (to economic growth) reasons. For this purpose, we conducted a novel worldwide survey of 165 country-specific democracy experts covering the aforementioned 38 democratic transitions. Democracy experts were identified based on their research credentials and, crucially for our purpose, their deep knowledge of country-specific democratizations. In terms of their research credentials, they are affiliated with or direct the most prominent political science departments, research institutes, and think tanks in each of the studied countries or around the world. Crucially, they show a deep knowledge of country-specific democratizations, which is reflected by their numerous publications in the subject matter including journal articles and books. See the Online Appendix for a complete list of country-specific democracy experts. On average, we obtained a response of four democracy experts per country, with a maximum response of eight experts for the transition in Lithuania and a minimum of one for the case of Grenada.¹³

Figure 3 shows an example of the survey (for the Argentinean case). Each survey starts with a brief country-specific foreword identifying the date of the democratization. This is followed by seven common questions regarding the nature and environment surrounding the democratization process:

- The first three questions inquire about the level and nature of civil liberties and political rights of the democratic transition as well as the timing of its announcement. The first question asks the date of announcement of elections, which is later used to assess the role of anticipation. The following two questions, which are based on PS's four key aspects of representative government, ask about the civil liberties and political rights of constitutional changes as well as freedom, population inclusiveness, and governance capacity of elections leading to the democratic transition. We use these two questions later to explore their role in the effect of democratic transitions on economic growth.
- The following three questions point directly to the main objective of this paper. Multiple choice questions four and five inquire about the main and (potentially the) secondary cause for the rise of democracy, respectively. While the appearance in democratic rule is in most transitions a confluence of several political, institutional, social, and economic factors, political science research and democracy experts tend to agree that in most democratization episodes some dimension(s) are more relevant than others. Based on preparatory work for this survey, we were able to identify seven main overarching causes for democratic transitions including coup, the death of the leader, economic volatility and/or turmoil, fall of communism, foreign intervention, political/institutional reasons, and social unrest.

Open-ended question six allows democracy experts to articulate in more detail the nature of the

¹³For 70 percent (or 26 out of 38) democratizations we obtained between three and five democracy experts per country. For 20 percent (or 7 out of 38) democratic transitions we have more than five experts. Only for about 10 percent (or 5 out of 38) of democratizations did we obtain fewer than three experts per country.

cause(s) of the democratic transition. This option was intensively used by 95 percent (or 157 out of 165) of democracy experts. On average, each response to this question contains about 110 words, which illustrates the significant degree of engagement of democracy experts with our survey.

- The last question allows the expert to maintain anonymity. When preparing the survey, we thought that granting this possibility would increase honesty and reliability of answers, particularly in countries where experts may feel apprehensive otherwise due to (among other plausible reasons) concerns of political harassment. About 20 percent (or 35 out of 165) of democracy experts opted for this option. Our initial concern seems to be justified since, as shown in Figure 4, there is a positive and statistically significant relation between the share of democracy experts that decided to remain anonymous for each democratization case and the respective country’s press freedom index calculated by Reporters Without Borders for the year 2014 (the year in which the survey was conducted).¹⁴

4.1 Identifying Motivation

Based on categorical responses to survey questions 4 and 5, open-ended question 6, and complementing (not substituting) that information with background material from numerous history texts and academic articles, the 38 democratic transitions are classified into those occurring for reasons related to economic turmoil, which we categorize as endogenous, and those grounded in more exogenous (to economic growth) reasons. Based on experts’ response to surveys, it is usually straightforward to identify the main nature of each democratization and, more importantly for our purposes, whether economic turmoil has been behind the democratic transition. Typically, there is substantial agreement among experts about the main nature of factors triggering the democratization, and, at the very least, there is a very strong consensus regarding whether economic turmoil factors have been behind the democratic transition. That is to say, democracy experts’ answers to our new worldwide survey on democracy provide a very unified and precise identification strategy to classify democratic transitions into endogenous and more exogenous (to economic growth) reasons.

For example, the democratization of Benin in 1991 represents a process dominated by the rapid and complete failure of the economy in second half of the 1980s. All three democracy experts on Benin’s transition i) identified the category “economic volatility and/or turmoil” as the main cause for the rise in democracy and ii) when asked about the existence of a possible second cause they all indicated “social unrest” (which they later characterized in question 6 as being driven by rapid economic decline).¹⁵ In question 6, Heilbrunn argues that “the unrestrained plunder of Benin’s three state-owned banks in 1986-1988 preceded a collapse of its economy. Strikes and social unrest followed. Benin had

¹⁴The dispersion observed in the 2014 World Press Freedom Index among democratization countries is the same to that present in the “always democratic” group of countries. Formally, we cannot reject the null hypothesis that both groups of countries have equal variances in this press freedom indicator.

¹⁵The three democracy experts for Benin are Professor John Heilbrunn, Professor Mamoudou Gazibo, and a third expert who preferred to remain anonymous.

never experienced widespread violence and when the military asked the regime to intervene, its leaders refused and allowed a national conference and political reform to take place” and Gazibo notes that “the economic collapse of the country led to increasing popular mobilizations demanding political changes.” In a similar vein, in a recent study, Soble (2007) argues “without the extreme economic devastation of Benin’s economy, the call for democracy would not have been as urgent, large, or unified. It was the severe economic crisis in Benin which [...] limited Kérékou’s ability to resist the coming change.”

On the other side of the spectrum, there are those democratic transitions that are more exogenous to economic turmoil factors. For example, the democratization of Spain was catalyzed by the death of the autocratic leader, General Francisco Franco, who ruled Spain from 1939 until his natural death at the age of 84 on November 20, 1975. An increasing politicized society demanding amnesty and freedom rights, a Church, led by Cardinal Enrique Tarancón, that gradually moved away from the regime, and an external environment that was pushing to create an integrated Europe were all combined factors that intensified the latent divisions and struggle for power within Franco’s regime during the late 1960s and early 1970s. The appointment of King Juan Carlos I as Franco’s official successor, Franco’s death, the appointment of Adolfo Suárez as Prime Minister and the Law for Political Reform were milestones that marked the early years of the transition and that led to the enactment of the 1978 Constitution, a furtherance of the Spanish transition to democracy. Indeed, four out of five democracy experts consider death of leader the main cause of democratization, and one notes it as secondary cause in questions 4 and 5. Moreover, no democracy expert cites economic turmoil as a main or secondary cause of democratization in the case of Spain.

Occasionally, there appear to be genuinely mixed responses about the role played by economic turmoil. This is, for example, the case of Argentina. While there is strong consensus among democracy experts that the Falkland/Malvinas war with Great Britain that the military junta lost in 1982 was a key catalytic factor in explaining the transition, several experts also point to the importance of increasing economic crises in bringing down the military dictatorship. Since the main objective of the paper is to address genuine reverse causality concerns, the identification strategy developed prefers to err on the safe side in order to confidently guarantee that economic factors are not behind those more exogenous democratic transitions. For this reason, endogenous democratic transitions include cases where economic factors are identified by experts as the foremost determinant behind the democratic transition (e.g., Benin) as well as those processes where economic elements represent some of the main determinants triggering or facilitating the transition towards democratic rule, such as the case of Argentina.

Table 3 provides an extremely brief summary of the endogenous or more exogenous nature of each democratic transition, the number of democracy experts per country, and the number of those that preferred to remain anonymous. Based on this proposed novel identification strategy, only 11 out of the 38 democratizations are categorized as endogenous (i.e., about 30 percent) and the remaining 27 transitions (i.e., about 70 percent) are classified as more exogenous.¹⁶ A thorough analysis of each de-

¹⁶All socialist countries democratized in a very synchronized manner as a consequence of the collapse of communism in

mocratization case, including the list of democracy experts and key country-specific references obtained from the survey as well as from numerous history books and academic articles, is described in great detail in the Online Appendix.^{17,18}

4.2 The Importance of Relying on a Worldwide Survey on Democracy as a Source of Identifying Motivation

It is important to emphasize that the identification strategy used in this paper is based on the answers provided by country and world-renowned democracy experts to a democracy survey specifically designed for this study. It does not rely directly or indirectly (given the caliber of democracy experts and that of their answers) on a statistically based approach that classifies as endogenous those democratic transitions that show, for example, negative economic growth before the transition.

Panel A in Table 4 shows that, indeed, there is no statistical association between democratizations being classified as endogenous (exogenous) and whether economic growth has been negative (positive), for example, in the decade preceding the democratic transition.¹⁹ If a statistical approach were able to perfectly predict the classification based on our democracy survey, one would observe cells [1,1] and [2,2] in Panel A of Table 4 to accrue all 38 democratic transitions. Using the terminology of the noise-to-signal ratio, the signal would be perfect and there would be no noise (i.e., the noise-to-signal ratio=0).²⁰ On the contrary, if a statistical approach were completely unable to predict the classification based on our democracy survey one would observe cells [1,2] and [2,1] in Table 4 to accrue all 38 democratic transitions and, using the terminology of the noise-to-signal ratio, the signal would be nil and there would be full noise (i.e., the noise-to-signal ratio=1). The noise-to-signal ratio observed in Panel A in Table 4 is 0.71, closer to reflecting full noise than perfect signal.

1989. The dissolution of the Soviet Union and the call for more democratic forms of government in new independent states were catalyzed by Gorbachev’s *glasnost* and *perestroika* policies, combined with the rise of national identity movements and the pressure for the restoration of nation-states since the late 1980s. As described in great detail in the Online Appendix, these democratic transitions in former Soviet Union States as well as in other satellite country states are driven by the fall of the communist regime as a whole as opposed to the failure driven by idiosyncratic economic problems. For this reason, we do not classify them as endogenous. However, our results strongly hold to the exclusion of this group of countries from the analysis or if we treated them as endogenous. In other words, the categorization of socialist countries is not a determinant of our empirical findings.

¹⁷As described before, our identification strategy (briefly summarized in column 2, Table 3) relies on categorical responses to survey questions 4 and 5, and open-ended question 6. Relying solely on multiple choice answers to questions 4 and 5 and setting a threshold of 40 percent of experts identifying “economic volatility and/or turmoil” as a main or secondary reason for classifying a democratization as endogenous (to err on the safe side), delivers a matching of 90 percent (or 34 out of 38 democratic transitions) with the the classification shown in column 2, Table 3. If we also exclude countries with less than four experts and Cape Verde (which is a marginal case with exactly 40 percent of experts pointing to underlying economic arguments) that match would increase to 96 percent. In other words, our categorization is robust to alternative classification strategies.

¹⁸The Online Appendix is available in the website <http://www.guillermovuletin.com/>

¹⁹All common tests of statistical associations between rows and columns performed in contingency tables like the Pearson χ^2 , likelihood-ratio χ^2 , Cramér’s V, Goodman and Kruskal’s gamma, and Kendall’s τ_b do not reject the null hypotheses of independence. Panel B in Table 4 also shows similar findings if one restricted the statistical analysis to the three years before democratizations.

²⁰The noise-to-signal ratio is defined for our purposes as $\frac{cell[2,1]/(cell[2,1]+cell[1,1])}{cell[2,2]/(cell[2,2]+cell[1,2])}$.

To sum up, this complementary analysis based on contingency tables point that the classification based on a novel worldwide survey of 165 democracy experts cannot be replicated or predicted by a statistical approach based on the mere observation of economic growth before democratizations. This evidence also reveals the importance of our survey efforts and the crucial relevance of relying on country-specific democracy experts.

4.3 Complementary Evidence to Identification Strategy Based on Democracy Worldwide Survey

This section provides two complementary types of evidence supporting democracy experts' opinions. First, we document that political movements and/or social uprising are equally present in both endogenous and more exogenous democratic transitions. For this purpose, we use NAVCO (Nonviolent and Violent Campaigns and Outcomes) data which, among other features, identify insurrections or campaigns by number of participants. Figure 5 shows the importance of political movements in the 10 years before the democratic transition computed as a yearly-demeaned ratio of the sizes of campaigns relative to total population for all, endogenous, and exogenous democratic transitions. Figure 5 also reports the 95 percent confidence intervals. We cannot reject the null hypothesis that the size of political movements pre-democratization is equally present across different types of democratic transitions.²¹

Second, the fact that political movements are of similar sizes does not imply, as articulated by democracy experts and long-standing research, that they have the same underlying driving factors. Indeed, based on our worldwide democracy survey we are able to classify democratizations according to whether economic turmoil seems to be a triggering or facilitating factor. To complement our democracy experts' opinions, we construct a novel Economic Turmoil in Media Index (hereafter, E-timi) to proxy for the relevance of this subject in international and domestic media. Reliance on international media reduces concerns about under-reporting of economic turmoil-related news due to possible lack of freedom for domestic media during autocratic regimes. E-timi is an index that measures economic upheaval across media, including foreign radio and television broadcasts, news agency transmissions, newspapers, periodicals, and government statements. The software data used for the formulation of this index was the Foreign Broadcast Information Service (FBIS), an open source intelligence component of the Central Intelligence Agency's that provides English translations of media news gathered from around the world from 1941 to 1996.²² In order to compute an algorithm, we first located the number of news that had articles containing specific words related to economic turmoil on a country and yearly basis. In particular, we use the words "economic crisis," "economic turmoil," "economic collapse," "debt crisis," "default," "financial crisis," "bank run," "bank crisis," "currency crisis," and "currency crash." Second,

²¹We cannot reject the null hypothesis that the mean yearly-demeaned ratio of the sizes of campaigns relative to total population for endogenous democratizations (-0.04) is the same as that observed in exogenous transitions (1.03) at the 5 percent level.

²²While unfortunately the data only goes until the year 1996, this does not impose a severe constraint on our study as almost 90 percent (or 34 out of 38) democratizations occur before the year 1996. This figure represents 89 percent (91 percent) of exogenous (endogenous) democratic transitions.

we computed a weighted measure dividing the economic turmoil related-news items by the total number of news items in that country and specific year. The process was carried out for a total of 180 countries for the period from 1960 to 1996. Figure 6 shows the average E-timi (yearly-demeaned) in the 10 years before the democratic transition for all, endogenous, and exogenous democratic transitions as well as 95 percent confidence intervals. We reject the null hypothesis that news pointing to economic upheaval is similar across endogenous and more exogenous transitions.²³ In particular, E-timi is 14 times larger in endogenous democratizations than in more exogenous ones.

To sum up, this complementary evidence seems to validate democracy experts' opinions. While both endogenous and more exogenous democratizations share some common elements regarding the magnitude of political movements and/or social uprising, their nature, particularly regarding the perception of and role played by economic turmoil as captured by the media, clearly differs in the expected direction.

5 The Effect of Democracy on Economic Growth: Baseline Evidence from a Novel Identification Strategy

We now evaluate the effect of democratization on economic growth using the identification strategy proposed in the previous section. Out of the 38 democratic transitions, 11 are classified as endogenous (as they are triggered or facilitated for reasons related to economic turmoil) and 27 are associated with more exogenous (to economic growth) reasons including, among others, the death of autocratic leader and political/institutional arguments.

Panel A in Table 5 replicates the empirical exercise of Table 2 but only relying on those more *exogenous* democratic transitions for identification purposes. To be precise, the dichotomous variable D now adopts the value of one in the year an *exogenous* democratization occurs and in all subsequent years (i.e., *exogenous* democratization countries represent the “treated” group and *endogenous* democratizations are included in the “control” group).²⁴ All positive effects of democratization on economic growth vanish (see columns 1 to 3 in Panel A in Table 5).²⁵ By addressing endogeneity considerations, the results obtained in recent panel-data studies (and replicated in Section 3) change dramatically. Specifically, democracy does not *cause* economic growth.²⁶

One must not use *endogenous* democratic transitions to evaluate the impact of democracy on economic growth, precisely because these episodes are contaminated with reverse causality. However, and

²³We reject the null hypothesis that the mean yearly-demeaned E-timi for endogenous democratizations (1.81) is the same as that observed in exogenous transitions (0.13) at the 5 percent level.

²⁴Similar results are obtained if countries with *endogenous* democratization episodes are excluded from the analysis. Results are not shown for brevity.

²⁵If analogous to Figure 2, one recoded the dichotomous variable D in those more *exogenous* democratizations by missing data during periods i) preceding the 10 years before a democratic transition (i.e., before T-10) and ii) the years after 10 years of democratization (i.e., after T+10) the main result regarding the neutrality of democracy on economic growth strongly holds.

²⁶We also re-estimated the empirical model dropping one country at the time to check the impact of possible outliers. The findings strongly hold. Results are not shown for brevity.

for comparison purposes, Panel B in Table 5 replicates the empirical exercise of Table 2, but relying on those *endogenous* democratic transitions for identification purposes.²⁷ In light of the findings for exogenous transitions in Panel A in Table 5, it should not come as a surprise that common panel-data based literature findings (i.e., democracy is associated with higher growth) depicted in Table 2 are solely driven by *endogenous* democratization episodes (i.e., due to faulty identification).²⁸

Since the number of democratizations used to properly identify the effect of democracy on economic growth falls from 38 (when using all democratizations) to 27 (when relying on *exogenous* democratizations), one may have concerns regarding the statistical power of this new set of results. In particular, one may have concerns that the neutrality of democracy on economic growth result obtained when using *exogenous* democratizations in Panel A in Table 5 is mainly due to having less variation in the democracy variable as opposed to truly reflecting a neutral effect of democracy on economic growth. Two things are worth noting in this regard. First, this drastic change in results is the consequence of excluding less than 30 percent (or 11 out of 38) of the democratization episodes from the “treated” group. Without providing formal proof, evidence from Panel B in Table 5 (which uses *endogenous* democratizations) seems to suggest that even having as low as 11 democratic transition cases could, in principle, provide sufficient variation. Second, Panel A in Table 6 shows that relying on difference-in-difference regressions, *exogenous* democratizations tend to improve (as one would expect) political and institutional variables as well as human rights.²⁹ Columns 1 and 2 show that, indeed, democracy increases citizens’ contestation and inclusiveness.³⁰ Moreover, columns 3 to 5 shows that democracy increases checks and balances (each of the three branches of government can limit the powers of the others), physical integrity (measured by the degree of torture, extrajudicial killing, political imprisonment, and disappearance indicators), and empowerment rights (measured by indices regarding freedom of speech, freedom of assembly and association, workers’ rights, electoral self-determination, freedom of religion, and citizens’ freedom to leave and return to their country as well as to travel within their own country). The fact that *exogenous* democratizations are strongly associated (in the direction one would expect) with non-growth outcomes such as political, institutional, and human rights variables provides strong evidence that the type of statistical power concerns described above are not granted. For completeness, Panel B in Table 6 also shows that these non-growth outcomes also improve when solely relying on *endogenous* democratizations.

²⁷To be precise, the dichotomous variable D now adopts the value of one in the year an *endogenous* democratization occurs and in all subsequent years (i.e., *endogenous* democratization countries represent the “treated” group and *exogenous* democratizations are included in the “control” group). Similar results are obtained if countries with *exogenous* democratization episodes are excluded from the analysis. Results are not shown for brevity.

²⁸We also re-estimated the empirical model dropping one country at the time to check the impact of possible outliers. The findings strongly hold. Results are not shown for brevity.

²⁹See Appendix 9 for a definition and sources of all variables.

³⁰Based on the work of Dahl (1971), Coppedge, Alvarez and Maldonadoas (2006) define contestation as citizens’ “unimpaired opportunities to formulate their preferences, to signify their preferences to their fellow citizens and the government by individual and collective action and to have their preferences weighed equality in the conduct of the government” and inclusiveness as the “variation in the proportion of the population entitled to participate on a more or less equal plane in controlling and contesting the conduct of the government.”

6 The Effect of Democracy on Economic Growth: Further Evidence

This section performs additional empirical exercises to complement our baseline evidence from exogenous democratic transitions shown in Section 5 as well as to further understand some of the limitations of the traditional approach presented in Section 3.

This section also analyzes the merits of the modernization theory arguments in possibly biasing our findings regarding the impact of democracy on economic growth. Not without being contested, early work by Lipset (1959), Lerner (1958), Almond and Verba (1963), and Coleman (1961) finds that social progress including urbanization, education, industrialization, and media growth represent a necessary but not sufficient condition for the establishment of a democratic political system. While our control variables include several of these social progress variables, one may still be concerned that even after controlling for them, economic growth and its effect on some other dimensions of social progress, could, in principle, create the necessary conditions for development of a democratic political system. It is important to point out that, even if present, modernization theory arguments are not sufficient to explain a change in the democratic political system. If this growth-driven modernization theory mechanism were present during the period preceding the democratic transition, our main findings regarding the effect of democracy on economic growth may be downward biased. As will become clear below in Section 6.1, we find no support for these very indirect growth-driven modernization arguments.

6.1 Relevance of Underlying Factors behind Democratic Transitions

While exogenous democratic transitions have been typically driven by a confluence of several factors, in this section we use the main underlying factor(s) identified by democracy experts in categorical questions 4 and 5 of the survey to assess if the neutrality of democracy found in Section 5 depends upon the underlying factors of democratization. Based on this strategy, political/institutional, fall of communism, foreign intervention, death of the leader, social unrest, and coup are identified in 13, 9, 4, 3, 1, and 1 cases, respectively.^{31,32}

Table 7 shows the empirical relevance of underlying factors behind democratic transitions. For this purpose, we estimate a regression with controls using exogenous democratization events (like the one in column 3 in Panel A in Table 5), but exploiting the source of variation associated with each underlying

³¹In cases where democracy experts identify two or more causes for a democratization process with identical support in questions 4 and 5, we select all of them as underlying factors.

³²Political/Institutional arguments are identified by experts in Cape Verde, Chile, Dominican Republic, El Salvador, Ghana, Greece, Korea Rep., Panama, Portugal, Senegal, Slovenia, South Africa, and Uruguay. Fall of communism transitions involve Bulgaria, Czech Republic, Estonia, Hungary, Latvia, Lithuania, Mongolia, Poland, and Slovak Republic. Foreign intervention arguments are identified by experts in Dominican Republic, El Salvador, Grenada and Honduras. Death of the leader is present in Croatia, Spain, and Romania. Social unrest democratizations includes South Africa. Coup is solely present in Portugal.

factor of democratization. In particular, we use the following regression:^{33,34}

$$\Delta y_{it} = \alpha + \sum_j \beta_j D_{it}^j + \sum_h \delta_h x_{it}^h + \mu_i + \eta_t + \varepsilon_{it}, \quad j = POL, FC, FI, DL, SUC, \quad (2)$$

where D^j adopts the value of one in the year a democratization episode occurs and in all subsequent years for those countries associated with underlying democratization factor j . Column 1 in Table 7 shows the findings. The evidence shows that different main underlying factors of democratizations have only a negligible effect on economic growth. Interestingly, democratizations driven by death of the leader (arguably the most exogenous of all exogenous to economic growth democratizations) also show a neutral effect on economic growth.³⁵

Arguably, political/institutional-driven democratizations may be the ones with a greater likelihood to be associated with modernization arguments, as they reflect with most likelihood (vis-à-vis other main underlying democratizations factors) progressive and continuous transitions. Indeed, Greece, the Republic of Korea, South Africa, and Portugal (all driven, according to the democracy experts surveyed, by political/institutional arguments) are, according to Przeworski and Limongi (1997), “the dream cases of a modernization theorist.” Column 1 in Table 7 shows that, while not statistically significant, transitions of this type are associated with a higher growth effect. This evidence does not support growth-driven modernization arguments because, as explained earlier in this section, this should bias downward the democracy variable coefficient towards a negative sign.

Since the number of democratizations used to identify the effect of democracy on economic growth falls when differentiating among underlying factor of democratization (see column 7 in Table 7 for details), one may have concerns regarding the statistical power of this new set of results (as also discussed in Section 5). To unravel the relevance of this concern we proceed as before and replicate this exercise for non-growth outcomes including political, institutional, and human rights variables. Columns 2 to 6 in Table 7 confirm that this genuine concern does not seem to be warranted because, by and large, democratizations are strongly associated (in the direction one would expect) with these non-growth outcomes in all underlying democratizations factors.

³³POL, FC, FI, DL, and SUC stand for political/institutional, fall of communism, foreign intervention, death of leader, and social unrest or coup, respectively.

³⁴Given the few democratic transitions associated with social unrest (only one case) and coup (only one case), we group these two categories together in the regression analysis.

³⁵It is important to note that the death of leaders in Spain (Francisco Franco at the age of 82 and due to naturally caused heart failure), in Croatia (Franjo Tudjman at the age of 77 and due to prolonged cancer), and in Romania (Nicolae Ceausescu at the age of 71 and due to a summary trial, death sentence, and execution under the charges of genocide –murdering over 60,000 people during the revolution in Timisoara) are not driven by political assassinations caused by economic turmoil. Since the revolution that started in Timisoara occurred, as detailed by democracy experts in open-ended question 6 and reflected in Table 3 and in Online Appendix, by “changes in the entire region [and the] democratization of Eastern Europe after the fall of communism” (words of democracy expert Cristian Ghinea, Director of Romanian Center for European Policies), classifying Romania under the fall of communism category would not change results. Results are not shown for brevity.

6.2 Transmission Mechanism

So far we have shown robust evidence that, when properly identified, democracy does not *cause* economic growth. To explore this evidence in greater depth, we now evaluate the effect of democracy on key underlying variables of economic growth as well as on more holistic developmental variables. Panel A of Table 8 shows the results of estimating difference-in-difference models on investment, education, human capital, productivity, an economic complexity index, a human development index, and income inequality.^{36,37} The evidence consistently suggests that democracy does not increase any key underlying variables of economic growth such as investment, education, human capital, or productivity (columns 1 to 4). Columns 5 and 6 show that democracy also has no effect on holistic production and social developmental measures such as the degree of diversity and sophistication of a country’s export (proxied by the Economic Complexity Index) and the human development index. Column 7 indicates that democratic rule does not alter income inequality either.

As articulated above, one must not use *endogenous* transitions to evaluate the impact of democracy on economic growth. However, to further understand the nature of those endogenous democratizations, Panel B in Table 8 replicates the empirical exercise of Panel A but only for *endogenous* democratic transitions. These transitions show no statistical association with investment, education, human capital, or productivity. The human development index does not appear to be higher and, moreover, the degree of diversity and sophistication of a country’s export seems to fall. This evidence further supports previous arguments that the higher (and in particular less negative!) economic growth observed after democratic transitions in those endogenously driven democratizations are not driven by changes in fundamental inputs such as education, investment, and productivity.

6.3 The Role of Anticipation

When determining the year of the democratic transition, we follow the crucial work by PS. However, anticipation of democratization could also matter and, more importantly, may bias democratization estimates either upwards or downwards. For example, if the advent of democracy induced firms and individuals to start investing in advance and, consequently, economic growth begins to rise before the transition, then the bias on democratization would be downwards. The opposite would be true if, for example, the imminence of democracy were perceived by domestic elites and foreign investors as a risk to their business. This, in turn, could trigger an anticipated reduction in investment and a reduction in economic activity. To control for potential anticipation effects we enrich specification (1) to include

³⁶See Appendix 9 for definition and sources of variables.

³⁷With the exception of investment (which is a flow variable), we use changes (not levels) of all other variables to map with real GDP per capita growth accounting and regressions. For example, if one uses a basic Cobb-Douglas production function $Y_t = A_t K_t^\alpha H_t^\beta L_t^{1-\alpha-\beta}$, where Y , A , K , L , and H represent GDP, productivity, stock of physical capital, size of the labor force, and human capital, it is straightforward to show that $\log y_t - \log y_{t-1} = \log A_t - \log A_{t-1} + \alpha(\log k_t - \log k_{t-1}) + \beta(\log h_t - \log h_{t-1})$ where small letters refer to concepts in per worker terms. Therefore, following this basic production function, economic growth can be decomposed in the growth of productivity, physical capital, and human capital.

the role of news about democratization:

$$\Delta y_{it} = \alpha + \beta D_{it} + \gamma News_{it} + \sum_h \delta_h x_{it}^h + \mu_i + \eta_t + \varepsilon_{it}, \quad (3)$$

where the variable *News* aim to reflect the perceived probability of a democratic transition. This additional variable helps i) understand the effect of anticipation and ii) properly identify the effect of democratization (particularly if the anticipatory effect was important in either complementing or substituting the democratization effect). We use three complementary measures that aim at capturing different relevant dimensions:

- A first measure is formulated by the authors based on fundamental constitutional, referendum or other types of legal landmarks indicating the future call for elections ($News^{legal}$). In most episodes, that measure is associated with the drafting of a new constitution. However, in other democratic transitions, such as in the case of Argentina, it is associated with the official announcement of elections by the exiting military regime. Column 2 of Table 9 describes in detail key legal landmarks for each country (i.e., $News^{legal}$). In regression (3) $News^{legal}$ is a dichotomous variable adopting the value of one in the year in which the legal announcement took place and in all subsequent years before the democratic transition. In 13 percent (or 4 out of 38) of all democratic transitions the year of announcement using this measure coincides with that of the democratization (specifically in Argentina, Bolivia, Grenada, Guyana, and Mali). This figure represents 4 percent for exogenous democratic transitions.
- A second measure is based on democracy experts’ answer to question one in our worldwide survey described in Section 4 ($News^{experts}$). In that question, we asked democracy experts when were elections announced without pointing to a particular nature (e.g., legal landmark, popular perception, or other type of more informal announcement). Given the multiple number of experts per country and the total answers observed, we focus on the median announcement date (see Table 9, column 3). In regression (3) $News^{experts}$ is a dichotomous variable adopting the value of one in the year in which, according to the experts, the announcement took place and in all subsequent years before the democratic transition. In 24 percent (or 9 out of 38) of all democratic transitions, the year of announcement using this measure coincides with that of the democratization (specifically in Argentina, Bulgaria, Estonia, Grenada, Guyana, Hungary, Philippines, Poland, and Romania). This figure represents 22 percent for exogenous democratic transitions.
- A third measure is based on a novel index developed for the purpose of this study which aims to proxy in a continuous manner international and domestic media perception of democratic transition ($News^{media}$). Relying on the same software data used for the construction of the E-timi (see Section 4.3 for details), $News^{media}$ is a continuous variable constructed as follows: for the period during the last autocratic regime before the democratic transition, the variable equals the number of articles containing the words “election,” “elections,” “voting,” “democracy” or

“constitutional reform” relative to the total number of articles. For the rest of the period the variable adopts a value of zero.

Columns 1, 2, and 3 in Table 10 show the findings of estimating regression (3) when using $News^{legal}$, $News^{experts}$, and $News^{media}$, respectively.³⁸ These estimates strongly support our previous findings that democracy does not *cause* economic growth. Moreover, the anticipation effect does not seem to play an active role.

6.4 Does the Quality of Democracy Matter for Growth?

In this section we perform several robustness tests to account for differences among democratic transitions. In particular, we allow the degree of political and civil right freedoms, democratic accountability, or bureaucracy quality in periods of democracy (i.e., when the democratization dichotomous variable is equal to one) to affect the impact of democracy on economic growth. To evaluate the relevance of these aspects, we enrich specification (1) by interacting democratization with continuous and discrete variables capturing these dimensions (W):

$$\Delta y_{it} = \alpha + \beta D_{it} + \lambda (D_{it} \times W_{it}) + \kappa W_{it} + \sum_h \delta_h x_{it}^h + \mu_i + \eta_t + \varepsilon_{it}. \quad (4)$$

We use three measures for W : *political freedom* (measured by polity2 of Polity Project), and *democratic accountability* and *bureaucracy quality* from International Country Risk Guide (ICRG). Table 11, columns 1 to 3 show these results.

We also use democracy experts’ answers to questions 2 and 3 of the survey, which indicate i) the degree of political and civil right freedoms, ii) freedom, competitiveness, and fairness of elections, iii) whether there were actual transfers of power resulting from elections, and iv) population inclusiveness in the election. Since we only have these answers for the first democratic elections in the 38 democratizations surveyed in this paper, we estimate

$$\Delta y_{it} = \alpha + \lambda (D_{it} \times Q_i) + \sum_h \delta_h x_{it}^h + \mu_i + \eta_t + \varepsilon_{it}. \quad (5)$$

where we use two measures for Q : *Question 2* (average answer of experts to question 2 in the survey) and *Question 3* (average answer of experts to question 3; a “yes” counts as one and a “no” as zero).³⁹ Table 11, columns 4 and 5, show these results. Our key findings strongly hold: democracy still shows no effect on economic growth. Moreover, changes in democracy’s core fundamentals during democratic rule (captured by the interaction terms) do not seem to impact economic growth either.

³⁸Since these regressions focus on exogenous democratizations, the $News$ measures adopt a non-zero value only for these transitions.

³⁹Since these regressions focus on exogenous democratizations, the Q measures adopt a non-zero value only for these changes.

7 Reconciling Our Findings with Those of Acemoglu, Naidu, Restrepo, and Robinson (2014)

As discussed in the Introduction, most recent panel data studies do not address endogeneity considerations. This occurs, to a large extent, due to the difficulty of finding proper instrumental variables in the context of panel data (i.e., instruments that are time-varying). A notable exception is the paper by Acemoglu, Naidu, Restrepo, and Robinson (2014), hereafter ANRR. Motivated by the recent Arab Spring cascading effect, ANRR show that i) democratizations tend to occur in regional waves (i.e., democratic transitions tend to be highly synchronized at the regional level) and argue that ii) such regional democratic waves do not seem to be explained by regional economic common factors or trends but rather by the demand for democracy spreading from one country to another. Based on these two premises, the authors instrument democratic transitions using regional waves of democratization, after controlling for proper macro control variables at the regional level to ameliorate possible violations of premise ii). Using this instrumental variable identification strategy, ANRR find that democracy indeed seems to cause more economic growth.

How could one reconcile our findings (about the neutrality of democracy on economic growth) with those of ANRR? In this section we, first, take a stand against the universal validity of ANRR's exogeneity premise ii). Then, we show that while democratizations indeed tend to occur in regional waves, the type of democratic transitions displaying a positive association between democracy and economic growth occur in endogenous synchronized cases (mostly occurring in Latin America and, to a lesser extent, in Sub-Sahara Africa).⁴⁰ In spite of the complex nature of the economic turmoil leading to these endogenous democratizations in many Latin American countries (e.g., Ecuador in 1979, Peru in 1980, Bolivia in 1982, Argentina in 1983, and Brazil in 1985), political science research robustly point to the Latin American debt crisis as one of the main catalyzers of many democratic transitions in early/mid 1980s (e.g., O'Donnell, 1973; Cavarozzi, 1992; Remmer, 1993).⁴¹ On the contrary, when relying on highly synchronized democratization episodes that are driven by more exogenous democratic transitions (occurring in Western Europe and Eastern Europe and Central Asia), democracy shows negligible effect on economic growth. This implies that the positive effect of democracy on economic growth obtained when using ANRR's instrumental variable identification strategy is driven by an endogenous source of variation as opposed to an exogenous one (i.e., due to faulty identification).

7.1 Existence of Regional Waves of Democratic Transitions

Figure 7 confirms the evidence shown in ANRR regarding the existence of regional democratization waves.⁴² Panel A depicts the evolution of average democratization among countries that were initially

⁴⁰In this section we refer to Latin America for brevity, but we mean to allude to Latin America and the Caribbean.

⁴¹The Latin America debt crisis mainly occurred as the result of excessive borrowing of Latin American governments at a floating interest rate from wealthy OPEC countries during the mid 1970s and the rise in international interest rates triggered by Volcker's Federal reserve in 1979-1981 (Frieden, 1991; Sachs and Williamson, 1985; Vegh and Vuletin, 2014).

⁴²As has been the case throughout the paper, we continue focusing on the 38 democratic transitions.

nondemocracies in all five regions represented in our study (solid line).⁴³ For comparison, Panel A also shows average democratization among initial nondemocracies in the other regions (dashed line). As in ANRR, following the first democratization in a region, average democratization rises much faster in the same region than average democracy in the comparison group, illustrating the existence of regional waves of democratization. For example, the shaded area shows that during the five years following the first democratization in a region, democratization increases by 34 percent in the same region and just 8 percent in other regions. Other panels in Figure 7 show an equivalent picture for each region. With the exception of East Asia and Pacific (Panel B), all other regions show that democracy depicts a regional wave pattern. For example, during the five years following the first democratization in Latin America (Panel C), democratization increases by 31 percent in the region and nil in other regions.

7.2 Exogenous versus Endogenous Source of Identifying Variation

The existence of regional democratization waves shown in the previous section is not sufficient to grant exogeneity to this source of variation. To grant this, regional waves cannot be determined by regional economic common factors or trends. Indeed, this is the reason why ANRR use regional waves as an instrument of democratization but also control for proper macro control variables at the regional level to ameliorate possible violations of the exogeneity premise. To analyze the validity of this premise, we replicate the exercise of Figure 7, but differentiating between more exogenous and endogenous democratizations (according to the classification proposed in this paper) in Figures 8 and 9, respectively.

Panels A in Figure 8 and 9 show that the existence of democratic regional waves are driven by both more exogenous as well as endogenous democratic transitions. The shaded area in Panel A in Figure 8 (Figure 9) shows that during the five years following the first exogenous (endogenous) democratic transition in a region, democratization increases by 28 percent (14 percent) in the same region and just 6 percent (1 percent) in other regions. That is to say, during the five years following the first exogenous democratization, the increase in democratic transitions is 24 percentage points (i.e., $28-6=24$) larger in the same region than in other regions. When focusing on endogenous democratizations such figure is 13 percentage points (i.e., $14-1=13$). This feature (in and of itself) casts serious doubt on the universal validity of the exogeneity premise. That is to say, an important part of the synchronization observed at the regional level is driven by endogenous democratization cases. This suggests the existence of common negative regional economic shocks or trends which increase economic turmoil, destabilizing authoritarian regimes.

When focusing on individual regional aspects, some very interesting (yet not totally surprising) asymmetries emerge. Figures 8 and 9 show that Eastern Europe and Central Asia (Panels E) and Western Europe (Panels F) regional democratization waves are completely dominated by more exogenous synchronized transition processes. On the contrary, in Latin America (Panels C) and, to a lesser

⁴³The five regions are East Asia and Pacific, Eastern Europe and Central Asia, Latin America and the Caribbean, Sub-Saharan Africa, and Western Europe.

extent in Sub-Saharan Africa (Panels D), the synchronized democratizations are, contrary to the ANRR exogeneity premise, mostly driven by endogenous democratizations.^{44,45} In short, while in Eastern Europe and Central Asia and Western Europe ANRR’s exogeneity premise seem to be valid, in Latin America and in Sub-Saharan Africa it is not. This evidence is not totally surprising in light of robust political science research pointing, for example in the case of Latin American, to the 1980s debt crisis as one of the main catalysts of many democratic transitions (e.g., O’Donnell, 1973; Cavarozzi, 1992; Remmer, 1993).

7.3 Empirical Relevance of Degree of Exogeneity of Democratic Regional Waves

In this section we test the empirical relevance regarding the aforementioned validity of the exogeneity premise across regions. For this purpose, we estimate a difference-in-difference regression with controls using all democratization events (like the one in column 3 in Table 2), but exploiting the source of variation in each region. In particular, we use the following regression:⁴⁶

$$\Delta y_{it} = \alpha + \sum_j \beta_j D_{it}^j + \sum_h \delta_h x_{it}^h + \mu_i + \eta_t + \varepsilon_{it}, \quad j = LAC, SSA, ECA, WE, EAP, \quad (6)$$

where D^j adopts the value of one in the year a democratization episode occurs and in all subsequent years for those countries in region j . Column 1 in Table 12 shows the findings. Democracy is positively associated with economic growth in Latin America and Sub-Saharan Africa, precisely the two regions where the exogeneity premise of democratization regional waves of ANRR is violated. Column 7 shows the percent of endogenous democratizations in each region. On the contrary, in Eastern Europe and Central Asia and Western Europe (where the exogeneity premise of democratization regional waves of ANRR is granted), democracy does not cause higher economic growth than more autocratic form of governments.

Since the number of democratizations used to identify the effect of democracy on economic growth falls when differentiating among regions (to 14 in LAC, 7 in SSA, 11 in ECA, 3 in WE, and 3 in EAP), one may have concerns regarding the statistical power of this new set of results (as also discussed in Section 5). To unravel the relevance of this concern we proceed as before and replicate this exercise for non-growth outcomes including political, institutional, and human rights variables. Columns 2 to 6 in Table 12 confirm that this genuine concern does not seem to be warranted because, by and large,

⁴⁴The shaded area in Panel C in Figure 8 (Figure 9) shows that during the five years following the first exogenous (endogenous) democratization in Latin America, democratization increases by 6 percentage points (18 percent) in Latin America and nil in other regions. That is to say, during the five years following the first exogenous democratization, the increase in democratic transitions is 6 percentage points (i.e., 6-0=0) larger in the same region than in other regions. When focusing on endogenous democratizations that figure is 18 percentage points (i.e., 18-0=0).

⁴⁵The shaded area in Panel D in Figure 8 (Figure 9) shows that during the five years following the first exogenous (endogenous) democratization in Sub-Saharan Africa, democratization increases by 7 percent (7 percent) in Sub-Saharan Africa and 14 percent (1 percent) in other regions. That is to say, during the five years following the first exogenous democratization, the increase in democratic transitions is -7 percentage points (i.e., 7-14=-7) larger in the same region than in other regions. When focusing on endogenous democratizations that figure is 6 percentage points (i.e., 7-1=6).

⁴⁶LAC, SSA, ECA, WE, and EAP stand for Latin America and Caribbean, Sub-Saharan Africa, Eastern Europe and Central Asia, Western Europe, and East Asia and Pacific, respectively.

democratizations are strongly associated (in the direction one would expect) with these non-growth outcomes in all regions.⁴⁷

To sum up, this section’s findings are twofold. First, in terms of the specific contribution by ANRR (which to our knowledge is the only article aiming at addressing endogeneity concerns in the context of panel data-based studies), it casts doubts on the validity of the exogeneity premise of democratization regional waves as a universal identification strategy. Moreover, for regions where the proposed strategy seems to be applicable, democracy shows a negligible effect on economic growth. Second, through the lenses of our paper (i.e., emphasizing the importance of differentiating exogenous from endogenous democratic transitions to properly evaluate its impact on economic growth) it characterizes the regional differences of democratic developments. This regional analysis may, in turn, also prove helpful in providing supplementary fabric to policy analysis and academic research when evaluating the relevance of the political and economic environments as well as the economic implications of democratizations in imminent new transition processes such as those emerging in the Middle East, Africa, and Central Asia.

8 Final Thoughts

The year 2014 marked the fortieth anniversary of Portugal’s Revolution of the Carnations and what Samuel Huntington dubbed “the third wave” of democratization. When the third wave of democratization began in 1974, about 30 percent of the world’s independent states had electoral democracies. In the subsequent three decades, that figure grew as human history has never seen before, reaching about 60 percent of world states. Around the year 2006, the expansion of democracy around the world came to a halt. Given the importance of that form of government, and in hopes that the Arab Spring eventually translates into real democracy, the debate about whether democracy increases not only political and human rights (as one may expect), but also whether it will be able to deliver more economy prosperity has been at the core of heated debates in both academic and policy circles.

This paper deals with the specific question of whether democracy *causes* more economic growth; no more, no less. Since theoretical arguments point in both directions, answering this question quickly becomes an empirical question. On one hand, Barro (1997) points out “[m]ore political rights do not have an effect on growth... The first lesson is that democracy is not the key to economic growth.” On the other hand, for example, ANRR strongly argue the their “results show a robust and sizable effect of democracy on economic growth.” While not uncontested, the recent trend during the last decade has been towards finding positive effects of democracy on economic growth. In particular, most of these recent findings have been based on the use of panel datasets. In doing so, this literature has advanced on crucial fronts including, among others, the use of panel data (as opposed to cross-country analysis) and the construction of more accurate measures of democracy like the one developed by Papaioannou

⁴⁷The coefficient associated with the democratization in Western Europe (i.e., D^{WE}) is not reported in columns 5 and 6 (that term is “dropped” when estimating each regression) because the data used for this purpose start in 1981, after the democratizations in Greece, Portugal, and Spain.

and Siourounis (2007 and 2008).

In spite of the aforementioned advances, endogeneity considerations remain a genuine concern. This concern seems to be well-grounded in light of extensive evidence and political science research indicating that economic turmoil is responsible for triggering or facilitating many democratic transitions (e.g., O'Donnell, 1973; Linz, 1978; Cavarozzi, 1992; Remmer, 1993; Gasiorowski, 1995; Haggard and Kaufmann, 1995). This occurs, to a large extent, due to the difficulty of finding proper instrumental variables in the context of panel data (i.e., instruments that are time-varying).

Based on a novel identification strategy using a new survey conducted to 165 country-specific democracy experts we aim to address these genuine endogeneity concerns. We find that, unfortunately, democracy does not *cause* growth and, moreover, the common positive association between democracy and economic growth is driven by faulty identification. In other words, democracy does not seem to be the key to unlocking economic growth.

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9 Appendix of data

Bureaucracy quality

Measures the institutional strength and quality of the bureaucracy. Source: International Country Risk Guide (ICRG).

Checks and balances

Beck, Clarke, Groff, Keefer, and Walsh (2001) was the source of data. An 18-category scale, from 1 to 18, with a higher score indicating more political checks and balances.

Contestation in a democracy

Contestation is the amount of elections held. “There is contestation when citizens have unimpaired opportunities to formulate their preferences, to signify their preferences to their fellow citizens and the government by individual and collective action and to have their preferences weighed equally in the conduct of the government.” Source: Coppedge, Alvarez, and Maldonado (2008).

Democratization

Dummy variable equals 0 for non-reforming countries and for democratization countries before transition and 1 for democratization countries in all subsequent years after transition. We follow the same algorithm than that in Papaioannou and Siourounis (2007) (hereafter, PS) extending the coverage from 2005 to 2013 for 174 countries. See their paper for more details about the construction of this variable. Based on this extension, we code 38 incidents as full democratization. We also identify 38 always intermediate status countries including: 32 partial incidents, 4 borderline episodes and only 2 countries experienced reverse transitions from relatively stable democracies to autocracies. Finally we group the non-reforming countries into three categories: always democratic (43) and always autocratic (54) and always intermediate status (38).

Democratic accountability

Measures how responsive government is to its people, on the basis that the less responsive it is, the more likely it is that the government will fall, peacefully in a democratic society, but possibly violently in a non-democratic one. Source: ICRG.

Economic complexity index

Annual change in the Economic Complexity Index. Source: The Atlas of Economic Complexity (<http://atlas.cid.harvard.edu/>).

E-timi

Economic Turmoil in Media Index (hereafter, E-timi) is a novel variable created to proxy for the relevance of economic turmoil in international and local media. E-timi is an index that measures the economic upheaval across media, including foreign radio and television broadcasts, news agency transmissions, newspapers, periodicals, and government statements. The software-data used for the elaboration of this index was the Foreign Broadcast Information Service (FBIS), an open source intelligence component of the Central Intelligence Agency's that provides with English translations of media news gathered from around the world from 1941 to 1996. In order to compute an algorithm, we first, located the number of news that had articles containing specific words related to economic turmoil on a country and yearly basis. In particular, we use the words "economic crisis", "economic turmoil", "economic collapse", "debt crisis", "default", "financial crisis", "bank run", "bank crisis", "currency crisis" and "currency crash." Second, we computed a weighted measure by dividing the economic turmoil related news by the total number of news in that country and specific year.

Education

Total average education years of schooling (population aged 15 and over), linearly interpolated. Source: The Barro-Lee Dataset (<http://www.barrolee.com/>).

Empowerment rights index

Additive index constructed from the subindices "foreign movement," "domestic movement," "freedom of speech," "freedom of assembly and association," "workers' rights," "electoral self-determination," and "freedom of religion indicators." It ranges from 0 (no government respect for these seven rights) to 14 (full government respect for these seven rights). Source: Cingranelli, David L., David L. Richards, and K. Chad Clay. 2014. "The CIRI Human Rights Dataset." <http://www.humanrightsdata.com>. Version 2014.04.14.

Gini

Estimate of Gini index of inequality in equivalized (square root scale) household disposable income, using Luxembourg Income Study data as the standard, from Solt, Frederick. 2009. "Standardizing the World Income Inequality Database." *Social Science Quarterly* 90(2):231-242. SWIID Version 3.1, December 2011.

Government spending

Updated version of variable govcons from PS, which corresponds to general government final consumption expenditure as a percentage of GDP from WDI. Data prior to 2000 corresponds to PS, after that, we use updated data from the same source (WDI).

Human capital

Life expectancy at birth, total, years, linearly interpolated and extrapolated. Source: WDI.

Human development index

Human development index, linearly interpolated and extrapolated from Max Roser (2014) Human Development Index (HDI). The HDI is a composite index that measures the average achievements in a country in three basic dimensions of human development: a long and healthy life, as measured by life expectancy at birth; knowledge, as measured by the adult literacy rate and the combined gross enrolment ratio for primary, secondary and tertiary schools; and a decent standard of living, as measured by GDP per capita in purchasing power parity (PPP) US dollars.

Inclusiveness in a democracy

Inclusiveness is a form of social organization which re-integrates society with economy, polity and nature. Following Dahl (1971), “inclusiveness is variation in the proportion of the population entitled to participate on a more or less equal plane in controlling and contesting the conduct of the government”. Source: Coppedge, Alvarez, and Maldonado (2008).

Investment

Updated version of variable invest from PS which corresponds to the gross capital formation as a percentage of GDP from WDI. Data prior to 2000 corresponds to PS, after that, we use updated data from the same source (WDI).

Level of democracy

Variable polity2 from PolityIV database.

NAVCO

NAVCO’s variable “camp_size” is an indicator of the general size of the campaign that goes from zero to five, where a size of zero corresponds to smaller camp sizes (ranges between 1 and 999) and a size of five corresponds to any camp size greater than 1 million. For our analysis, we transform the variable so that each data point corresponds to the mid-point of every interval. That is, we assigned a value of 500 whenever camp size equaled zero or unknown (to err on the safe side), 4500 whenever camp size equaled 1, 44500 whenever camp size equaled 2, 199999 whenever camp size equaled 3 and 250000 whenever camp size equaled 4. Given that we cannot compute a midpoint for camp size of 5, we assigned a value of 1000000. Whenever a campaign was registered for a given country, we completed the missing data with zeroes (that is, no campaign took place on that particular year) for the period between 1960 and 2006. Finally, we computed a weighted measure of camp_size by dividing each data point by the population of each country. Our variable of interest was yearly-demeaned, representing the country’s camp size minus the average camp size for that year. Source: NAVCO (Nonviolent and Violent Campaigns and Outcomes) data (http://www.du.edu/korbel/sie/research/chenow_navco_data.html)

Openness

Updated version of variable trade from PS, which corresponds to the sum of exports and imports as a percentage of GDP from WDI. Data prior to 2000 corresponds to PS, after that, we use updated data from the same source (WDI).

Physical integrity rights index

Additive index constructed from the subindices “torture,” “extrajudicial killing,” “political imprisonment,” and “disappearance indicators.” It ranges from 0 (no government respect for these four rights) to 8 (full government respect for these four rights). Source: Cingranelli, David L., David L. Richards, and K. Chad Clay. 2014. “The CIRI Human Rights Dataset.” <http://www.humanrightsdata.com>. Version 2014.04.14.

Productivity

Total factor productivity. Source: World Penn Table version 8 (variable name rtfpna).

Real GDP per capita growth

Real GDP per capita growth rate is defined as the annual logarithmic change of real per capita GDP. To make the coefficients more easily interpretable we multiply the variable by 100.

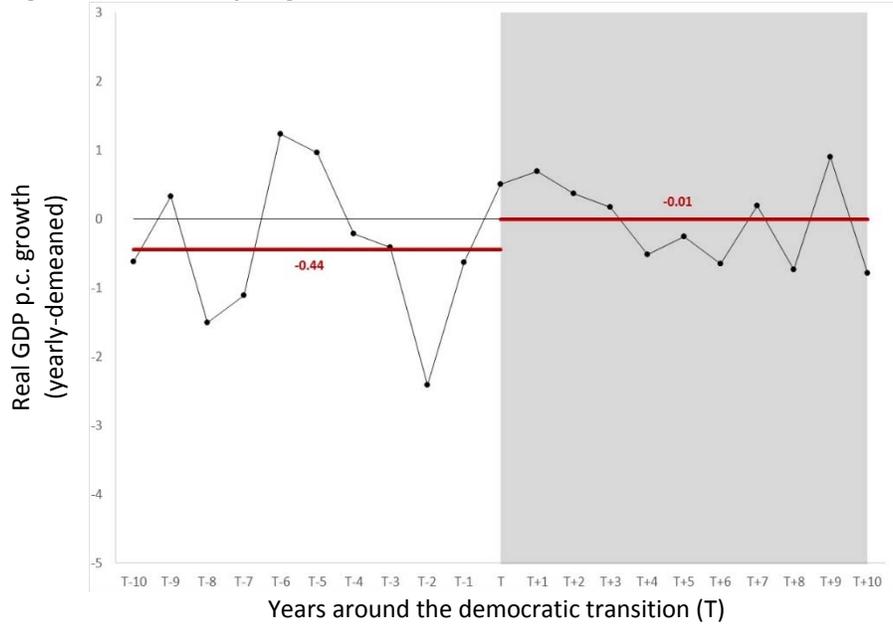
Terms of trade

Terms of trade. Source: Direction of Trade Statistics (DOTS).

World press freedom index

Press freedom index compiled and published by Reporters Without Borders based upon the organization’s assessment of the countries’ press freedom records. Source: Reporters Without Borders (<https://index.rsf.org>)

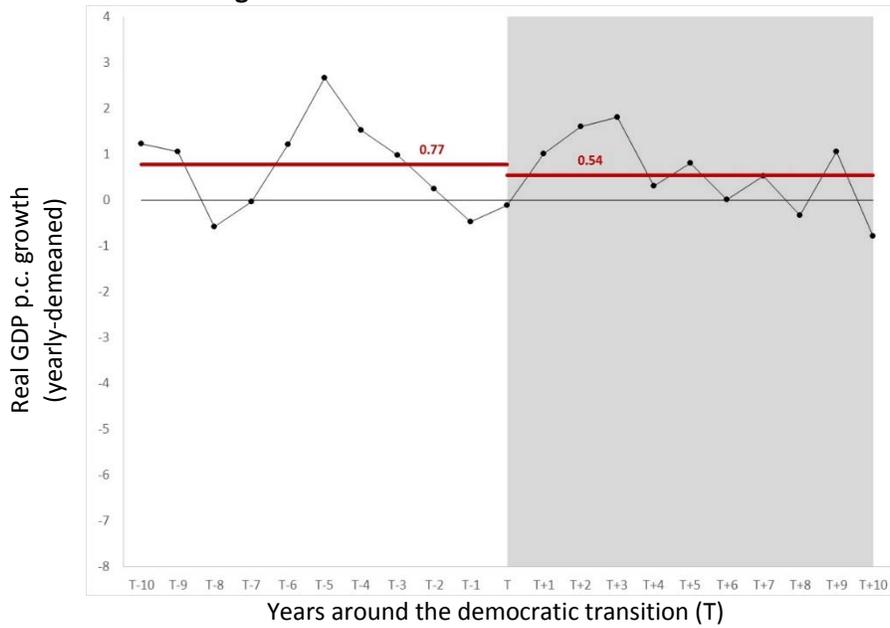
Figure 1. Real GDP p.c. growth around democratic transitions



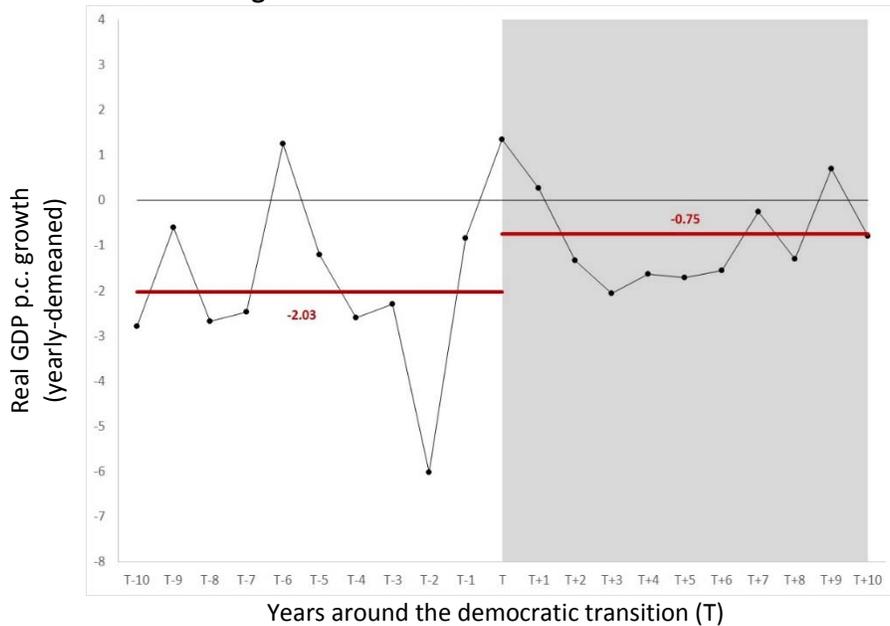
Notes: The figure plots the evolution of yearly-demeaned (country growth rate minus the median growth rate for that year) average real GDP per capita growth in the ten years before (non-shaded area) and after (shaded area) a democratic transition. Thicker red lines depict average growth rate before and after democratization. Socialist countries are excluded. Column 1 in Table 3 lists the democratization countries and the time of democratic transition.

**Figure 2. Real GDP p.c. growth around democratic transitions:
Exogenous vs. endogenous democratic transitions**

Panel A. Exogenous democratic transitions



Panel B. Endogenous democratic transitions



Notes: The figures plots the evolution of yearly-demeaned (country growth rate minus the median growth rate for that year) average real GDP per capita growth in the ten years before (non-shaded area) and after (shaded area) a democratic transition. Thicker red lines depict average growth rate before and after democratization. Socialist countries are excluded. Column 1 in Table 3 lists the democratization countries and the time of democratic transition. Column 2 in Table 3 shows an extremely brief summary regarding the endogenous or more exogenous nature of each democratic transition. Panels A and B plot these figures for exogenous and endogenous democratic transitions, respectively.

Figure 3. Survey example (Democratization in Argentina)

Edit this form

Democratization in Argentina

While the beginnings of permanent democratization processes are sometimes difficult to identify with precision, our research indicates that the democratization process in Argentina started on October 20, 1983, when the first free and fair elections occurred after a prolonged period of military dictatorship.

What follow are some multiple choice questions regarding the nature and environment of this process in Argentina.

*** Required**

1. When were elections announced? *

MM/YYYY

2. In case that a constitutional change is viewed as the landmark event to define the beginning of democracy, how would you rate the new constitution, as far as civil liberties and political rights are concerned? *

1 2 3 4 5

Severely restricted civil liberties and political rights Fully fledged civil liberties and political rights

3. In case that an election is viewed as the landmark event to define the beginning of democracy, would you agree with the following about the elections? *

	Yes	No
Elections were carried out in a free and fair manner.	<input type="radio"/>	<input type="radio"/>
Elections were respectful of civil liberties and political rights.	<input type="radio"/>	<input type="radio"/>
The franchise was inclusive for the majority of the population.	<input type="radio"/>	<input type="radio"/>
The elected officials enjoyed real governing capacity.	<input type="radio"/>	<input type="radio"/>

4. What was the main cause for the rise of democracy in the country? *

- Economic turmoil
- Death of the leader
- Fall of communism
- Political/Institutional reasons

Figure 3 cont. Survey example (Democratization in Argentina)

Coup
 Social Unrest
 Foreign intervention

5. Is there another (i.e. secondary) cause for the rise of democratization in the country? *

No
 Yes, Economic turmoil
 Yes, Death of the leader
 Yes, Fall of communism
 Yes, Political/Institutional reasons
 Yes, Coup
 Yes, Social Unrest
 Yes, Foreign intervention

6. How would you best describe the origin/roots/cause of the democratization process?

7. Would you allow our study to quote your answer to question 6 (fully or partially), or would you prefer to maintain anonymity? *

Brookings Institution may quote my answer to question 6
 I would prefer to maintain anonymity

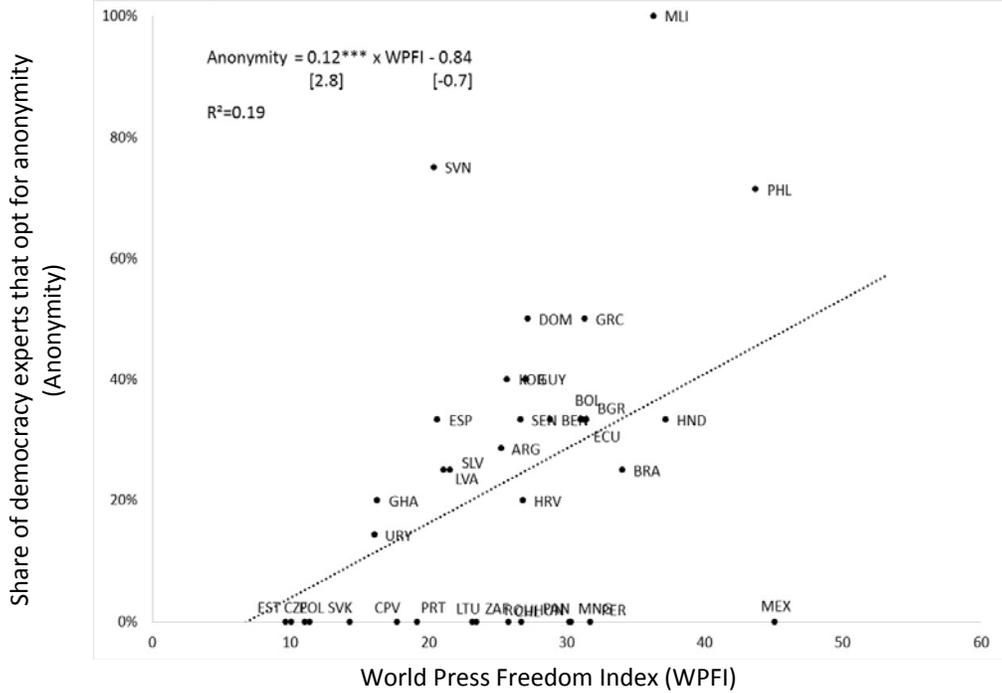
Please provide your full name and title *

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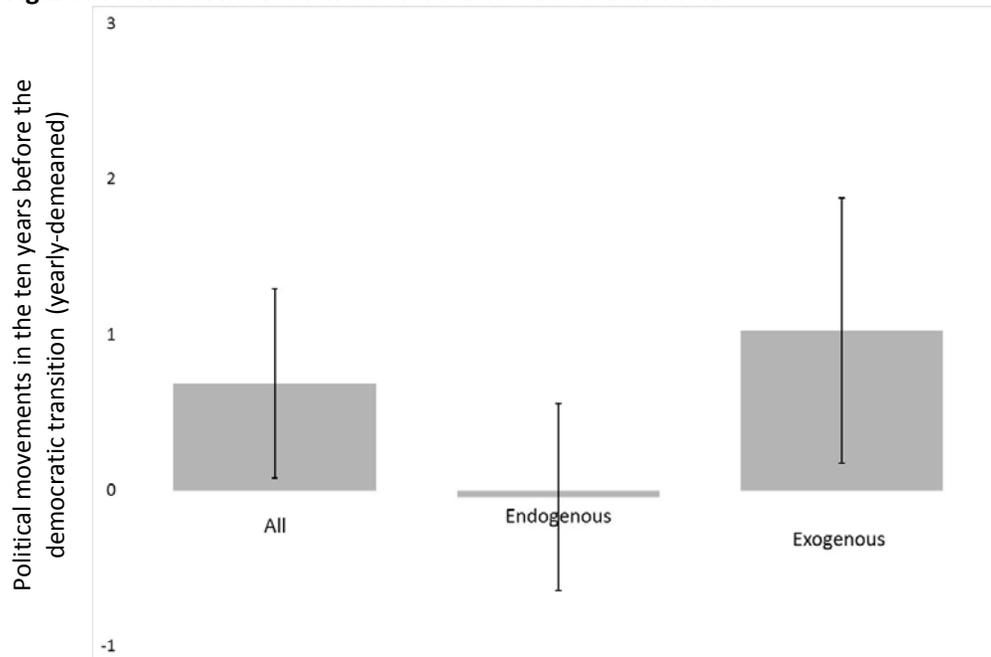
Figure 4. Share of democracy experts that opted for anonymity in worldwide democracy survey and World Press Freedom Index



Larger value is associated with less press freedom

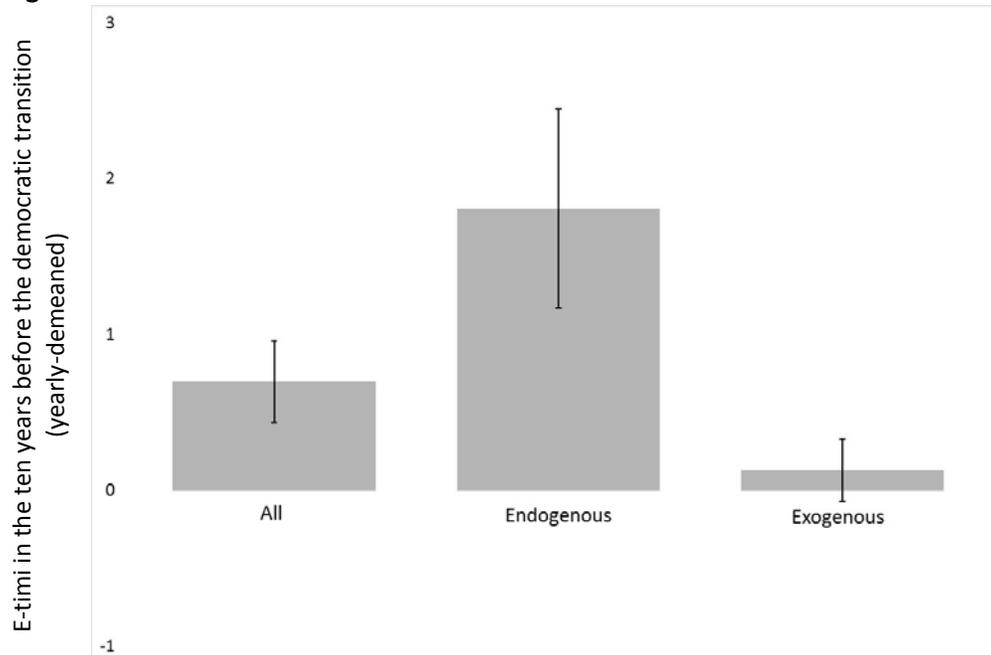
Notes: Grenada and Sao Tome and Principe are not included due to lack of data for World Press Freedom Index.

Figure 5. Political movements before democratic transitions



Notes: Political movement is measured by the size of the political movement (from NAVCO) relative to population. Error bars measure 95% confidence intervals. All, endogenous, and exogenous democratizations have 282, 90, and 192 obs., respectively.

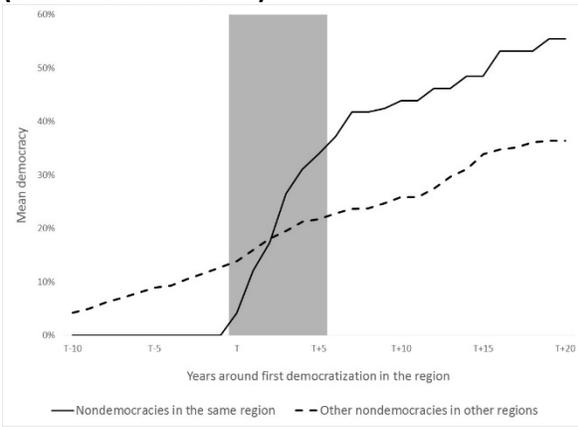
Figure 6. E-timi before democratic transitions



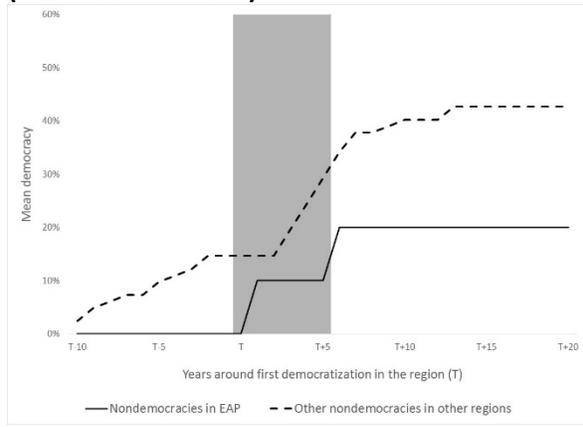
Notes: E-timi stands for Economic Turmoil in Media Index. Error bars measure 95% confidence intervals. All, endogenous, and exogenous democratizations have 321, 109, and 212 obs., respectively.

Figure 7. Democratizations around first regional democratic transition

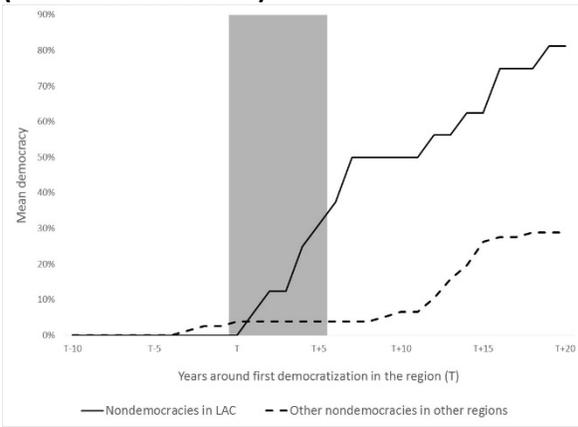
**Panel A. All regions
(38 democratizations)**



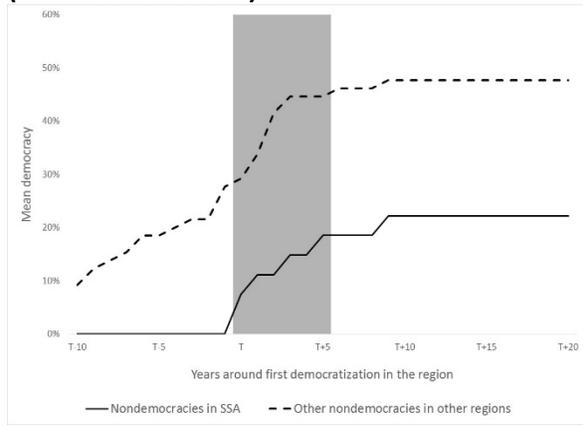
**Panel B. East Asian and Pacific
(3 democratizations)**



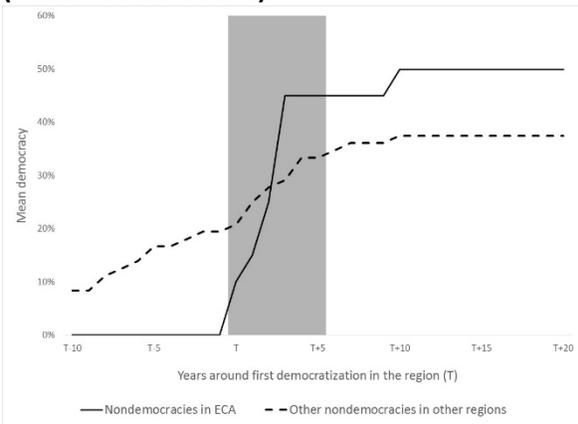
**Panel C. Latin America and the Caribbean
(14 democratizations)**



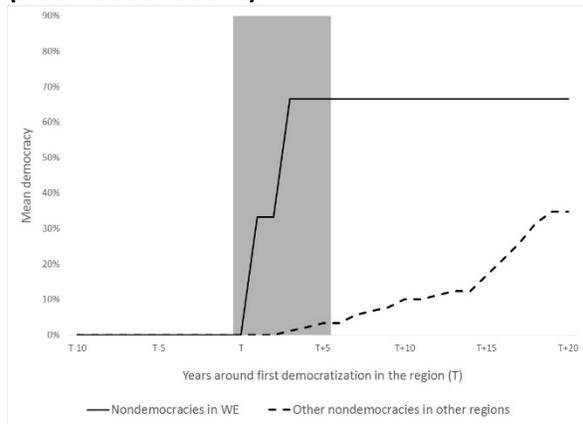
**Panel D. Sub-Sahara Africa
(7 democratizations)**



**Panel E. Eastern Europe and Central Asia
(11 democratizations)**



**Panel F. Western Europe
(3 democratizations)**

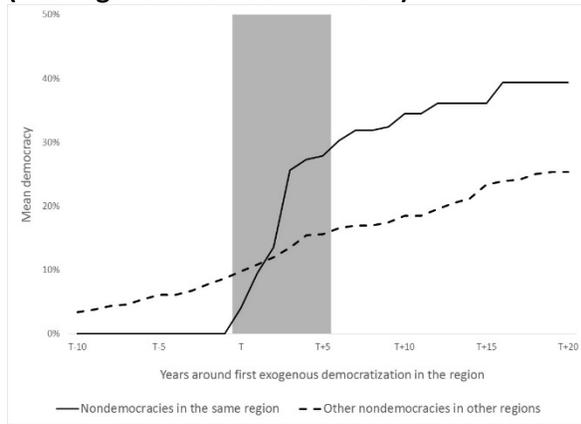


Note: Panel A plots average democracy among initial nondemocracies in a region around the first democratization in the same region (solid line). For comparison it also plots average democracy among other initial nondemocracies in other regions (dashed line). Panels B-F show same figures for one region at-a-time. Shaded area corresponds to time five years after first regional democratization.

Figure 8. Exogenous democratizations around first *exogenous* regional democratic transition

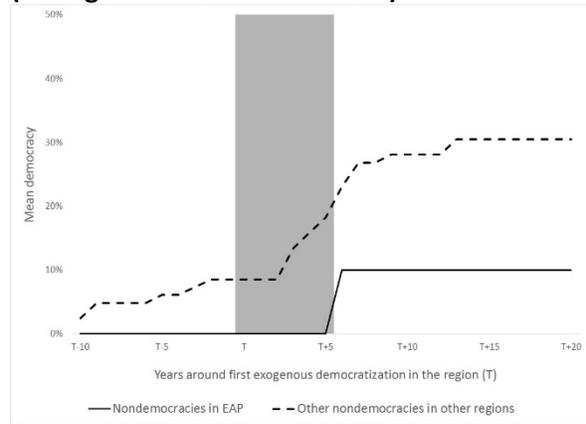
Panel A. All regions

(27 exogenous democratizations)



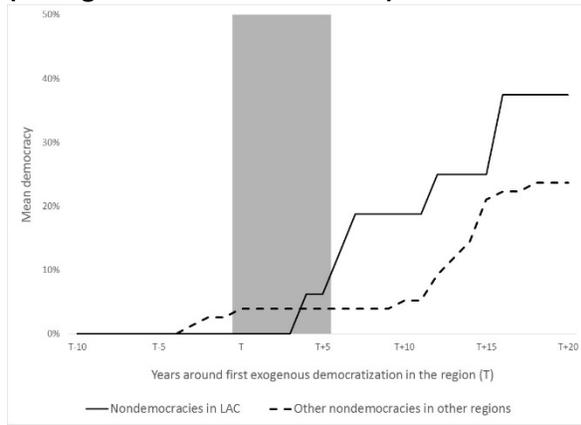
Panel B. East Asian and Pacific

(2 exogenous democratizations)



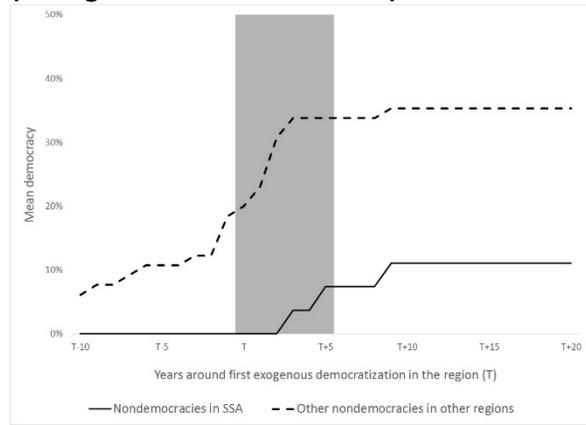
Panel C. Latin America and the Caribbean

(7 exogenous democratizations)



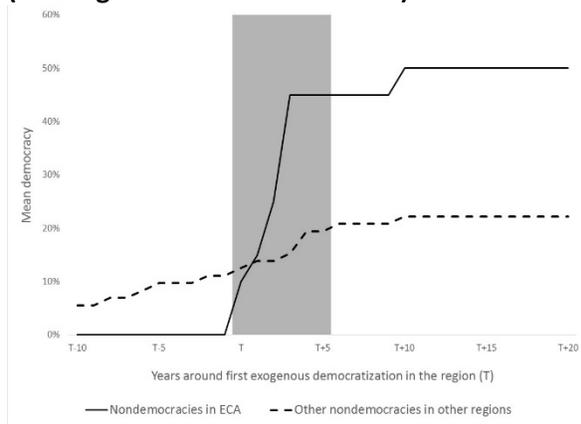
Panel D. Sub-Sahara Africa

(4 exogenous democratizations)



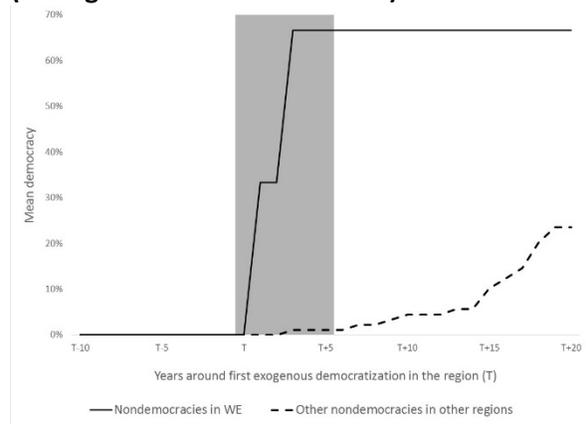
Panel E. Eastern Europe and Central Asia

(11 exogenous democratizations)



Panel F. Western Europe

(3 exogenous democratizations)

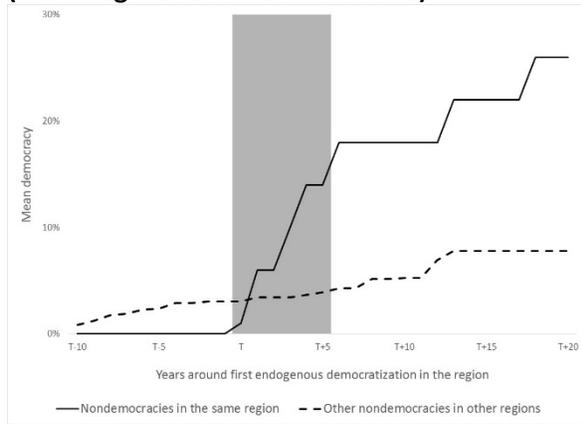


Note: Panel A plots average democracy among initial nondemocracies in a region around the first exogenous democratization in the same region (solid line). For comparison it also plots average democracy among other initial nondemocracies in other regions (dashed line). Panels B-F show same figures for one region at-a-time. Shaded area corresponds to time five years after first exogenous regional democratization.

Figure 9. Endogenous democratizations around first *endogenous* regional democratic transition

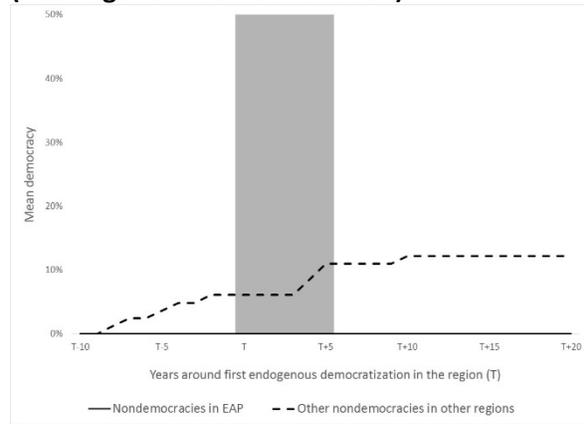
Panel A. All regions

(11 endogenous democratizations)



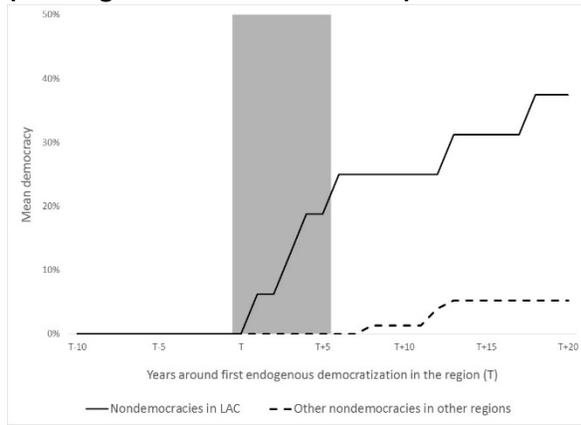
Panel E. East Asian and Pacific

(1 endogenous democratization)



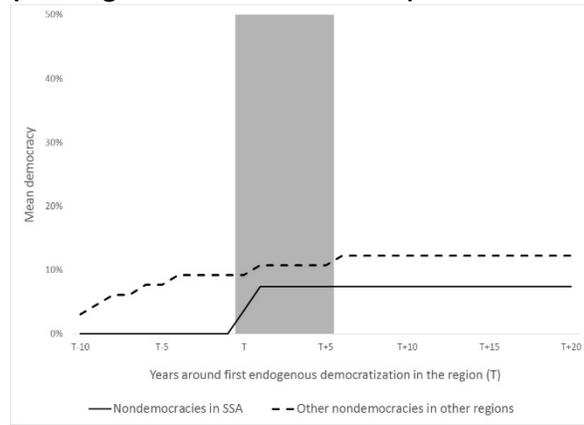
Panel B. Latin America and the Caribbean

(7 endogenous democratizations)



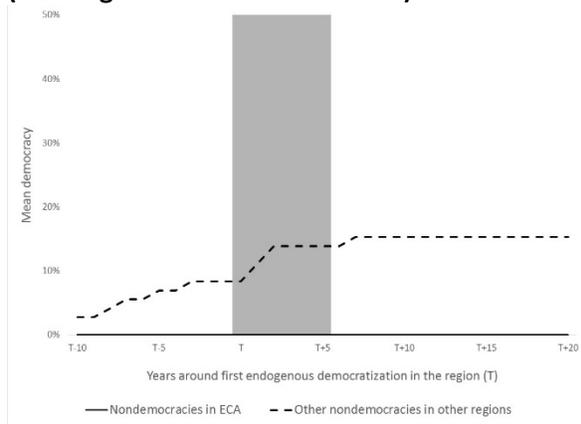
Panel D. Sub-Sahara Africa

(3 endogenous democratizations)



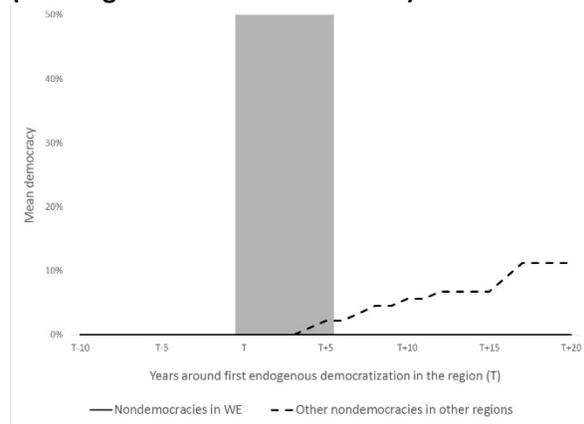
Panel C. Eastern Europe and Central Asia

(0 endogenous democratizations)



Panel F. Western Europe

(0 endogenous democratizations)



Note: Panel A plots average democracy among initial nondemocracies in a region around the first endogenous democratization in the same region (solid line). For comparison it also plots average democracy among other initial nondemocracies in other regions (dashed line). Panels B-F show same figures for one region at-a-time. Shaded area corresponds to time five years after first endogenous regional democratization.

Table 1. Country sample grouped based on political regimes and transitions

Full-liberal democratization	Partial-electoral democratization	Always authoritarian	Always democratic	Always intermediate
Argentina (1983)	Albania (1992)	Afghanistan	Antigua	Fiji
Benin (1991)	Armenia (1998)	Algeria	Australia	Malaysia
Bolivia (1982)	Bangladesh (1991)	Angola	Austria	Tonga
Brazil (1985)	FYROM (1991)	Azerbaijan	Bahamas	
Bulgaria (1991)	Georgia (1995)	Bahrain	Barbados	
Cape Verde (1991)	Guatemala (1996)	Belarus	Belgium	
Chile (1990)	Indonesia (1999)	Bhutan	Belize	
Croatia (2000)	Lesotho (1993)	Bosnia	Botswana	Borderline-electoral democratization
Czech Rep. (1993)	Madagascar (1993)	Brunei	Canada	Central African Republic (1993)
Dom. Rep. (1978)	Malawi (1994)	Burkina Faso	Colombia	Comoros (1990)
Ecuador (1979)	Moldova (1994)	Burundi	Costa Rica	Liberia (2006)
El Salvador (1994)	Mozambique (1994)	Cambodia	Cyprus	Nepal (1991)
Estonia (1992)	Nicaragua (1990)	Cameroon	Denmark	Niger (1999)
Ghana (1996)	Nigeria (1999)	Chad	Dominica	Pakistan (1988)
Greece (1975)	Paraguay (1993)	China	Finland	
Grenada (1984)	Russia (1993)	Congo, Dem.	France	
Guyana (1992)	Serbia-Montenegro (2000)	Congo, Rep.	Germany	Reversal
Honduras (1982)	Suriname (1991)	Cote d'Ivoire	Iceland	Ethiopia (1995)
Hungary (1990)	Tanzania (1995)	Cuba	India	Gambia (1994)
	Thailand (1992)	Djibouti	Iran	Lebanon (1975)
	Turkey (1983)	Egypt	Iraq	Zimbabwe (1987)
	Ukraine (1994)	Equatorial Guinea	Jordan	
	Zambia (1991)	Eritrea	Tajikistan	
		Gabon	Togo	
		Guinea	Tunisia	
		Guinea-Bissau	Turkmenistan	
		Haiti	U. Arab Emirates	
		Iran	Uganda	
		Uzbekistan	Uzbekistan	
		Vietnam	Vietnam	
		Yemen	Yemen	
			Venezuela	
			Trinidad & Tobago	
			United Kingdom	
			United States	

Table 2. Effects of democratic transitions on economic growth

	(1)	(2)	(3)
Democratization	0.67* [1.7]	0.84** [2.1]	0.53* [1.9]
<i>Statistics:</i>			
Observations	7344	6302	4956
Number of countries	171	138	132
"Treated" democratizations events	All	All	All
Group of countries	All	No socialists	All
Controls	No	No	Yes
R ²	0.07	0.05	0.23

Notes: Estimations are performed using country and year fixed-effects. Errors are allowed to present arbitrary heteroskedasticity and arbitrary intra-country correlation (i.e., clustered by country). t-statistics are in square brackets. Regression including control variables (i.e., column 3), include time-varying control variables such as investment, education, human capital, government spending, openness, terms of trade, and lag of income growth (i.e., Δy_{it-1}). As in Papaioannuo and Siourounis (2008), we include the two-year lag of the level and the contemporaneous and one-year lag of the difference of each control variable (except for lag of income growth). These coefficients are not reported in regression tables for brevity. See Appendix 9 for definition and source of variables. *, ** and *** indicate statistically significant at the 10%, 5% and 1% levels, respectively.

Table 3. Categorization of each democratic transition in endogenous or exogenous, brief description of the such nature, total number of democracy experts, and number of experts that opt to remain anonymous

Country and year of democratic transition (1)	Categorization of democratic transition in endogenous or exogenous, brief description of the such nature, total number of democracy experts, and number of experts that opt to remain anonymous (2)
Argentina (1983)	Endogenous. Since 1930, Argentina has been characterized by a culture of successive political coups, even at the expense of institutional stability. This has led Argentina to have one of the most violent and unstable political systems and one of the worst economies in the Western world. The defeat of the military regime in the Falkland/Malvinas War in a context of severe violations of human rights and increasing economic crisis eventually brought down the dictatorship. Experts: 7 (2 of which opted for anonymity).
Benin (1991)	Endogenous. The 17 years of Kerekou's regime were marked by economic decline, political oppression, and failed relationships with foreign regimes. In 1989, Benin's three state-owned banks became illiquid, causing a series of strikes and social unrest that eventually caused the rapid fall of the military regime. Experts: 3 (1 of which opted for anonymity).
Bolivia (1982)	Endogenous. Since its inception in 1825, Bolivia has suffered through a host of irregular changes of government and an extreme cycle of economic boom and bust pivoting around a primary product (mining). Between 1978 and 1982, amid a severe economic crisis that triggered mass protests and a crippling general strike in 1982, the military high command decided to return to the barracks. On October 10, 1982, Hernan Siles Zuazo assumed office. Experts: 3 (1 of which opted for anonymity).
Brazil (1985)	Endogenous. After a period of spectacular growth (1968-73) and "big projects" (largely financed by overseas borrowing), Brazil got seriously hit by the international debt crisis and the oil and interest rate shocks of the late 1970s. The almost unbearable economic constraint and the protracted nature of the decompression process led to a solid drumbeat of protest over economic policy, a gradual erosion of the legitimacy of the military and a powerful opposition that was finally able to persuade civil society mobilization. In March 1985, the opposition took office and the military and its allies were swept from power. Experts: 4 (1 of which opted for anonymity).
Bulgaria (1991)	Exogenous. Following several protests from the Bulgarians and the international community, the Bulgarian Communist Party (BCP), undermined by the declining Soviet empire, the Bulgarian intelligentsia and by its harsh Turkish assimilation policies, proved unsustainable. In early 1990, and in order to retain some form of political power, the BCP agreed to Roundtable negotiations with the opposition. In July 1991, the General National Assembly ratified a new constitution and called for the first parliamentary elections. Experts: 3 (1 of which opted for anonymity).
Cape Verde (1991)	Exogenous. In addition to international pressure, economic liberalization began to lead the way to political liberalization as well. The fall of communism, the constant pressure from the major opposition party—the Movement for Democracy—and public desire to pursue democracy also led the ruling party to taking initiatives for plural democracy. Experts: 5 (none of which opted for anonymity).
Chile (1990)	Exogenous. The 1980 Constitution limited the length of Pinochet's power into two terms with a plebiscite scheduled in 1988 to determine whether Pinochet would stay in power. Divisions and conflicts among the civilian supporters of the regime, alliance of opposition political parties, considerable amount of international pressure to force the regime to loosen political repression and the influential Catholic Church all advocated for transition to democracy. In March 1990, Aylwin was sworn into the office. Experts: 7 (none of which opted for anonymity).
Croatia (2000)	Exogenous. Croatian Democratic Union (HDZ), ruling party from 1990 to 1999, entered the parliamentary elections on 3 January 2000 in a situation imbued by the deteriorating health and later the death of its leader, first Croatian president Franjo Tudjman. In addition, the uneven results of the privatization process, together with general economic deterioration, corruption scandals and political succession struggles resulted in large-scale oppositions against the Tudjman regime and eventually the failure of HDZ in the 2000 election. Experts: 5 (1 of which opted for anonymity).
Czech Republic & Slovak Republic (1993)	Exogenous. Czechoslovakia's conservative communist regime was undermined by the Soviet Union's advocacy of glasnost and perestroika, as well as its unwillingness to intervene in the affairs of its satellite state. The government's fall was also a result of the structural deficiencies in the communist regime itself. While the catalyst to Czechoslovakia's democratic transition was a November 1989 student demonstration in Prague that resulted in police brutality and sparked mass protests and a general strike, the internal situation was ready for this change. Following elections in June 1990 and June 1992, the country's federal assembly was unable to agree on a new constitution, largely due to cultural and social differences between the Czechs and Slovaks. Repeated attempts to compromise on the structure of a common state failed, and the heads of Slovakia and the Czech Republic's largest coalition parties negotiated an agreement to dissolve Czechoslovakia on December 31, 1992. Slovakia approved a Slovak constitution in September 1992 while the Czech Republic approved their constitution in December 1992. On January 1, 1993 the Czech Republic and Slovakia became independent, democratic states. Experts: 6 for Czech Republic and 5 for Slovak Republic (none of which opted for anonymity).
Dominican Republic (1978)	Exogenous. During Balaguer's rule, Dominican Republic enjoyed substantial growth industrialization, and urbanization. However, Balaguer alienated these entrepreneurs by excluding them from advisory councils and state agencies, causing great disapproval. At the same time, the main opposition party, the leftist Dominican Revolutionary Party managed to improve its political capacity and popularity through allying with oppositions, forging international ties and enhancing organizational power. International pressure, significant internal conflicts inside the regime and a widespread domestic societal mobilization in defense of free elections pushed Balaguer to resume the democratic process. In July 1978 Guzmán was elected president. Experts: 2 (1 of which opted for anonymity).

Table 3 cont. Categorization of each democratic transition in endogenous or exogenous, brief description of the such nature, total number of democracy experts, and number of experts that opt to remain anonymous

Country and year of democratic transition (1)	Categorization of democratic transition in endogenous or exogenous, brief description of the such nature, total number of democracy experts, and number of experts that opt to remain anonymous (2)
Ecuador (1979)	<p>Endogenous. Ecuador has a long history of inconsistent democratic governments, interrupted by sporadic military juntas and authoritarian dictators. The rapidly deteriorating economic situation in the 1960s soon brought about a split in the “velasquista” coalition and a major social unrest. In spite of world oil prices, the regime's oil policy did not result in the anticipated resolution of mounting economic problems. Given the discredited institution, the armed forces had no other choice but to translate the power to civil actors. On July 16, 1978 Jaime Roldós (from CPF) won the presidential elections. Experts: 3 (1 of which opted for anonymity).</p>
El Salvador (1994)	<p>Exogenous. Under heavy U.S. influence, amid civil war, a Constituent Assembly election was imposed in 1982, which promulgated a new constitution of El Salvador in 1983, establishing a provisional government and institutional rules for the elections. At the same time, the fall of communism reduced the U.S. willingness to continue to finance the Salvadoran military, debilitating the regime even further. In addition, the Central American Peace Plan signed in 1987 and a variety of social movements also pushed for a negotiated solution. In January 1992, after a two-year peace negotiation, the Salvadoran government and the FMLN reached a peace agreement in Chapultepec, Mexico, ending 12 years of civil war and military dominance in Salvadoran politics. In accordance with the 1983 constitution and the Chapultepec Accord of 1992, presidential, legislative and municipal elections were held in 1994 and Calderón Sol of ARENA was elected president. Experts: 4 (1 of which opted for anonymity).</p>
Estonia (1992)	<p>Exogenous. Following Gorbachev's introduction of glasnost and perestroika which gave Estonians more autonomy and pressured Gorbachev to replace Estonia's leader for a native, Vaino Väljas, Estonians began to pursue a bottom-up movement towards independence. Initially, although the Soviet Union rejected a declaration of their sovereignty aimed at giving Estonian laws precedence over Soviet legislation, the Estonian Supreme Soviet refused to annul it. This attitude set a precedent that would restore Estonian's eroded national identity and lead the Estonian Popular Front to win over 40 percent of the seats in the Estonian Supreme Soviet, declaring the restoration of Estonia's independence. Ultimately, because of a stalemate with the Soviet Union following a failed coup in 1991, Estonia unilaterally declared its independence which the Soviet Union recognized in September 1991. A new constitution was approved in 1992 and the first elections were held September 1992. Experts: 3 (none of which opted for anonymity).</p>
Ghana (1996)	<p>Exogenous. Ghana's democratic process was rooted in both external and internal factors. The general global democratization wave, the subsequent breakdown of Soviet hegemony and pressure from international financial institutions all pushed for a systematic program of economic and political liberalization. As a result, the PNDC were forced to reassert a renewed commitment through the National Commission for Democracy aiming at deepening the stabilization and adjustment process. These external factors also added impetus to domestic groups in their struggle for democratic civilian rule. Under the pressure of foreign donors and civil society, the PNDC announced its acceptance of a multiparty system in Ghana. On March 6, 1992, Chairman Rawlings presented the timetable for the return to constitutional rule and the presidential election was held on November 3, 1992. Rawlings won the election with 58.3 percent of the votes. Experts: 5 (1 of which opted for anonymity).</p>
Greece (1975)	<p>Exogenous. The reason for Greece's democratization movement in the 1970s was deeply rooted in the country's long-lasting institutional and cultural aspiration of pursuing democracy. Such aspirations led to strong public antagonism against Junta's violation of civilian rights. The fall of Junta was directly triggered by a series of events, including Papadopoulos' attempts at liberalization and consequent protests, Ioannidis' counter-coup against Papadopoulos and defeat of the Greek armed forces in Cyprus. These incidents led to the fall of two strongmen in the Junta leadership and the appointment of Phaedon Gizikis as president, who appointed a new interim government aimed at leading the democratic transition. In November 1974 during the legislative elections, Karamanlis (from New Democracy) obtained parliamentary majority and was elected Prime Minister. Soon after, the Greek republic referendum abolished the monarchy and established the Third Hellenic Republic. Experts: 4 (2 of which opted for anonymity).</p>
Grenada (1984)	<p>Exogenous. In March 1979, the revolutionary party New Jewel Movement (NJM) led by Maurice Bishop overthrew the long-time regime of Prime Minister Gairy in Grenada through a bloodless coup d'état and came to office as the People's Revolutionary Government (PRG) under Bishop's leadership. Meanwhile, the relations between the U.S. government and Grenada were worsened by the PRG's anti-imperialist rhetoric; and Grenada's consistently pro-Cuba and anti-U.S. stance. On October 19, 1983, when the internal divisions within the NJM between Bishop and Coard led to the murder of Bishop by his fellow revolutionary comrades, the U.S. and the Organization of Eastern Caribbean States (OECS) reached consensus that a transition was needed. On October 25, 1983, under the pretext to protect American students in Grenada, the U.S. with the support of the OECS invaded the country, and, subsequently, set the stage for new elections. One year after the U.S. invasion, general elections were held in Grenada and a new government was formed, restoring the country to democracy on December 3, 1984. Experts: 1 (none of which opted for anonymity).</p>

Table 3 cont. Categorization of each democratic transition in endogenous or exogenous, brief description of the such nature, total number of democracy experts, and number of experts that opt to remain anonymous

Country and year of democratic transition (1)	Categorization of democratic transition in endogenous or exogenous, brief description of the such nature, total number of democracy experts, and number of experts that opt to remain anonymous (2)
Guyana (1992)	Endogenous. The death of President Forbes Burnham in 1985 led to the successor leader Desmond Hoyte acknowledging the need for political and economic reforms. Pressured by political unrest, a failing economy, ethnic diversity and approaches by opposition parties, he quickly initiated social, economic, electoral and political reforms that fortified the democratic process in Guyana. The influence of the international community in facilitating the enhancement of press freedom, electoral reform and the liberalization of the economy were also important elements in the democratization process. Experts: 5 (2 of which opted for anonymity).
Honduras (1982)	Exogenous. The prolonged existence of Honduras' bipartisan party system (the National Party and the Liberal Party) differentiates it from the rest of the Central American region that had long been governed by different authoritarian regimes. The coup d'état led by General Paz García in August 1978 halted the return to constitutionalism that was already programmed. In addition, the rise of the revolutionary armed struggles in Central America placed important geopolitical role on Honduras, deepening the international pressures (especially from the U.S) to start a process of democratization. At the same time, the widespread corruption of the military, increasing social unrest and the emergence of leftist guerrilla groups in late 1970s also pushed for a democratic transition. As a result, the Constituent Assembly was held in April 1980, which was in charge of drafting a new constitution and calling for general elections. A year later, after negotiation among the military, the National Party and the Liberal Party, the general election was successfully held in November 1981. Roberto Suazo Córdova of the Liberal Party became the first democratically elected president. Experts: 3 (1 of which opted for anonymity).
Hungary (1990)	Exogenous. Although a process driven primarily by the elite and which began by the weakening of the communist regime following Gorbachev's policies of Glasnost and Perestroika, Hungary's democratic transition came as a result of a multiple factors: economic stagnation due to high debts, the progressive liberalization of the party and increasing opposition movements. Eventually a coalition of the opposition convened in a roundtable negotiation with the party in 1989. In September 1989, both agreed on free elections and a multiparty system. Parliamentary elections were held in 1990, marking Hungary's transition to democracy. Experts: 4 (none of which opted for anonymity).
Korea, Rep. (1988)	Exogenous. The Chun Doo Hwan regime, which came to power through a coup d'état, violently suppressed civil protests in 1980 and tried to eliminate opposition through "purification" campaigns. The economic growth in the mid-1980s gave birth to a rapidly expanding middle class that resisted the government's political control of the people. Corruption scandals along with well-organized student movements and international pressure from U.S. government directly contributed to the fall of the regime. Although it took some time for democracy to consolidate, the 1987 presidential election was a milestone in Korea's democratic transition process. Experts: 5 (2 of which opted for anonymity).
Latvia (1993)	Exogenous. Latvia's liberalization from the Soviet regime began with Gorbachev's advocacy for increased political and economic openness through glasnost and perestroika. This newly acquired independence allowed Latvians to challenge the regime, first on environmental issues but soon thereafter on matters of sovereignty. Fueled by opposition to the "Russification" of Latvia, that would ensue from the pact of non-aggression between Germany and the Soviet Union in 1988, the Popular Front of Latvia (LTF) was established the same year. The LTF won majority seats in the 1990 elections of the Latvian Supreme Soviet and shortly after voted to begin transitioning towards independence. Following the attempted coup against Gorbachev in 1991 the Supreme Council declared its independence and free and fair parliamentary elections were held in 1993. Experts: 4 (1 of which opted for anonymity).
Lithuania (1993)	Exogenous. Lithuania's democratic transition was a result of "broad consensus" that democratization was the only solution to break free from Moscow's influence. In 1988 the reformist Sąjūdis movement was formed advocating for nationalism and independence. With the support of the Lithuanian Communist Party (LCP), the Sąjūdis won majority seats in the Lithuanian Supreme Soviet in 1990. After Lithuania suffered from an economic blockade and violent repression ordered by Gorbachev, negotiations with the Soviet Union reached a stalemate. Following the attempted Coup on the Soviet Union, Lithuania asserted its independence in 1991 which was recognized by the Soviet Union within weeks. Free and fair parliamentary elections were held in October 1992 as well as a referendum to adopt a new constitution. Experts: 8 (none of which opted for anonymity).
Mali (1992)	Endogenous. Worsened by severe droughts that hit Mali in both 1970s and 1980s, the Malian economy remained in dire straits during Traoré's military regime and, despite the military government's efforts, there was no improvement in living standards for the Malian people. This, combined with the fall of the Soviet Union, Mali's subsequent reliance on France which conditioned foreign aid and the government's inability to reduce economic hardship contributed to a rising social and political unrest that demanded multiparty democracy and free elections. On April 1992, Alpha Konaré of ADEMA was elected president. Experts: 2 (2 of which opted for anonymity).

Table 3 cont. Categorization of each democratic transition in endogenous or exogenous, brief description of the such nature, total number of democracy experts, and number of experts that opt to remain anonymous

Country and year of democratic transition (1)	Categorization of democratic transition in endogenous or exogenous, brief description of the such nature, total number of democracy experts, and number of experts that opt to remain anonymous (2)
Mexico (1997)	<p>Endogenous. Despite the sophistication in structure of the Institutional Revolutionary party (PRI), the system found itself beset with an economic crisis that challenged their hegemonic character and opened the door to fundamental political transformations. Aside from the economic reversals of the 1980s and 1990s which most clearly brought pressures on the regime and contributed to an increased electoral opposition, other factors contributing to the process were a deepened role of the Church, a proliferation of civic associations and the discontent of civil society. On June 6, 1997 and for the first time since its creation in 1929, the PRI lost the absolute power in the general election. Experts: 5 (none of which opted for anonymity).</p>
Mongolia (1993)	<p>Exogenous. Mongolia, which was unofficially considered the sixteenth republic of the USSR, was able to consolidate its democratization through the creation of institutions that served to decentralize power. Gorbachev's advocacy for political openness through glasnost and perestroika fueled Mongolian's already existing desire for broader reform and transparency. Through demonstrations that began in 1989, the opposition demanded Multiparty elections which became a reality in 1990 when Jambyn Batmönkh, the head of state, resigned. The People's Great Hural, Mongolia's national assembly announced it would amend the constitution to allow for free elections, and the first draft of the constitution was published in 1991. General assembly elections were held in 1992 and presidential elections in 1993. Experts: 5 (none of which opted for anonymity).</p>
Panama (1994)	<p>Exogenous. In the aftermath of a 1968 coup, General Torrijos became the de facto leader of the military authoritarian regime ruling Panama. The U.S. president Carter and General Torrijos agreed that the management of Panama Canal was to be returned to Panama by 2000 and that a transition to democracy was to be established. However, in 1981, Torrijos' death in a plane crash disrupted the democratic process. Lieutenant Colonel Noriega rose to power in the military, opening up a period of social unrest resulting from revelations of institutional corruption and political repression. As a result, the United States shifted away from supporting the military regime which facilitated the growth of internal opposition against militarization. A few months later after the aborted elections of 1989, military forces of the United States invaded Panama and replaced Noriega's government by giving power to the opposition leaders that had contested the May 1989 elections. Guillermo Endara, the previously declared winner of the 1989 elections earlier that year assumed the presidency in Panama. Between 1990 and 1994, the new government then dismantled the military and strengthened the Electoral Tribunal and other electoral rules in preparation for the 1994 elections. Experts: 5 (none of which opted for anonymity).</p>
Peru (1980)	<p>Endogenous. The Peruvian democratic transition took place in a particular critical context shaped by a severe economic crisis, the exacerbation of armed violence and the deterioration of the military government. The transition was negotiated by the military and through a new Constituent Assembly that had the time and agreements necessary to sustain it. However, the unstoppable economic crisis and the emergence of the Shining Path were disastrous for a process that could not properly consolidate until twelve years later when Alberto Fujimori's resigned the Presidency in 2000. Experts: 2 (none of which opted for anonymity).</p>
Philippines (1987)	<p>Endogenous. The 1979 oil shock and a corruption scandal set off a chain of reactions that raised doubts on the credibility of the financial institutions and creditworthiness of corporate sectors. By 1983, the government was running huge deficits in order to finance the bankrupt companies of cronies and was facing growing communist insurgencies, Muslim separatists, and urban terrorism. In addition, Aquino's assassination triggered massive public protests precipitated broader public involvement and more explicit political action. The "People Power" demonstration eventually persuaded President Marcos to step down, ending his fourteen year rule. Corazon Aquino was sworn in as democratically elected President on February 25, 1986. Experts: 7 (5 of which opted for anonymity).</p>
Poland (1990)	<p>Exogenous. Poland's democratization was a result of multiple factors, including the wearing out of communist leaders, rapid diminishing legitimacy to govern, economic turmoil and personal encouragement from Pope John Paul II. The emergence of the opposition movement, Solidarity, also facilitated the transition. In February 1988, largely motivated by this movement and the Perestroika policy of Gorbachev, the ruling Polish United Workers' Party entered roundtable negotiations with the opposition, agreeing to call for elections (held in October 1991). Experts: 3 (none of which opted for anonymity).</p>

Table 3 cont. Categorization of each democratic transition in endogenous or exogenous, brief description of the such nature, total number of democracy experts, and number of experts that opt to remain anonymous

Country and year of democratic transition (1)	Categorization of democratic transition in endogenous or exogenous, brief description of the such nature, total number of democracy experts, and number of experts that opt to remain anonymous (2)
Portugal (1976)	<p>Exogenous. Widespread discontent with the authoritarian regime that had ruled Portugal since 1926 and with the ongoing war in the African colonies led to a bloodless coup (later known as the Carnation Revolution) conducted by the Armed Forces Movement (MFA) in April 25, 1974. The MFA called for election of a constituent assembly and the right to freely form political association. The euphoria of the bloodless coup, nevertheless, did not last long. Soon after, the difference in political views among military officers soon began to emerge, weakening Spínola's influence in the military and eventually leading to his resignation. By August 1975, the MFA had become deeply divided and its authority weakened as democratic socialist, populist, and Marxist-Leninist were struggling for power. On November 25, 1975, a counter-coup against an imminent extreme Left coup d'état put an end to this impasse, which led to the triumph of the democratic socialist faction of the MFA, the Group of Nine represented by Major Melo Antunes. After the countercoup, the government of Pinheiro de Azevedo (backed by the Group of Nine) pushed for a transition to a Western European-style democracy. On April 2, 1976, a new constitution was passed by the Constituent Assembly. The first democratically elected government took office on June 23, 1976, with General Ramalho Eanes as the constitutional president. Experts: 5 (none of which opted for anonymity).</p>
Romania (1990)	<p>Exogenous. Romania's transition from Ceausescu's dictatorship to democracy was primarily a result of the ongoing changes throughout the region, led by the fall of communism, which spread democratic ideals throughout Mongolia. Widespread advocacy for democratic liberties from civic and political movements led to violent backlash by the regime which coupled with the eviction of Hungarian pastor, László Tokes, sparked massive protests and eventually Ceausescu's execution. These protests were initially fueled by anti-Ceausescu sentiment but by 1990 were met with anti-communist and prodemocratic articulation. After Ceausescu's execution the National Salvation Front was formed which led the government until elections were held in May 1990, marking Romania's transition to democracy. Experts: 2 (none of which opted for anonymity).</p>
Sao Tome and Principe (1991)	<p>Endogenous. The transition of Sao Tome and Principe (STP) to democracy was driven by the collapse of coca prices, political turmoil, and pressure from international institutions such as the IMF and the World Bank. Underlying these issues was the economic collapse of STP driven by the government's mismanagement of the economy and break down of the labor market. Eventually, Pinto da Costa realized that it was time to open the political system to opposition political parties. In 1990, a new multi-party constitution was adopted. The result of the 1991 elections led to the Pinto da Costa losing to Miguel Trovoada, the former exiled prime minister. Experts: 5 (2 of which opted for anonymity).</p>
Senegal (2000)	<p>Exogenous. The democratic transition in Senegal was an evolutionary process of electoral reform, party change and coalitional configurations which resulted in an eventual turnover of power over a period of three decades from the hegemonic ruling party, the Socialist party (PS) established by President Senghor, to the largest opposition party, Senegalese Democratic Party (PDS) founded by Abdoulaye Wade in March 2000. In January 1, 1981, President Senghor, after being president of Senegal for 20 years, voluntarily stepped down and transferred power to his constitutionally designated successor, Prime Minister Abdou Diouf who initiated a series of electoral reforms. Due to the domestic and international criticism of alleged electoral fraud and growing factional battles in the PS, Diouf initiated a series of institutional reforms that although they enabled him to remain in power it also opened the door to the participation of opposition parties. Taking advantage of the fractioned ruling party and the reformed institutional framework, the opposition formed a coalition around the leading vote getter Mr. Wade of the PDS, successfully helping him to win over President Diouf in the second election with "58.7 percent of the vote. This democratic election marked the end of the PS's 40-year hegemonic rule and Diouf's 20-year presidency in Senegal. Experts: 3 (1 of which opted for anonymity).</p>
Slovenia (1992)	<p>Exogenous. Slovenia, which had been part of Yugoslavia since 1918, transitioned towards democracy and independence primarily due to social movements influenced by trends of pro-democratic thought prevalent throughout the region which spread during the late 1970's. These movements critiqued communism and advocated for liberalization and civil society. In 1986, in an effort to preserve the League of Communists of Slovenia, the liberal wing ousted the conservative leadership. Furthermore, through efforts led by Milan Kuča, the leadership chose to support the new social movements, which advocated for a multi-party system, rather than the single-party status quo. A multiparty system was adopted through a constitutional amendment in 1989 by the Slovene parliament and elections were held in 1990. These internal developments in conjunction with external tensions between Slovenia and Serbia over the political structure of Yugoslavia, which failed to reach a consensus, led Slovenia to declare its independence in July 1990; it seceded in 1991 and adopted a new democratic constitution in 1991. Experts: 4 (3 of which opted for anonymity).</p>

Table 3 cont. Categorization of each democratic transition in endogenous or exogenous, brief description of the such nature, total number of democracy experts, and number of experts that opt to remain anonymous

Country and year of democratic transition (1)	Categorization of democratic transition in endogenous or exogenous, brief description of the such nature, total number of democracy experts, and number of experts that opt to remain anonymous (2)
South Africa (1994)	<p>Exogenous. The apartheid system of complete racial segregation had met strong resistance from the black majorities in South Africa since its formal commencement in 1950. Each successive period of resistance—1952 (Defiance of Unjust Laws Campaign), 1960 (Sharpeville Massacre), 1976-77 (Soweto Uprising), and 1984-88 (township revolts) —was more intense and widespread, and the regime’s efforts to contain revolution through repression were less and less effective. As a result of an escalating conflict, democratization negotiations became a strategy for exit since it became clear to the government that its coercive security option would not provide lasting solutions, and the African National Congress (ANC), the main opposition, realized that its armed struggle was incapable of delivering victory. Political stalemate increased resistance internally and the increased isolation of White South Africans by the international community eventually led to the successful conclusion of negotiation between President F.W. de Klerk of the ruling National Party (NP) and Nelson Mandela, the leader of the ANC, on the establishment of government of national unity (GNU) and the end of apartheid. The first truly democratic election in the history of South Africa” , in which South Africans of all races participated, was held on April 28, 1994, in which Nelson Mandela was elected president. Experts: 5 (none of which opted for anonymity).</p>
Spain (1978)	<p>Exogenous. The increasing politicized society that claimed amnesty and freedom rights accompanied by a deeply divided army between those that remain faithful to Franco’s regime and those supporting reforms; a Church – led by Cardinal Enrique Tarancón – that gradually moved away from the regime; and an external environment that was pushing to create an integrated Europe were factors that intensified the latent divisions and struggle for power within Franco’s regime. Once the weakness of the regime was made evident by the rising number of mobilization activities, ETA’s terrorists’ attacks and political uncertainty, the elites were “forced” to negotiate an exit with opposition forces. After Franco’s death in November 20th, 1975, the restoration of the monarchy under King Juan Carlos I, the appointment of Adolfo Suárez as Prime Minister and the Law for Political Reform were milestones that marked the early years of the transition and that led to enact the 1978 Constitution, a furtherance of the Spanish transition to democracy. Experts: 6 (2 of which opted for anonymity).</p>
Uruguay (1985)	<p>Exogenous. The dictatorship in Uruguay (1973-1984) was an exception from the long-standing democratic tradition that has characterized it. The military regime, aware of the traditional democratic political culture, realized that they would ultimately become untenable. As a result, the military announced a political <i>cronograma</i> in 1977 that called for a national plebiscite on a draft constitution in November 1980. The constitutional project was rejected by 57.9 percent of voters. Suffering the defeat of the 1980 Plebiscite, the military promulgated a new <i>cronograma</i> in 1981 announcing both internal party and national elections in 1982 and November 1984, respectively. The 1981 <i>cronograma</i> placed political parties at the nucleus of the transition but still kept the military in control. Once again, this resulted in a disastrous political defeat for the military. Facing massive public demonstrations, internal conflicts within the military began to appear. Eventually, in July 1984, representatives of the Colorado party, the Civic Union and the Broad Front and three military leaders successfully agreed upon establishing a timetable for the return of democracy. Sanguinetti of the Colorado party won the presidency on November 25, 1984, ending the 12-year military regime. Experts: 7 (1 of which opted for anonymity).</p>

Table 4. Contingency tables comparing (i) classification based on a novel worldwide survey to democracy experts and (ii) an statistical approach based on economic growth before the democratic transition.

Panel A. Using growth in the decade before the democratization (i.e., [-10,0])

		Classification of democratic transition		
		Exogenous	Endogenous	
Economic growth in decade before democratization (i.e., [-10,0] period)	Positive	13	3	16
	Negative	14	8	22
Total		27	11	38

Notes: Pearson $\chi^2(1) = 1.4$ (p-value = 0.24); likelihood-ratio $\chi^2(1) = 1.4$ (p-value = 0.23); Cramer's V = 0.19; gamma = 0.4 (ASE=0.32); Kendall's $\tau_b = 0.2$ (ASE=0.15).

Panel B. Using growth in the three years preceding the democratization (i.e., [-3,0])

		Classification of democratic transition		
		Exogenous	Endogenous	
Economic growth in decade before democratization (i.e., [-3,0] period)	Positive	10	4	14
	Negative	17	7	24
Total		27	11	38

Notes: Pearson $\chi^2(1) = 0.001$ (p-value = 0.97); likelihood-ratio $\chi^2(1) = 0.001$ (p-value = 0.97); Cramer's V = 0.006; gamma = 0.01 (ASE=0.37); Kendall's $\tau_b = 0.006$ (ASE=0.16).

**Table 5. Effects of democratic transitions on economic growth:
Exogenous vs. endogenous democratic transitions**

Panel A. Effects of *exogenous* democratic transitions

	(1)	(2)	(3)
Democratization	0.33 [0.7]	0.45 [0.8]	0.39 [1.1]
<i>Statistics:</i>			
Observations	7344	6302	4956
Number of countries	171	138	132
"Treated" democratizations events	Exogenous	Exogenous	Exogenous
Group of countries	All	No socialists	All
Controls	No	No	Yes
R ²	0.07	0.05	0.23

Panel B. Effects of *endogenous* democratic transitions

	(1)	(2)	(3)
Democratization	1.15** [2.4]	1.15** [2.5]	0.57* [1.7]
<i>Statistics:</i>			
Observations	7344	6302	4956
Number of countries	171	138	132
"Treated" democratizations events	Endogenous	Endogenous	Endogenous
Group of countries	All	No socialists	All
Controls	No	No	Yes
R ²	0.07	0.05	0.23

Notes: Estimations are performed using country and year fixed-effects. Errors are allowed to present arbitrary heteroskedasticity and arbitrary intra-country correlation (i.e., clustered by country). t-statistics are in square brackets. Regressions including control variables (i.e., columns 3), include time-varying control variables such as investment, education, human capital, government spending, openness, terms of trade, and lag of income growth (i.e., Δy_{it-1}). As in Papaioannou and Siourounis (2008), we include the two-year lag of the level and the contemporaneous and one-year lag of the difference of each control variable (except for lag of income growth). These coefficients are not reported in regression tables for brevity. See Appendix 9 for definition and source of variables. *, ** and *** indicate statistically significant at the 10%, 5% and 1% levels, respectively.

Table 6. Effects of democratic trans. on political, institutional, and human rights
Panel A. Effects of *exogenous* democratic transitions

	(1)	(2)	(3)	(4)	(5)
Democratization	1.34*** [10.66]	0.52*** [2.67]	1.59*** [6.37]	2.02*** [6.94]	4.71*** [6.63]
<i>Statistics:</i>					
Dependent variable	Contestation in democracy	Inclusiveness in democracy	Checks and balances	Physical integrity rights index	Empowerment rights index
Observations	5863	5863	5736	4630	4642
Number of countries	172	172	166	172	172
"Treated" democratizations events	Exogenous	Exogenous	Exogenous	Exogenous	Exogenous
Group of countries	All	All	All	All	All
Controls	No	No	No	No	No
R ²	0.35	0.10	0.19	0.08	0.19

Panel B. Effects of *endogenous* democratic transitions

	(1)	(2)	(3)	(4)	(5)
Democratization	1.18*** [7.94]	0.99*** [3.63]	1.68*** [6.32]	0.87*** [3.18]	2.05** [2.33]
<i>Statistics:</i>					
Dependent variable	Contestation in democracy	Inclusiveness in democracy	Checks and balances	Physical integrity rights index	Empowerment rights index
Observations	5863	5863	5736	4630	4642
Number of countries	172	172	166	172	172
"Treated" democratizations events	Endogenous	Endogenous	Endogenous	Endogenous	Endogenous
Group of countries	All	All	All	All	All
Controls	No	No	No	No	No
R ²	0.26	0.11	0.16	0.03	0.09

Notes: Estimations are performed using country and year fixed-effects. Errors are allowed to present arbitrary heteroskedasticity and arbitrary intra-country correlation (i.e., clustered by country). t-statistics are in square brackets. Constant term is not reported. See Appendix 9 for definition and source of variables. *, ** and *** indicate statistically significant at the 10%, 5% and 1% levels, respectively.

Table 7. Effects of *exogenous* democratic transitions by underlying factors behind democratizations

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Democratization ^{Political / institutional}	0.76 [1.5]	0.89*** [7.5]	0.43* [1.7]	1.09*** [6.0]	1.80*** [4.8]	2.45** [2.5]	13 "treated" transitions
Democratization ^{Fall of communism}	-0.23 [-0.5]	1.71*** [15.2]	-0.28*** [-4.3]	2.01*** [4.8]	1.49*** [3.7]	6.48*** [13.2]	9 "treated" transitions
Democratization ^{Foreign intervention}	-0.19 [-0.5]	0.44 [1.4]	0.66 [1.2]	0.93*** [2.9]	2.85*** [7.5]	-0.02 [-0.0]	4 "treated" transitions
Democratization ^{Death of the leader}	-0.57 [-0.6]	1.84*** [6.1]	0.92 [1.0]	2.93*** [4.5]	2.25*** [24.1]	5.48*** [4.0]	3 "treated" transitions
Democratization ^{Social unrest or coup}	0.99 [1.6]	0.73 [1.2]	0.40 [1.7]	-1.51*** [-9.5]	0.80** [2.2]	5.28*** [5.5]	2 "treated" transitions

Statistics:

Dependent variable	Economic growth	Contestation in democracy	Inclusiveness in democracy	Checks and balances	Physical integrity rights index	Empowerment rights index
Observations	4956	5863	5863	5736	4630	4642
Number of countries	132	172	172	166	172	172
"Treated" democratizations events	Exogenous	Exogenous	Exogenous	Exogenous	Exogenous	Exogenous
Controls	Yes	No	No	No	No	No
R ²	0.23	0.35	0.1	0.2	0.09	0.22

Notes: Estimations are performed using country and year fixed-effects. Errors are allowed to present arbitrary heteroskedasticity and arbitrary intra-country correlation (i.e., clustered by country). t-statistics are in square brackets. Regression including control variables (i.e., column 1), includes time-varying control variables such as investment, education, human capital, government spending, openness, terms of trade, and lag of income growth (i.e., Δy_{it-1}). As in Papaioannou and Siourounis (2008), we include the two-year lag of the level and the contemporaneous and one-year lag of the difference of each control variable (except for lag of income growth). These coefficients are not reported in regression tables for brevity. See Appendix 9 for definition and source of variables. *, ** and *** indicate statistically significant at the 10%, 5% and 1% levels, respectively.

Table 8. Transmission mechanism**Panel A. Exogenous democratic transitions**

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Democratization	-0.3811 [-0.23]	-0.0112 [-0.44]	-0.0008 [-0.27]	0.0013 [0.23]	0.0004 [0.03]	-0.0002 [-0.55]	0.0983 [0.81]
<i>Statistics:</i>							
Dependent variable	Investment	Education	Human capital	Productivity	Economic complexity index	Human development index	Gini
Observations	7038	6979	5711	4498	5113	8327	4020
Number of countries	172	138	127	106	132	169	151
"Treated" democratizations events	Exogenous	Exogenous	Exogenous	Exogenous	Exogenous	Exogenous	Exogenous
Group of countries	All	All	All	All	All	All	All
Controls	No	No	No	No	No	No	No
R ²	0.037	0.014	0.086	0.070	0.002	0.064	0.043

Panel B. Endogenous democratic transitions

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Democratization	1.8091 [0.66]	0.0023 [0.13]	0.0026 [0.75]	-0.0021 [-0.37]	-0.0284** [-2.41]	0.0005 [0.68]	0.1524 [0.49]
<i>Statistics:</i>							
Dependent variable	Investment	Education	Human capital	Productivity	Economic complexity index	Human development index	Gini
Observations	7038	6979	5711	4498	5113	8327	4020
Number of countries	172	138	127	106	132	169	151
"Treated" democratizations events	Endogenous	Endogenous	Endogenous	Endogenous	Endogenous	Endogenous	Endogenous
Group of countries	All	All	All	All	All	All	All
Controls	No	No	No	No	No	No	No
R ²	0.037	0.014	0.087	0.070	0.002	0.064	0.043

Notes: Estimations are performed using country and year fixed-effects. Errors are allowed to present arbitrary heteroskedasticity and arbitrary intra-country correlation (i.e., clustered by country). t-statistics are in square brackets. Constant term is not reported. See Appendix 9 for definition and source of variables. *, ** and *** indicate statistically significant at the 10%, 5% and 1% levels, respectively.

Table 9. Announcement of elections for each democratization

Country and year of democratic transition (1)	News ^{legal} (2)	News ^{experts} (median date) (3)
Argentina (1983)	Announcement: February 1983. Description: On February 28 1983, after two years of pressure from the multi-party coalition, the erosion of the government and the social backlash of a repressed strike, the military government announced that they would hold general elections on October 30. Source: Maximiliano Campos Ríos (2013), "Octubre, mes electoral". Bastion Digital.	March 1983
Benin (1991)	Announcement: December 1990. Description: In December 1990, a new Constitution was adopted by referendum to replace the "1977 Loi fondamentale" that had been repealed at the national conference. Under its terms legislative and presidential polling was scheduled for February 1991. Source: Parliamentary Chamber: Assemblée nationale, Benin, Inter-Parliamentary Union, 1991.	December 1990
Bolivia (1982)	Announcement: April 1982. Description: During April 1982, after years of international pressure and an economic crisis that stemmed off mismanagement as well as the global recession, president Torrelio Villa announced that elections would be held during the first semester of 1983 with the purpose of forming a Constituent Assembly, which would be formed August 6th of the same year. Source: Informe Anual de la Comisión Interamericana de Derechos Humanos 1981-1982, Capítulo V. Bolivia.	January 1980
Brazil (1985)	Announcement: April 1984. Description: In 1984, the largest mobilization in Brazilian history (Diretas Já) demanded direct presidential elections. Although it failed to accomplish its overriding objective, the campaign's failure strengthened the hand of Tancredo Neves, who headed the opposition effort to encourage enough defections among PDS electoral representatives to win the presidency in the electoral college. On January 15, 1985, Neves defeated his unpopular opponent by an overwhelming margin in the electoral college. Source: Frances Hagopian and Scott Mainwaring (1987) "Democracy in Brazil: Origins, Problems, Prospects."	April 1977
Bulgaria (1991)	Announcement: December 1989. Description: During December 1989, following massive demonstrations of opposition to the regime in Sofia, Zhivkov and his supporter lost their positions. The new leadership announced abolishment of Communist Party's monopoly, free election for next spring, a new constitution and investigation concerning corruption and abuse of power during the Zhivkov Area. Source: Nadja Rademacher "Bulgaria", The European Graduate Organization, University of Pennsylvania.	May 1991
Cape Verde (1991)	Announcement: April 1990. Description: In April 1990, after significant growing pressure for democracy, Pereira announced that the next presidential elections planned for December 1990, would be held for the first time on the basis of universal adult suffrage. Source: Eur (2002) "Africa South of the Sahara 2003."	July 1990
Chile (1990)	Announcement: March 1981. Description: Due to internal and external pressure and seven years into his dictatorship, Pinochet established a transitory period through the constitution of 1980 that extended from March 11th 1981 until the end of his presidential term (eight years later). After which a referendum that would determine his continuation would be held. Source: Constitución Política de la República de Chile de 1980.	October 1988
Croatia (2000)	Announcement: November 1999. Description: On 27 November, acting President Pavletic announced the election would take place on 3 January 2000. The election took place within a new legislative framework. Notwithstanding its late adoption, the new law remedied some concerns expressed after the 1995 and 1997 elections in Croatia. The Constitutional Court further improved the electoral environment through important decisions and the prompt disposition of complaints. A plurality of political parties was able to compete effectively for seats in the House of Representatives. Source: Office for Democratic Institutions and Human Rights (2000) "Republic of Croatia, final report."	November 1999
Czech Republic (1993)	Announcement: November 1989. Description: In response to the collapse of other Warsaw Pact governments and the increasing street protests, the Communist Party of Czechoslovakia announced on November 28, 1989 that it would relinquish power and dismantle the single-party state. Source: Andre Glucksmann (2010) "The Velvet Philosophical Revolution."	December 1989
Dominican Republic (1978)	Announcement: August 1965. Description: On August 30 1965, with the aid of OEA, which acted as a mediating commission, an agreement was signed called "Acta institucional" throughout which Dr. Héctor García Godoy was elected provisional president and which stated that elections would be held the following year. Source: Deiby Villalona (2006) "Revolución de Abril del 1965 República Dominicana."	December 1977
Ecuador (1979)	Announcement: December 1977. Description: After some pressure from the international community, the military regime established a timetable for a return to democracy through the enactment of an Electoral Law and a Political Parties Act. On December 1977, vice admiral Alfredo Poveda Burbano, head of the military triumvirate that ruled the country since January of the same year, announced that elections would be held on July 16 1978. Source: El País, "Ecuador: las elecciones serán el 16 de julio" December 8 1977.	July 1978
El Salvador (1994)	Announcement: January 1992. Description: With the mediating aid of the United Nations, the FMLN was demobilized as a guerrilla group as well as other authoritarian institutions. The Chapultepec Agreement, which was signed on 16 January 1992 between the Salvadorian Government and the Frente Farabundo Martí para la Liberación Nacional (FMLN) stated that elections were to be held in 1994. Source: Francesco Manca (1997) "The UN and the observation of the electoral process in El Salvador", Electoral Observation and democratic transition in Latin America Center for US-Mexican Studies at the University of California.	January 1992
Estonia (1992)	Announcement: February 1991. Description: Following the creation of a Constitutional Assembly in 1991, the Assembly agreed to one of the most widely supported proposals: changing the head of state's title from a traditional Estonian term to 'president,' and compromised on the issue of direct elections to the presidency by allowing direct elections with reversion to selection by the parliament if no candidate achieved an absolute majority. Source: Jennifer Widner, Princeton University, (2005) "Constitution Writing & Conflict Resolution: Data & Summaries."	July 1992

Table 9 cont. Announcement of elections for each democratization

Country and year of democratic transition (1)	News ^{legal} (2)	News ^{experts} (median date) (3)
Ghana (1996)	Announcement: March 1992. Description: Mainly due to international and internal pressure, on March 6 1992, Head of State Jerry Rawlings, who had been in power for the past eleven years, announced plans for a return to civilian rule by 7 January 1993. The process included a referendum on 28 April to adopt a new Constitution drafted by the Consultative Assembly, as well as a presidential election on 3 November and parliamentary polling on 8 December. Source: Inter-Parliamentary Union (1992) "Ghana."	May 1992
Greece (1975)	Announcement: August 1974. Description: After the implosion of the military régime, in a speech in Thessaloniki in August 1974, Karamanlis, who was acting as an interim prime minister, stress[ed] the importance of holding free and fair elections since "the collapse of the junta alone did not signify the advent of a genuine democratic polity." Source: Eirini Karamouzi (2014) "Greece, the EEC and the Cold War 1974-1979: The Second Enlargement."	August 1974
Grenada (1984)	Announcement: September 1984. Description: Following the overthrow of the People's Revolutionary Government of Mr. Maurice Bishop, the 1984 election date was announced on 21 September. Source: Inter-Parliamentary Union (1992) "Grenada 1984", Chron. XIX (1984-1985).	April 1984
Guyana (1992)	Announcement: August 1992. Description: After assuming presidency following the death of Linden Burnham, Desmond Hoyte dissolved Parliament on 29 August 1992 and announced that elections would be held on 5 October, the various political parties began their election campaign in earnest. Source: Odeen Ishmael (2012) "The October 1992 elections: The restoration of democracy in Guyana."	June 1992
Honduras (1982)	Announcement: March 1976. Description: During March of 1976, the military government created a plan throughout which it detailed the creation of an advising council to the executive office which, amongst other objectives, was set to establish a new electoral law. This was materialized through a Constituent Assembly created in 1980 and which passed the new electoral laws in 1982. Source: Ernesto Paz Aguilar (2006) "La Reforma Política Electoral en Honduras", Georgetown.	September 1979
Hungary (1990)	Announcement: October 1989. Description: The Parliament adopted the latest amendment to the Constitution (which in reality was an entirely new constitution) on the October 18 1989, and it was announced on October 23 1989. It was a symbolic and probably the most important day of the transition, as the state-form of 'republic' instead of 'people's republic' were also proclaimed this same day. Source: Andrea Mezei (2005) "The Role of Constitution-Building Processes in Democratization. Case Study: Hungary."	January 1990
Korea, Rep. (1988)	Announcement: December 1979. Description: Disregarding strong opposition protests [...] acting President Choi Kyu-hah announced the National Conference for Unifications, a 2,560-member presidential electoral college, that convened in Seoul to elect a new chief executive. On November 10, Choi announced that the constitution would be amended "to promote democracy" and that new elections would be held. Sources: Spokane Daily Chronicle (December 1979), and Adesnik and Kim (2009) "If At First You Don't Succeed: The Puzzle of South Korea's Democratic Transition."	December 1987
Latvia (1993)	Announcement: December 1992. Description: On 4 May 1990, the Supreme Soviet of the Latvian Soviet Socialist Republic adopted the Declaration on the Renewal of the Independence of the Republic of Latvia. It declared a transition period that would lead to the full independence of Latvia. In December 1992, the Supreme Council announced that parliamentary elections would take place on 5 and 6 June 1993. A total of 879 candidates were fielded by 23 parties, movements or pre-electoral coalitions. Source: Inter-Parliamentary Union (1993) "Latvia."	August 1991
Lithuania (1993)	Announcement: October 1992. Description: In May 1989, the Supreme Soviet of Lithuania adopted a declaration of sovereignty that referred directly to former independence and illegal incorporation into the Soviet Union. The Supreme Soviet also adopted amendments to the Constitution, instituting the supremacy of Lithuanian laws over Soviet legislation. From this point on, rapid progress was made towards a pluralist system. The referendum on the new constitution (25 October 1992) provided the country with the structures and institutions of a pluralist parliamentary democracy. Source: Parliamentary Assembly (March 1993) "Report on the application of the Republic of Lithuania for membership of the Council of Europe", Doc. 6787, 1403-24/2/93-6-E.	November 1992
Mali (1992)	Announcement: January 1992. Description: After days of intense student-led and anti-government rioting supported by government workers, a group of 17 military officers arrested President Traoré. Within days [...] national conference held in August 1991 produced a draft constitution (approved in a referendum January 12, 1992), a charter for political parties, and an electoral code. Political parties were allowed to form freely. Source: IBP, Inc (2012) "Mali Country Study Guide Volume 1 Strategic Information and Developments."	August 1991
Mexico (1997)	Announcement: July 1996. Description: Mexico's prolonged transition to democracy concludes, in fact, with the constitutional reform of 1996 which established appropriate institutional conditions to guarantee free and fair elections. This transition is a result of years of pressure from the opposition and Mexico's citizens who pressured the ruling PRI for more representation. Source: Alejandro Monsiváis Carrillo (2008) "La equidad electoral formal en las entidades federativas: México (1996-2007)."	July 1996
Mongolia (1993)	Announcement: May 1990. Description: Through events inspired by the Glasnost and Perestroika, a democratic revolution that started with hunger strikes to overthrow the government led to the peaceful renoucement of communism. In May 1990, the Constitution was amended to provide for multi-party system and new elections. Source: U.S. Department of State "Mongolia (01/07)."	June 1990

Table 9 cont. Announcement of elections for each democratization

Country and year of democratic transition (1)	News ^{legal} (2)	News ^{experts} (median date) (3)
Panama (1994)	Announcement: June 1993. Description: On June 30 1993, after the dissolution of the army by a majority vote, the Legislative Assembly enacted law number 17 which reformed the electoral code and called for elections on May 1994. Source: Gaceta Oficial, Organo del Estado, N 22.319, Asamblea Legislativa Ley N 17, Julio 1993.	May 1993
Peru (1980)	Announcement: July 1979. Description: In the midst of growing popular discontent due to a financial crisis characterized by currency devaluations that brought unprecedented strikes, on July 30 1979 decree 22622 was announced which called for general elections for the President and Vice-president of the republic, senators and congressmen on May 18 1980. Source: Congreso de Peru, Decreto Ley No. 22622 (30 Julio 1979).	August 1977
Philippines (1987)	Announcement: November 1985. Description: Indicative of the importance of United States support for his regime, Marcos announced his decision to hold a "snap" presidential election on an American television talk show, "This Week with David Brinkley," in November 1985. Source: Federal Research Division of the Library of Congress, Country Studies Series, "The Snap Election and Marcos's Ouster."	February 1987
Poland (1990)	Announcement: April 1989. Description: On April 4 1989, the historic Round Table Agreement was signed legalizing Solidarity and setting up partly free parliamentary elections to be held on 4 June 1989. A year later, Walesa ran against Mazowiecki in Poland's first-ever direct presidential election. He won more than 74 percent of the votes cast and was sworn in two weeks later. Source: Dr. Robert Winslow "A Comparative Criminology Tour of the World: Poland."	October 1990
Portugal (1976)	Announcement: November 1975. Description: Due to the "Processo Revolucionário Em Curso", also known as the Carnation revolution, a revolution also credited for the economic collapse of Portugal. During the phase of the PREC, which lasted until 25 November 1975, the day of a pro-communist coup followed by a successful counter-coup by pro-democracy moderates, marked by constant friction between liberal-democratic forces and leftist/communist political parties, ultimately led to the first direct elections. Source: University of Coimbra, Centro de Documentacao 25 de Abril "Entrevista com Alpoim Calvao."	April 1975
Romania (1990)	Announcement: December 1989. Description: On 27 December 1989, following the Romanian Revolution, the National Salvation Front decreed the abolishment of the one-party system and the convocation of elections. Shortly after, the two most important pre-Communist Romanian parties, the National Peasants' Party (PNT) and the National Liberal Party (PNL), were registered. Source: Steven D. Roper (2000) "Romania: The Unfinished Revolution."	January 1990
Sao Tome and Principe (1991)	Announcement: September 1990. Description: Under the new constitution passed by the National Assembly in April 1990, which was approved in a public referendum held in August and promulgated in September, Sao Tome and Principe held multiparty elections for the first time since independence. Source: U.S. Department of State, Sao Tome and Principe (03/97).	March 1990
Senegal (2000)	Announcement: February 1999. Description: In 1998, under pressure from the opposition, President Abdou Diouf introduced changes to the election management structure by creating two separate bodies, the General Directorate of Elections (Direction Générale des Elections, DGE) and the National Elections Observatory (Observatoire National des Elections, ONEI). This was, according to one of the opposition leaders, the first time in 40 years when the entire political class was able to participate in elections with equal chances. Source: Claude Kabemba and Andrew Ellis "Senegal: Independence Strengthened in a Mixed Model of Electoral Management", International Institute for Democracy and Electoral Assistance.	February 1999
Slovak Republic (1993)	Announcement: November 1989. Description: In November 1989, public protests known as the "Velvet Revolution" brought down the Communist Party and in 1990 the first democratic elections were organized. Source: European Election Database "Slovakia."	March 1990
Slovenia (1992)	Announcement: January 1990. Description: In January 1990, an extraordinary Congress of the League of Communists of Yugoslavia was called in order to settle the disputes among its constituent parties. Faced with being completely outnumbered, the Slovenian and Croatian Communists walked out of the Congress on January 23 1990, thus effectively bringing to an end the Yugoslav Communist Party. Both parties of the two western republics negotiated free multi-party elections with their own opposition movements. Source: Joseph Rothschild and Nancy M. Wingfield (2002) "Return to Diversity: A Political History of East Central Europe Since World War II", Oxford University Press.	August 1990
South Africa (1994)	Announcement: July 1993. Description: After the dismantlement of the apartheid and after negotiations with the Convention for a Democratic South Africa, a draft constitution was published in July 1993, which announced South Africa's first non-racial democratic elections to be held on April 27, 1994. Source: Human Rights Committee of South Africa (ed. Max Coleman) "Crime Against Humanity, Analysing the Repression of the Apartheid State."	November 1993
Spain (1978)	Announcement: January 1977. Description: Shortly after Franco's death in 1975, the law for Political Reform was established on January 4 1977. This new norm contained the complete derogation of the political system instilled by Franco and also called for democratic elections. Source: Fundación Transición Española, Archives (March 23, 1977): "Publicación en el BOE del Real Decreto Ley de Normas Electorales."	April 1977
Uruguay (1985)	Announcement: August 1984. Description: Following massive protests against the dictatorship in 1984 armed forces planned a return to civilian rule. Eventually the pact "Pacto del Club Naval" was reached on August 3, 1984 amongst the highest ranking military officials and representatives of the existing political parties (Colorado, Frente Amplio and Union Civica) which facilitated the return of a democratic regime for Uruguay. Source: Gillespie, Charles (1991) "Negotiating Democracy: Politicians and Generals in Uruguay" Cambridge Press.	July 1984

**Table 10. Effects of *exogenous* democratic transitions:
The role of anticipation**

	(1)	(2)	(3)
Democratization	0.28 [0.6]	0.28 [0.7]	0.53 [0.9]
News	-0.60 [-0.6]	-1.16 [-0.8]	0.01 [0.4]
<i>Statistics:</i>			
Observations	4956	4956	4956
Number of countries	132	132	132
"Treated" democratizations events	Exogenous	Exogenous	Exogenous
Group of countries	All	All	All
Controls	Yes	Yes	Yes
Measure of announcement	News ^{legal}	News ^{experts}	News ^{media}
R ²	0.23	0.23	0.23

Notes: Estimations are performed using country and year fixed-effects. Errors are allowed to present arbitrary heteroskedasticity and arbitrary intra-country correlation (i.e., clustered by country). t-statistics are in square brackets. Constant term is not reported. All regressions include time-varying control variables such as investment, education, human capital, government spending, openness, terms of trade, and lag of income growth (i.e., Δy_{t-1}). As in Papaioannuo and Siourounis (2008), we include the two-year lag of the level and the contemporaneous and one-year lag of the difference of each control variable (except for lag of income growth). These coefficients are not reported in regression tables for brevity. See Appendix 9 for definition and source of variables. *, ** and *** indicate statistically significant at the 10%, 5% and 1% levels, respectively.

**Table 11. Effects of *exogenous* democratic transitions:
The role of quality of democracy**

	(1)	(2)	(3)	(4)	(5)
Democratization	-0.58 [-0.6]	-0.58 [-0.5]	0.48 [0.6]		
Democratization x Level of democrrac	0.09 [0.8]				
Democratization x Dem. accountability		0.04 [0.1]			
Democratization x Bureaucracy quality			-0.36 [-0.8]		
Democratization x Question 2				0.03 [0.3]	
Democratization x Question 3					0.45 [1.0]
<i>Statistics:</i>					
Observations	4693	2941	2941	4905	4956
Number of countries	126	116	116	131	132
"Treated" democratizations events	Exogenous	Exogenous	Exogenous	Exogenous	Exogenous
Group of countries	All	All	All	All	All
Controls	Yes	Yes	Yes	Yes	Yes
<i>Other information</i>					
R ²	0.25	0.25	0.25	0.24	0.23

Notes: Estimations are performed using country and year fixed-effects. Errors are allowed to present arbitrary heteroskedasticity and arbitrary intra-country correlation (i.e., clustered by country). t-statistics are in square brackets. Constant term, Level of democracy, Dem. Accountability, and Bureaucracy quality are not reported. All regressions include time-varying control variables such as investment, education, human capital, government spending, openness, terms of trade, and lag of income growth (i.e., Δy_{it-1}). As in Papaioannuo and Siourounis (2008), we include the two-year lag of the level and the contemporaneous and one-year lag of the difference of each control variable (except for lag of income growth). These coefficients are not reported in regression tables for brevity. See Appendix 9 for definition and source of variables. *, ** and *** indicate statistically significant at the 10%, 5% and 1% levels, respectively.

Table 12. Effects of democratic transitions by region

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Democratization ^{LAC}	0.75** [2.1]	1.15*** [10.0]	1.10*** [4.8]	1.82*** [8.6]	2.23*** [3.8]	2.45*** [3.5]	50 percent (or 7 out of 14) endogenous democ.
Democratization ^{SSA}	1.04** [2.2]	1.26*** [5.8]	0.73*** [3.4]	0.93*** [3.4]	1.54*** [5.1]	3.68*** [2.6]	43 percent (or 3 out of 7) endogenous democ.
Democratization ^{ECA}	-0.62 [-1.5]	1.67*** [13.7]	-0.23*** [-2.9]	2.54*** [6.5]	1.90*** [7.3]	6.20*** [10.7]	0 percent (or 0 out of 11) endogenous democ.
Democratization ^{WE}	-0.21 [-0.3]	2.04*** [7.5]	1.56*** [4.6]	2.42*** [29.2]			0 percent (or 0 out of 3) endogenous democ.
Democratization ^{EAP}	0.20 [0.3]	1.33*** [5.8]	0.01 [0.1]	1.09*** [3.9]	0.40 [0.7]	4.37** [2.5]	0 percent (or 0 out of 3) endogenous democ.

Statistics:

Dependent variable	Economic growth	Contestation in democracy	Inclusiveness in democracy	Checks and balances	Physical integrity rights index	Empowerment rights index
Observations	4956	5863	5863	5736	4630	4642
Number of countries	132	172	172	166	172	172
"Treated" democratizations events	All	All	All	All	All	All
Controls	Yes	No	No	No	No	No
R ²	0.23	0.44	0.15	0.23	0.08	0.22

Notes: Estimations are performed using country and year fixed-effects. Errors are allowed to present arbitrary heteroskedasticity and arbitrary intra-country correlation (i.e., clustered by country). t-statistics are in square brackets. Constant term is not reported. Regression including control variables (i.e., column 1), include time-varying control variables such as investment, education, human capital, government spending, openness, terms of trade, and lag of income growth (i.e., Δy_{it-1}). As in Papaioannou and Siourounis (2008), we include the two-year lag of the level and the contemporaneous and one-year lag of the difference of each control variable (except for lag of income growth). These coefficients are not reported in regression tables for brevity. See Appendix 9 for definition and source of variables. *, ** and *** indicate statistically significant at the 10%, 5% and 1% levels, respectively.