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Does democratization facilitate economic liberalization?

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ABSTRACT

Previous empirical studies have found that the institutions and policies of democracies are generally more supportive of economic freedom than authoritarian political regimes. This paper employs a new dataset by Cheibub et al. (2010) to examine the impact of transitions to democracy on economic freedom. The dataset identifies 48 political transitions from authoritarianism to democracy since the mid-1970s, for which the data on economic freedom are available. Both cross-sectional and panel data analyses are employed to examine these transitions within the framework of fixed- and random effects models. The results indicate that transitions to democracy are associated with subsequent increases in economic liberalization as measured by changes in the Economic Freedom of the World index. Moreover, the economic liberalization appears to follow the path of an inverted U, ascending for approximately 10 years after the democratic transition, but receding thereafter. There was also evidence that stable (long-term) democracies achieved larger increases in economic freedom than authoritarian regimes, while unstable democratic transitions adversely affected economic liberalization.

1. Introduction

The effect of political regimes on economic performance and institutions has been a focal point of recent scholarly research and there is a growing public interest in this topic. Several recent empirical studies indicate that an institutional environment more consistent with economic freedom improves long-run growth performance (e.g. Pitlik, 2002; Berggren, 2003; Gwartney et al., 2006; de Haan et al., 2006; Doucouliagos and Ulubasoglu, 2006; Efendic et al., 2011; Rode and Coll, 2012). If good economic institutions facilitate growth, this ultimately raises a more fundamental question: What are the political determinants of market oriented institutions and is it possible to empirically uncover their interrelations?[1] Further, the rapid growth rates of countries like China, Taiwan, South Korea, and Chile that, at least for a time, combined moves toward economic liberalizations with politically authoritarian regimes raises the issue of the potential usefulness of *developmental dictatorships* (Glaeser et al., 2004). Moreover, the recent revolutions of the Arab Spring highlight the importance of the linkage between political democracy and economic liberalization. For example, popular pressures from the so-called Arab street for redistribution, religious dictates, and social justice in both Tunisia and Egypt have raised doubts that the newly elected democratic regimes will liberalize their economies any time soon. Some scholars therefore suggest that democratization should only be achieved at higher levels of per capita income, arguing that the threat of an electoral backlash may prevent economic reforms in developing countries or cause inefficient policies to be implemented (Haggard and Kaufman, 1995; Roland, 2000).[2]

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[1] i.e. Acemoglu et al. (2001).

[2] Concerning the impact of democratization on economic performance, skepticism is also expressed by Giavazzi and Tabellini (2005), as well as Persson and Tabellini (2006), who find that countries which liberalize first the economy and only afterwards become more democratic, also show better economic performances than those countries which liberalize economic and political life in a parallel manner.

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In contrast with this critical view, several studies have found that democracy exerts a decidedly positive impact on growth and development. For instance, de Haan and Sturm (2003) and Lundström (2005) show with cross sectional data how a country's level of democracy, measured by its Polity IV score or Freedom House ranking for political rights and civil liberties, exerts a positive impact on subsequent increases in economic freedom. Using panel data, Pitlik and Wirth (2003) and Pitlik (2008) obtain similar results. According to de Vanssay and Spindler (2002) and de Vanssay et al. (2005) democratic constitutions lay the foundations for economic freedom. More recently Lawson and Clark (2010) further examine the connection between economic- and political freedom in light of the Hayek–Friedmann hypothesis, stating that politically free countries must also be economically free, but not necessarily the other way around, while Adam et al. (2011) show that democracies also exhibit more efficient public sectors. These studies suggest that, contrary to the opinions expressed in much of the popular media, democracies are not harmful for institutional development but rather the opposite. Democratic decision-making appears to provide governments with legitimacy, which enhances their ability to implement liberal institutional reforms that sometimes involve high transitional costs (de Haan and Sturm, 2003).

Of course, if democracy (or democratization) makes economic liberalization more likely, then we should expect those countries to also have a comparatively better growth performance in the future. A related body of literature addresses this interplay of political institutions, economic institutions, and growth. Nelson and Singh (1998), Minier (1998), Rodrik (2000), Klomp and de Haan (2009), and Benyishay and Betancourt (2010) all find democracy, or elements of democratic rule, to be direct determinants of comparatively higher and less volatile growth rates. But, De Haan and Siermann (1998), Wu and Davis (1999), and Aixalá and Fabro (2009) argue that economic freedom, and not democracy or political freedom, is the principal institutional determinant of growth. These findings are not incompatible though, and Fidrmuc (2003), Thies (2007), and Xu and Li (2008) find that the effect of democracy on growth operates principally through economic freedom. This viewpoint is also supported by Dawson (2003), Vega-Gordillo and Álvarez-Arce (2003), and Aixalá and Fabro (2009), all of whom present evidence that political freedom granger-causes economic freedom,[3] while economic freedom causes higher average growth.

Most of the prior studies have examined the relationship between the *level of democracy* and changes in economic freedom, or economic growth. The purpose of this paper is to examine the potential impact of transitions to democracy on economic liberalization. Essentially, we want to determine whether a shift from authoritarian to democratic political decision-making promotes reforms supportive of the principles of economic freedom. To our knowledge, no one has directly tested this relationship empirically. Some authors have considered the relationship from a more theoretical perspective: for example, Przeworski (1991) suggests that democratizing countries are likely to pursue economic liberalization reforms in the short run, but may abandon them with the passage of time. Weyland (2002) finds that democratization will generally weaken the interest groups that favor protectionism and rent seeking, making economic liberalization more likely after a transition, while Hellman (1998) states that economic reforms may be attempted and implemented because governments expect to be rewarded in future elections. However, none of these studies investigate the issue quantitatively. Garrett (2000), Dutt and Mitra (2002), Milner and Kubota (2005), and Milner and Murkherjee (2009) have examined the empirical linkages between democratization and trade openness. These studies generally found that democratic transitions enhance trade liberalization. Likewise, Rodrik and Wacziarg (2005), and Papaioannou and Siorounnis (2008) found that democratizations tended to produce higher rates of economic growth in the future. Still, none has explicitly examined the relationship between democratization and comprehensive economic liberalization. Our study addresses this important vacuum in the existing empirical literature.

The Economic Freedom of the World summary index (Gwartney et al., 2011) is used to measure changes in economic liberalization. Transitions to and from democracy are identified and measured with a comprehensive new dataset by Cheibub et al. (2010), which uses the contestability of elections to classify countries as either democratic or non-democratic since the 1950's. This dataset makes it possible to identify stable democracies, stable autocracies, stable democratic transitions, and unstable democratic transitions for our 1970–2009 investigation period. Both fixed and random effects models are used to analyze the impact of shifts to and from democracy within the framework of cross-sectional and panel datasets. The results indicate that a stable democratization leads to larger subsequent increases in economic liberalization. We also find indications that being a stable democracy leads to greater economic freedom, while making an unstable transition to democracy reduces economic freedom.

The rest of the paper is organized as follows: Section 2 focuses on the description of the data and the research strategy of our analysis. Section 3 presents the empirical estimations and discusses the results, while Section 4 concludes.

2. Data and research strategy

In this paper, we use the new DD dataset of political regimes by Cheibub et al. (2010) to identify and measure democratizations. According to its creators, it avoids the problems inherit in the Freedom House (FH) and Polity IV scores, which they argue are based on overly subjective evaluations and inadequate operational rules. Cheibub et al. (2010) claim that the middle categories of the FH and Polity IV variables add little useful information, in order to distinguish between political regimes. They also argue that, contrary to frequent practice, the two measures are not interchangeable in regression analysis. As an alternative, they propose a dichotomous variable that takes the value of one, if a country's legislative and executive offices are chosen by contested and popular elections, and zero otherwise. The data are available on an annual basis for all countries of the World from 1950 (or the respective year of independence) through 2008.

[3] In contrast, Farr et al. (1998) conclude that there is not a granger-causal relationship between political- and economic freedom.

Some might object that this classification involves only a reductionist definition of democracy and that it does not capture fully the dimensions of a comprehensive democracy, such as equality before the law, protection of individual rights, constraints on the executive, and freedom of the press. Undoubtedly, there is some merit to this view, especially if one is interested in a broad democracy concept that involves additional dimensions and normatively desirable attributes, which are generally associated with institutional democracy. On the other hand, however, there is really no way in which such a broad definition of democracy can be fully measureable without using subjective evaluations of the additional concepts. Furthermore, using measures that are based on a more comprehensive concept of democracy means that it is difficult to distinguish clearly between its different dimensions, or possible consequences. For example, one could ask if equality before the law is really an element of democracy, or rather a consequence of it. This latter point is important for our study, because certain dimensions of our dependent variable, economic freedom, overlap with broad definitions of democracy. The narrower concept of democracy makes it possible for us to reduce endogeneity concerns to a minimum and assure that our findings do not reflect spurious correlations.

Reproducing studies by Rodrik and Wacziarg (2005), and Epstein et al. (2006), Cheibub and his co-authors further show that the choice of democracy measure in different empirical studies does matter, and that it has important implications for the results obtained. This point is also highly relevant, because our focus is on the impact of democratic transitions rather than the level of democratic rule. Using either the Freedom House or Polity IV data would mean that identifying transitions would involve some rather arbitrary decisions, regarding where to draw the line for the classification of a country as becoming democratic. Obviously, this problem does not arise when using the new DD dataset, because a democratic transition merely entails a change from zero to one in the time series values of the respective country. By adopting the minimalist definition of the DD dataset to identify democratizations, we can therefore avoid some potential pitfalls that might influence our results.

As a consequence of these advantages, the DD dataset by Cheibub et al. (2010) has quickly become state of the art in political–economic analysis. Numerous recent articles illustrate this point: for instance, Potrafke (2012) employs it to reinvestigate earlier findings on the relationship between Islam and democracy, confirming that countries with Muslim majorities are less likely to be democratic. In a related paper, Cooray and Potrafke (2011) show by means of the DD dataset that democratic institutions are not the underlying reason for gender inequality in education but that these are rather of religious and cultural origin. Recently, Kalivitis and Vlachaki (2012) use the DD data to examine the relationship between foreign aid and democracy, generally finding a negative effect of aid for subsequent transitions to democracy. Focusing on the determinants of exchange rate regimes, Berdiev et al. (2011) further show by means of the DD dataset that democratic institutions increase the chance for adopting flexible exchange rate regimes.

Because the principal interest of our paper is the effect of democratization on economic liberalization, a comprehensive measure of the latter is also required. Following authors such as Pitlik and Wirth (2003), de Haan and Sturm (2003), and Pitlik (2008), the change in the Economic Freedom of the World (EFW) summary index by Gwartney et al. (2011) is used as the measure of economic liberalization.[4] This index is published annually by the Canadian Fraser Institute. The index uses 42 specific components, all measured on a zero to ten scale, to measure the degree to which the economic institutions and policies of a country correspond to free market principals. Zero represents the least free and ten the most free. While the EFW index now covers 141 countries, the data are available for approximately 100 countries at 5 year intervals between 1980 and 2000, and annually during the past decade.

The EFW Index has been used extensively by economic researchers in recent years.[5] It is based entirely on data published in secondary sources, which means it can be easily verified and duplicated by others (Berggren, 2003). This transparency feature adds to its credibility. The EFW Index is divided into five major areas: *1 Size of government: Expenditure, taxes, and enterprises*, *2 Legal structure and security of property rights*, *3 Access to sound money*, *4 Freedom to trade internationally*, and *5 Regulation of credit, labor, and business*. The summary rating for each country is calculated by simply taking the mean of the ratings in each of the five areas.

The strategy employed by de Haan and Sturm (2003), Lundström (2005), Pitlik and Wirth (2003), and Pitlik (2008) is utilized to derive empirical estimates of the effects of democratization on economic liberalization across countries. As mentioned above, these authors all use the change in the EFW Index as a dependent variable measuring increases in economic liberalization in regression analysis, further introducing the initial EFW Index value as a primary control variable in their models. We follow this same procedure. An inverse relationship is expected between the initial EFW value and the change in EFW, indicating that countries with a lower initial EFW rating are likely to liberalize more rapidly in subsequent periods. These studies also find that initial GDP per capita is a fundamental determinant of changes in economic freedom. Wu and Davis (1999), Aixalá and Fabro (2009), and Carden and Lawson (2010) also utilize per capita income in similar models. Therefore, the logarithm of initial GDP per capita in purchasing power parity terms is also included in our basic model. This data is taken from the latest version of the Penn World Tables and it is measured in constant 2005 US dollars (Heston et al., 2011).

Among others, a recent paper by Che et al. (forthcoming) focuses on how differences in per capita income impact democracy. This raises the question of how democracy and income are ultimately related. While we hold income constant, we do not seek to disentangle the causality relationship between the level of income and the level of democracy. Instead, our focus is on the impact of transitions to democracy on economic institutions. Even if there is a causal relationship between per capita income and democracy, this does not eliminate the potential impact of democratic transitions on economic liberalization, which is the focus of this paper.

[4] The chain-linked version of the EFW Index is used, because it is a more accurate measure across time.
[5] See Berggren (2003) or de Haan et al. (2006) for overviews.

Jeffrey Sachs has popularized the view that a country's level of economic activity is adversely affected by a tropical climate and a location that is distant from the world's major market centers, while access to a coastline exerts a favorable impact. He and his fellow researchers also believe that a country's institutions are determined by the same factors (Gallup et al., 1999). Similarly, Hall and Jones (1999), Acemoglu et al. (2001), and other researchers have argued that historically these determinants have adversely affected the development of institutions consistent with productive activity. These additional control variables are employed to test the robustness of our model. They are measured in the same manner as Sachs and his fellow researchers. The proportion of a country's geographic area located in a tropical region is used to measure the tropical location variable. The distance from core markets variable is the minimum air distance of a country from any one of the world's major trading centers, defined as Rotterdam, New York, or Tokyo. Finally, the coastal population variable is a percentage of a country's population living within 100 km of an ocean coastline.

Recent empirical studies show that government ideology is another potentially important determinant of economic freedom. In an analysis of OECD countries, Potrafke (2010) finds that the political orientation of governments has had a strong influence on the deregulation process of markets. In a similar study on the Canadian Provinces, Bjørnskov and Potrafke (2012) examine the role of government ideology for economic freedom at the provincial level. They find that administrations of right- and left wing ideology exert a different impact on size of government and the regulatory environment. Measures of government ideology are available for developed countries, but this is not the case for most of the developing world.[6] While this is an interesting question data limitations preclude investigation at this point in time.

Having established our basic model, the DD data set is used to define three distinct binary variables to examine the impact of political institutions, particularly transitions to democracy, on economic liberalization. The first is stable *Democracy*, which takes the value of one if a country is democratic for the whole observation period, and zero otherwise. This procedure means that stable authoritarian regimes comprise the base. The second additional variable is *Democratization*, which is assigned a value of one when a country makes a transition to democracy during the observation period, and zero otherwise. The third denotes an *Unstable Regime*, which has a value of one if a coup is observed in the 10 years before or after a democratization, and zero otherwise.

Generally, democratization, and perhaps also a stable democracy, is expected to exert a positive influence on liberalization, while making an unstable transition to democracy is expected to exert a negative effect on liberalization. Because we employ both cross-sectional and panel data, the exact definition of our three dummy variables may vary at different points in time, depending on the structure of the data and the method of analysis. This will be further discussed in the next section, but it can be noted that the pattern of our empirical results is not sensitive to these delineations.

In order to exemplify the above, all countries contained in our dataset are classified according to their political institutions in Table 1: stable *Autocracies* and stable *Democracies*, for those countries which we also have values in the chain-linked version of the EFW Index, are shown in the two columns on the left hand side. These countries did not experience a change in the structure of their political system during the entire observation period. Their respective classifications confirm common intuition. The only thing that might seem a little out of place at first is the classification of South Africa as autocratic throughout the entire period. This might come as a surprise to the reader, but it highlights once again that the competitiveness of elections is the key determinant of political classification in the DD database. In this case, the authors argue that, politically speaking, the country's transition of 1994 was a regime change rather than a democratization, because the dominance of the ANC meant that candidates of other parties did not have a realistic chance of winning a free and fair election. The more expansive *type 2* regime definition was utilized to check the robustness our results. In the broader measure, South Africa and other similar cases, which appear to have contested elections, are coded as democratic. The use of this more ample definition does not alter the pattern of the empirical findings.[7]

The DD dataset identifies 48 democratizations since 1970 for countries that are also included in the EFW Index. The countries experiencing transitions from autocratic to democratic political institutions are shown in the two columns on the right hand side of Table 1. These two columns also make a further distinction between countries that make a *stable* (long-term) transition to democracy, and those for which the transition is *unstable* (temporary). The respective year of transition, according to the DD dataset, is further shown in brackets. This is defined as the first year, in which a country becomes democratic during our observation period. Democratizations are classified as unstable if a coup occurs in the 10 years before or after the transition, and the elimination of democratic rule lasts for at least 2 years. In general, any regime change considered, has to last for at least 2 years, otherwise it is not taken into account. This latter criterion implies that only transitions of some permanence are considered. Thus, stop-gap regimes that briefly hold power are not counted. Apart from major transition phases, there are no interruptions of democratic rule (coups) in our dataset that last for less than 2 years.

Finally, it should be noted that not all datasets we establish analyze the same set of countries from Table 1. Different combinations of democratizations are investigated, depending on the structure of the data and the time horizon observed. The combinations are made explicit in Table A1 of Appendix A. Table 1 also includes five countries that have experienced a transition from communism to democracy. In each of these cases, the democratization process was accompanied by substantial economic liberalization, which raises the possibility that the results might be driven by those transitions. With regard to this possibility, it is important to note that only one of the five datasets (cross-sectional, 1990–2009) actually includes all post-communist countries at the same time. The four remaining datasets all contain only one post-communist country, namely Hungary. As a consequence,

[6] Even the most comprehensive measure for government ideology on a cross-country basis, the Database of Political institutions by Beck et al. (2010), has many missing data points for this particular variable.

[7] Results for the *type 2* democracy coding are not shown in the paper, but are available upon request.

Table 1
Classification of political institutions.

Autocracies	Democracies	Democratizations	
		Stable transitions	Unstable transitions
Algeria	Australia	Albania (1991)	Argentina (1983)
Bahrain	Austria	Benin (1991)	Bangladesh (1986)
Botswana	Bahamas	Bolivia (1983)	Burundi (1993)
Cameroon	Barbados	Brazil (1985)	Congo, Rep. (1992)
Chad	Belgium	Bulgaria (1990)	Ecuador (1979/2002)
China	Belize	Ctr. Af. Rep. (1993)	Fiji (1992)
Congo, D. Rep.	Canada	Chile (1990)	Ghana (1993)
Cote d'Ivoire	Columbia	Cyprus (1983)	Guatemala (1986)
Egypt	Costa Rica	El Salvador (1984)	Nepal (1990)
Gabon	Denmark	Honduras (1982)	Niger (1993)
Haiti	Dominican Rep.	Hungary (1990)	Nigeria (1979/1999)
Iran	Finland	Indonesia (1999)	Pakistan (1988)
Jordan	France	Kenya (1999)	Peru (1980/2001)
Kuwait	Germany	Korea, Rep. (1988)	Sierra Leone (1998)
Malaysia	Greece	Madagascar (1993)	Sri Lanka (1989)
Morocco	Iceland	Malawi (1994)	Thailand (1979)
Namibia	India	Mali (1992)	Turkey (1983)
Oman	Ireland	Mexico (2000)	
Rwanda	Israel	Nicaragua (1984)	
Singapore	Italy	Panama (1989)	
South Africa	Jamaica	Paraguay (1989)	
Syria	Japan	Philippines (1986)	
Tanzania	Luxembourg	Poland (1990)	
Togo	Malta	Portugal (1976)	
Tunisia	Mauritius	Romania (1990)	
Uganda	Netherlands	Senegal (2000)	
UAE	New Zealand	Spain (1977)	
Zambia	Norway	Taiwan (1996)	
Zimbabwe	Pap. N. Guinea	Uruguay (1985)	
	Sweden		
	Switzerland		
	Trinidad Tobago		
	UK		
	USA		
	Venezuela		
29	35	29	17

Sources: Cheibub et al. (2010).

the overall results cannot be driven by their presence. Furthermore, exclusion of all countries with former centrally planned economies exerts virtually no impact on the pattern of the results.

Nicaragua and the Philippines provide good examples of countries that go through a democratic transition and, as a consequence, liberalize their economies. Following the civil war, EFW ratings for Nicaragua were extremely low when the country democratized in 1984, showing an average of only 2.11 for 1985. There was little change through 1990, when the rating was still at only 2.96, partly because of the ongoing war against the Contras and partly due to failed economic policies enacted by the ruling Sandinista government. The general election of that same year brought an anti-Sandinista coalition to power, which then acted on its electoral promise to liberalize the country's contracting economy (Wilm, 2011). As a consequence, the EFW rating rapidly increased to 5.38 in 1995 and moved to 6.50 in 2000. It has been relatively constant at the latter level since that time.

Turning to the Philippines, in 1985 the country's EFW rating was only 5.11, reflecting the protectionist policies and widespread seizures, which were a common practice under the dictatorial regime of Ferdinand Marcos. After his ouster of power by a popular revolution the following year, the country's EFW rating only increased a little to 5.85 in 1990. The democratically elected government of Corazon Aquino was hampered by a huge national debt, corruption, Communist and Islamic insurgencies, and repeated coup attempts. Eventually the election of Fidel Ramos to the Presidency in 1992 brought stability and widespread economic reforms, which were directed at opening the Philippine economy to global markets, reducing corruption, and encouraging private enterprise (Zaide and Zaide, 2004). As a consequence, the country's EFW rating increased to historically high levels of 7.24 in 1995.

These two countries illustrate a common transition path. In both cases economic liberalization was an indirect consequence of prior transitions to democracy. Democratization made electoral competition possible, which eventually leads to governments that were committed to private property, market exchange, and competition as a basis for future improvement in economic performance.

3. Results

The datasets that we establish for empirical analysis can be separated into those containing either cross-sectional or panel data. Starting with the cross-sectional, two distinctive datasets are constructed, reflecting alternative time frames. These are:

democratizations between 1980 and 1990 that relate to changes in the EFW Index between 1980 and 2000, and democratizations between 1990 and 2000 that relate to changes in the EFW Index between 1990 and 2009.[8] This structure makes it possible to determine if the pattern of results holds across various waves of democratizations and country samples.

Because the number of countries in the EFW Index during 1990–2009 is greater than for 1980–2000, the sample size during the latter period will be larger. In this context, it is worthwhile to note that the same countries can also be observed in different ways, depending on the time period. For example, several Latin American countries experienced a democratic transition during 1980–1990. If the democracy is maintained during 1990–2009, these same countries will be classified as stable democracies during the latter period. If the results are similar across these different waves of democratization and country selections, this will enhance our confidence in the cross-sectional findings.

Ordinary least squares (OLS) estimation results with robust standard errors for the two different cross-sectional datasets are shown in Table 2. Eqs. (1) through (3) present the results for the 1980–2000 time frame, while Eqs. (4) through (6) are for 1990–2009. Because we are working with data over a relatively short time frame, a small change is made in the definition of the unstable regime variable. Instead of defining a regime as unstable if a coup is experienced either 10 years before or after its initial year of democratization, a country is classified as unstable, if a coup occurs during the last 15 years of the observation period of the dependent variable. In the cross-sectional analysis we therefore only observe the effects of recent regime instability.

As Table 2 shows, the initial EFW score is negative and highly significant as a determinant of subsequent changes in economic freedom. Thus, the cross-country analysis indicates that nations with lower initial levels of economic freedom tend to achieve larger subsequent increases in economic liberalization. This result is consistent with those of de Haan and Sturm (2003), Lundström (2005), Pitlik and Wirth (2003), and Pitlik (2008). The impact of initial GDP per capita income is not as clear: initial GDP per capita has a negative sign when introduced as a single control variable, but the sign shifts to positive when it is included jointly with initial EFW, even though it is not always significant. This may seem paradoxical at first, but it almost certainly reflects the correlation between these two control variables: countries with higher initial EFW ratings tend to have higher initial per capita incomes. But, this raises the question of how this collinearity affects our primary results. In order to make this transparent, we separately introduce the initial income first, and then add the initial EFW rating in the subsequent equation. Regarding the control variables from the Sachs model, all three variables have the expected sign, but only the tropical location variable is significant in both observation periods. The coastal population is significant in the later time frame, but not in the earlier one. The air distance to the world's major markets is always insignificant, implying that it does not exert an independent impact on economic liberalization.

Turning to the principal variables of interest, in models 1 and 2 (Eqs. (1), (2), (4), and (5)) the stable democracy variable is always positive, but insignificant. The transition to democracy variable is positive and significant in three of the four equations for these models. The unstable regime variable is negative and also significant in three of the four equations. Model 3 incorporates the Sachs variables. In this model, the stable democracy variable was positive for both time frames, but it was insignificant during the more recent period. The transition to democracy variable was positive and significant during both time intervals, and the unstable regime variable was negative and significant in both cases.

Model 2 (Eqs. (2) and (5)) has the most explanatory power. The adjusted R-squared of model 2 is 0.49 for the earlier time frame and 0.65 for the latter. Thus, this model explains nearly two-thirds of the variation in the changes in economic freedom accompanying shifts to democracy. Regarding the numerical meaning of the estimated effects in this model: relative to stable autocracies, a stable shift to democracy is on average associated with a 0.30 larger change in EFW for the earlier time frame and a 0.38 larger change for the latter time frame. This indicates that democratization enhanced economic liberalization. Likewise, an unstable regime is on average associated with a −0.36 change for the earlier time frame and a −0.72 change for the latter time interval, indicating less liberalization.

In summary, the cross-sectional analysis provides evidence that a stable transition to democratic rule will ceteris paribus increase economic liberalization reforms, while unstable political regimes appear to deter economic liberalization. There is also weak evidence that stable long-term democracies adopt more liberal economic reforms than authoritarian governments.

The cross-sectional results are interesting, but they do not directly measure the impact of transitions to democracy. In order to measure the impact of a shift to democracy with greater precision and provide better insight on the direction of causality, we now turn to the examination of panel data. Table 3 uses three distinct panel data sets to examine the impact of shifts from authoritarian to democratic political decision-making within the framework of a fixed effects model. The dependent variable is the change in EFW for five-year, ten-year, and fifteen-year intervals following shifts to democracy during 1976–2009. The initial EFW value and logarithm of initial GDP per capita are included as control variables, along with a dummy variable indicating a shift to democracy and another dummy identifying unstable regimes (occurrence of a coup during the 10 years *prior* to, or *following* a shift to democracy).[9]

The control variables do not change across our different panel datasets. What does change is the observation period of the dependent variable, which increases from 5, to 10, and to 15 year time frames. This procedure provides estimates for the impact of a shift to democracy on economic freedom over each of the three time intervals. Thus, the potential impact of a transition to democracy on economic liberalization is estimated for short, medium, and longer time intervals. This structure means that the

[8] Alternative time frames have also been used. These are democratizations between 1985 and 1995 that relate to changes in the EFW Index between 1985 and 2005, and democratizations between 1995 and 2005 that relate to changes in the EFW Index between 1995 and 2009. The principal results do not change and they are available from the authors upon request.

[9] Due to the structure of the panel data, we are therefore observing a 25 year period, around the time of democratization. The principal results do not change, if we reduce this period to a 15 year period in the panel datasets.

Table 2
Democracy and economic freedom (cross-section, OLS robust standard errors).

Dependent variable: ΔEFW						
	1980–2000			1990–2009		
	(1)	(2)	(3)	(4)	(5)	(6)
Intl. EFW score		−0.641 ***	−0.556 ***		−0.747 ***	−0.719 ***
		(−9.27)	(−8.10)		(−10.18)	(−10.53)
Intl. log GDP p.c.	−0.101	0.262 ***		−0.331 ***	0.235 ***	
	(−0.99)	(3.38)		(−3.24)	(3.00)	
Costal pop.			0.257			0.323 **
			(1.45)			(2.07)
Tropics			−0.317 *			−0.290 *
			(−1.89)			(−1.93)
Air distance			0.000			0.000
			(1.09)			(0.36)
Democracy	0.157	0.252	0.523 ***	0.100	0.166	0.237
	(0.65)	(1.33)	(2.95)	(0.46)	(1.17)	(1.65)
Democratization	0.512 **	0.303 *	0.383 **	0.359	0.383 **	0.348 **
	(2.30)	(1.96)	(2.16)	(1.07)	(2.32)	(2.01)
Unstable regime	−0.498	−0.363 *	−0.450 *	−1.016 ***	−0.722 ***	−0.821 ***
	(−1.57)	(−1.71)	(−1.80)	(−3.47)	(−3.75)	(−4.51)
Adj. R^2	0.04	0.49	0.45	0.16	0.65	0.63
F statistic	2.8	22.8	14.5	5.24	31.7	23.7
N	98	98	98	110	110	110

Note: T-statistics in parenthesis; * significant at 10%; ** significant at 5%; *** significant at 1%; all regressions include a constant term.

number of observation periods will differ in each dataset. While we have 6 observation periods in the 5-year panel, we are left with 5 for the 10-year panel, and 4 for the 15-year panel.[10]

The panel fixed effects model has the following structure:

$$\Delta EFW_{i,t} = \beta_1 EFW_{i,t-1} + \beta_2 GDP_{i,t-1} + \beta_3 DEM_{i,t-2} + \beta_4 UNS_{i,t-2} + u_{i,t}$$

where

$$\Delta EFW_{i,t} = EFW_{i,t} - EFW_{i,t-1}$$

and

$$u = \vartheta_i + \mu_t + \varepsilon_{i,t}.$$

Table 3 presents OLS estimations with robust standard errors as suggested by Arellano (2003), employing a model that controls for period- and country fixed-effects. The Hausman test indicates that this procedure is appropriate to control for unobserved country heterogeneity and possible world-wide trends toward economic liberalization, which are independent of democratizations.

If authoritarian regimes are to be maintained as the observation base within the framework of the fixed effects model, stable democracy and transitions to democracy must be considered jointly. A dummy variable is now used to represent both.[11] However, within this model, the country dummy will reflect only the impact of shifts to democracy. Thus, we can continue to refer to the variable as democratization, because this is precisely what it identifies in the fixed effects model. The Sachs variables do not change across time; therefore they cannot be incorporated here. Of course, the country fixed effect variable will adjust for their potential impact.

In order to further test the robustness of the model, variables used by other researchers are introduced. Following the procedures of Pitlik and Wirth (2003) and Pitlik (2008), the lagged growth rate of per capita GDP and an interaction term between the democratic transition variable and lagged growth rates are incorporated. Specifically Pitlik (2008) examines the

[10] For example, in the case of the 5-year sequence the dependent variable will begin with the change in EFW between 1980 and 1985. The independent variables are: the EFW value in 1980, the per capita GDP in 1980, democracy and democratizations between 1976 and 1980, and unstable regimes between 1965 and 1989 (reflecting the political structures both 10 years before and 10 years after the 5 year observation period for a shift to democracy). The next sequence relates the change in the EFW Index between 1985 and 1990, to the initial EFW value in 1985, and so forth. Note, for the 5-year time intervals this procedure results in 598 observations.

[11] If the model is run with the democratization variable, as defined before, the reference point in the fixed effects model would be any stable regime, including both authoritarian and democratic. As an additional robustness test, the model was run in this form. The coefficient on the transition to democracy variable was virtually unchanged. It remained positive and significant, indicating that transitions enhanced EFW, relative to both, stable authoritarian and democratic regimes. These results are available from the authors upon request.

Table 3
Democracy and economic freedom (panel-fixed effects, OLS robust standard errors).

Dependent variable: ΔEFW									
	5-year dep. variable			10-year dep. variable			15-year dep. variable		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Intl. EFW score	−0.447 ***	−0.437 ***	−0.461 ***	−0.887 ***	−0.891 ***	−0.903 ***	−1.052 ***	−1.048 ***	−1.052 ***
	(−11.23)	(−12.10)	(−11.59)	(−16.69)	(16.68)	(15.85)	(−18.362)	(−17.97)	(−18.13)
Intl. log GDP p.c.	−0.470 ***	−0.468 ***	−0.475 ***	−0.600 ***	−0.625 ***	−0.630 ***	−0.396 **	−0.410 **	−0.405 **
	(3.30)	(3.30)	(−3.52)	(−3.34)	(−3.34)	(−3.37)	(−2.26)	(−2.20)	(−2.17)
Democratization	0.229 ***	0.261 ***	0.253 ***	0.277 ***	0.302 ***	0.297 ***	0.219 **	0.225 **	0.222 **
	(2.79)	(3.07)	(3.06)	(2.60)	(2.69)	(2.68)	(2.48)	(2.49)	(2.50)
Unstable regime	−0.160 **	−0.154 **	−0.145 **	−0.212 *	−0.211 *	−0.212 *	−0.069	−0.069	−0.071
	(−2.13)	(−2.10)	(−2.02)	(−1.76)	(−1.75)	(−1.78)	(−0.68)	(−0.68)	(−0.68)
GDP growth (t-2)		1.089	0.772		1.287	1.161		0.214	0.194
		(1.22)	(0.93)		(1.09)	(1.04)		(0.24)	(0.22)
Democratization∗GDP growth (t-2)		−2.378 *	−1.990 *		−1.857	−1.697		−0.218	−0.152
		(−1.96)	(−1.76)		(−1.12)	(−1.08)		(−0.14)	(−0.10)
War			−0.213 *			−0.107			−0.055
			(−1.67)			(−0.72)			(−0.40)
Adj. R^2	0.35	0.35	0.36	0.63	0.63	0.63	0.83	0.83	0.83
F statistic	3.9	3.8	3.9	8.8	8.6	8.5	19.6	18.8	18.6
N	598	594	594	498	494	494	398	394	396
Countries	100	100	100	100	100	100	100	100	100
Country effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Period effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Hausman test	128.7	131.2	137.8	148.9	147.7	149.2	91.4	90.4	101.9
(p-value)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)

Note: T-statistics in parenthesis; * significant at 10%; ** significant at 5%; *** significant at 1%.

interrelations of economic growth (referring to the crisis hypothesis) and political institutions, as potential sources of freedom oriented economic reforms. He finds that poor growth performance makes liberalization more likely in democratic countries, but not so in authoritarian countries. Pitlik argues that the so called *conditional growth crisis effect* indicates that democracies are superior to autocracies in producing reasonable policy adjustments in times of crises. Lagged growth is therefore expected to have a positive impact on liberalization, while the interaction term is expected to be negative. Due to the fact that causality between per capita GDP, growth, and the EFW Index is not clear (e.g. Justensen, 2008; de Haan et al., 2006; Dawson, 2003; de Haan and Sturm, 2003), the growth rate is introduced to the model with a time lag of two periods (t-2), in order to avoid any possible endogeneity issues. Furthermore, politically motivated violence and armed conflict are examined as potential sources for unstable transitions to democracy. Based on the Correlates of War (COW) data by Sarkees and Wayman (2010) a dummy is added to the model, taking the value of one in the event of an intra- or inter-state war, and zero otherwise.

Table 3 presents the results of the fixed effects analysis. The initial EFW score is negative and highly significant in all equations. This demonstrates that countries with lower initial levels of economic freedom generally achieve larger subsequent increases in economic freedom. In contrast with the cross-sectional analysis of Table 2, the initial per capita GDP variable is now negative and significant. This indicates that nations with lower initial incomes generally make larger moves toward liberalization in subsequent periods. This is what one would expect. The positive sign of the initial income level in the cross-sectional analysis almost certainly reflects the correlation between the initial EFW rating and the initial level of income. The collinearity between these two independent variables reinforces the use of the fixed effects model for the purposes of our analysis.

Turning to our principal variables of interest, Eqs. (1) to (3) of Table 3 employ the 5-year dependent variable. In all three, the effect of democratization on liberalization is positive and highly significant at the 1% level, while making an unstable transition has a significantly negative effect at the 5% level. Both coefficients are sizable and vary little with the introduction of lagged income growth and the interaction term in Eq. (2). While, lagged growth is positive and insignificant the interaction term has the expected negative sign and is significant at the 10% level. As Eq. (3) illustrates, political instability might, at least in part, be due to ongoing wars, as the COW war dummy comes out as having a negative and significant effect (10% level) on subsequent liberalization. Nonetheless, the unstable regime variable remains significant even after the war variable is integrated into the model.

Eqs. (4) to (6) of Table 3 further employ the 10-year dependent variable. Again, the effect of democratization on liberalization is positive and highly significant at the 1% level in all models. The coefficients increase with respect to the 5-year dataset, and again vary little with the introduction of lagged income growth and the interaction term in Eq. (5). Both of these are statistically insignificant, but present the expected sign. In Eqs. (4) to (6), there is again indication that making an unstable transition to democracy has a negative and significant effect (10% level) for changes in the EFW Index, but unlike Eq. (3), this instability does not seem to be due to ongoing wars, since the dummy comes out as statistically insignificant in Eq. (6).

Finally, Eqs. (7) to (9) employ the 15-year dependent variable. The estimated impact of the democratic transition variable is once again positive and significant at the 5% level, indicating that countries shifting to democracy achieve larger increases in EFW over the 15-year period than those that do not. However, the coefficient for the transition to democracy variable is smaller for the 15-year model than for the 10-year. In fact, this coefficient is a little smaller than for the 5-year model. This indicates that the economic liberalization policies of countries shifting to democracy tend to recede between years 10 and 15. Eq. (8) again introduces lagged growth and the interaction term into the model. While both of these variables have the expected sign, they are again insignificant. In Eqs. (7) to (9), the unstable regime variable is negative but insignificant. The same applies to the war dummy in model 9, which also shows a negative but insignificant effect.

Generally, the pattern of coefficients in the 5, 10, and 15 year models indicate that shifts to democracy exert a significant impact on economic liberalization after 5 years and even larger after 10 years, but they tend to recede between years 10 and 15. Controlling for the initial EFW rating, initial per capita GDP, lagged growth and the interaction term (Eqs. (2), (5), and (8)), a shift to democracy is on average associated with a 0.26 higher change in EFW after 5 years, a 0.30 higher change after 10 years, and a 0.23 higher change after 15 years, relative to stable autocracies. These are sizable changes, considering that for the entire sample our within standard deviation of initial EFW is only 0.7 units. The pattern further indicates that the economic liberalization effects of democracy follow the non-linear pattern of an inverted U.[12] We further confirm this inverted U pattern by running an additional regression with a 20-year dependent variable. The results indicate that the coefficient for democratization continues to decline between years 15 and 20.[13]

The pattern of the results of the three panel fixed-effects models of Table 3 present strong evidence that, holding other important factors constant, democratization increases the intensity of economic liberalization reforms, relative to stable autocracies. The structure of the model relates shifts to democracy to subsequent changes in economic freedom, which increases our confidence in the direction of causality. To exclude the possibility of a symmetrical effects problem, where shifts away from democracy (coups) might influence our results, the fixed effects estimations are rerun without all nine cases that exhibit a de-democratization.[14] The results do not change significantly, raising only the coefficients for the democratization variable.

On the other hand, compared to stable autocracies an unstable transition to democracy exerts a negative impact on economic liberalization, at least for the first 10 years subsequent to the transition. It is associated with a 0.15 decrease in EFW change after 5 years, and a 0.21 decrease after 10 years. This adverse effect is partially explained by the presence of armed conflict, even though not all of the unstable transitions are connected to war. Further, unstable transitions will almost always generate uncertainty and political turmoil, which are likely to adversely impact the environment for economic liberalization. In accordance with Pitlik (2008), our findings provide some evidence of a conditional growth crises effect, suggesting that poor growth performance will make economic reform more likely in democracies. However, the important point is that these adjustments exert little impact on either the size or pattern of the transition to democracy coefficients.

In a final effort to further clarify the effect of stable democratic regimes on economic policy liberalization and check the robustness of our results, we re-estimate our three panel datasets with generalized least squares (GLS) analysis and robust standard errors in Table 4. Here, we use a random effects model, which means that we can use our original variable design to distinguish between countries that are democratic, and countries that become democratic: variable democracy and democratization are therefore defined in the same fashion as in the cross-sectional model, controlling for the separate effects of stable democracy and democratic transitions on economic policy liberalization.[15] The variable denoting an unstable regime is identical to the panel model with fixed effects. Finally, because the Hausman test indicates that the fixed effects model is more appropriate than random effects, we do not employ all the control variables from the previous analysis, but only replicate our research design from the cross sectional analysis, in order to check the robustness of the basic results.

The nine equations of Table 4 present results for three alternative models, and measurement of the dependent variable (change in economic freedom) over three time frames; 5, 10, and 15 years. In Eqs. (1) through (3), the dependent variable is the change in EFW in the 5 years after a transition to a democracy, while Eqs. (4) through (6) are for 10 years after the transition, and Eqs. (7) through (9) for the 15 year time frame. Model 1 (Eqs. (1), (4), and (7)) is the least comprehensive of the three models, and this is reflected by the substantially lower R-squared values for these equations. Therefore the results of model 1 should be considered with caution.

Table 4 presents the results. The initial EFW score is again negative and highly significant as a determinant of subsequent changes in economic freedom. As in the cross-sectional analysis, initial per capita income is negative and significant when it is the sole control variable, but switches to positive and significant when the initial EFW score is added to the model. This pattern reflects the correlation between those two variables and stands in stark contrast with the persistent negative impact of per capita GDP in the fixed effects model. The pattern of the Sachs variables is identical to that of the cross-sectional analysis. Coastal population is positive and tropical location negative, and both are always significant at conventional levels. Distance to major markets is only significant in Eq. (3).

[12] Differences between coefficients are statistically significant, according to a t-ratio test.

[13] Results are not shown, but are available from the authors upon request.

[14] The nine countries exhibiting a shift away from democracy were: Burundi, Rep. of the Congo, Fiji, Guatemala, Niger, Nigeria, Pakistan, Peru, and Turkey. Results are available from the authors upon request.

[15] In a different functional form, this panel model has also been re-estimated with a GMM system estimator, where the design of the democracy, democratization, and unstable transition variable is maintained. Different time lags of the dependent variables are used to replicate the focus on the 5, 10, and 15 year time horizons. Additionally, we follow Roodman (2009) and estimate the model with a collapsed instrument matrix. Results are very similar to the estimations with random effects. These are not shown, but are available from the authors upon request.

Table 4
Democracy and economic freedom (panel-random effects, GLS robust standard errors).

Dependent variable: ΔEFW									
	5-year dep. variable			10-year dep. variable			15-year dep. variable		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Intl. EFW score		−0.224 ***	−0.207 ***		−0.538 ***	−0.485 ***		−0.847 ***	−0.793 ***
		(−11.41)	(−9.52)		(−13.16)	(−11.07)		(−17.07)	(−15.56)
Intl. log GDP p.c.	−0.063 ***	0.064 ***		−0.086 **	0.212 ***		−0.178 **	0.319 ***	
	(−3.93)	(3.45)		(−2.12)	(5.17)		(−2.58)	(5.38)	
Costal pop.			0.099 **			0.319 ***			0.537 ***
			(1.98)			(2.86)			(2.96)
Tropics			−0.139 ***			−0.300 ***			−0.461 ***
			(−2.96)			(−2.90)			(−3.08)
Air distance			0.000 *			0.000			0.000
			(1.67)			(0.44)			(0.31)
Democracy	0.080 *	0.128 **	0.178 ***	0.032	0.186	0.338 ***	0.033	0.259	0.478 ***
	(1.77)	(2.12)	(2.96)	(0.35)	(1.51)	(2.78)	(0.24)	(1.60)	(2.95)
Democratization	0.115 *	0.189 ***	0.192 ***	0.229 **	0.382 ***	0.398 ***	0.179	0.340 ***	0.358 ***
	(1.90)	(3.49)	(3.30)	(1.96)	(4.14)	(4.01)	(1.18)	(4.12)	(4.18)
Unstable regime	−0.016	−0.098 *	−0.105 *	0.028	−0.137	−0.133	−0.103	−0.082	−0.082
	(−0.21)	(−1.83)	(−1.84)	(0.17)	(−1.28)	(−1.14)	(−0.43)	(−0.66)	(−0.62)
Adj. R^2	0.03	0.17	0.16	0.04	0.34	0.32	0.06	0.48	0.47
N	598	598	600	498	498	500	398	398	400
Countries	100	100	100	100	100	100	100	100	100
Period effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Hausman test	33.9	128.7	101.9	19.7	155.0	128.3	3.6	106.2	85.4
(p-value)	(0.000)	(0.000)	(0.000)	(0.006)	(0.000)	(0.000)	(0.734)	(0.000)	(0.000)

Note: T-statistics in parenthesis; * significant at 10%; ** significant at 5%; *** significant at 1%; all regressions include a constant term.

Turning to the democratization variables, the transition to democracy variable is positive and significant at the 1% level in all equations, except those of model 1. Controlling for the initial EFW rating and initial per capita GDP (Eqs. (2), (5), and (8)), a shift to democracy is associated with a 0.19 higher change in EFW after 5 years, a 0.38 higher change after 10 years, and a 0.34 higher change after 15 years, relative to stable autocracies. The size and pattern of these coefficients are similar to those present in the fixed effects model. This also provides additional evidence that shifts to democracy lead to persistent increases in economic freedom during the first 10 years following the democratic transition, but the liberalization trend reverses after that time frame.

Like the fixed effects model, the random effects analysis indicates the time path of economic liberalization in the aftermath of democratization reflects an inverted U-pattern. This is consistent with the views of Przeworski (1991), who suggests that democratizing countries are likely to pursue economic liberalization reforms in the short run, but may abandon them with the passage of time, when the costs of these reforms start to rise. The inverted U-pattern is also highly consistent with the theory of Olson (1982), who argues that distributional coalitions and interest groups engage in political action that undermine economic growth and therefore political shocks can enhance growth by reducing inefficiencies arising from this source. Within this framework, the initial economic liberalization results because the "shock" accompanying democratization temporarily reduces the influence of powerful political elites, but with time, these coalitions will form once again and roll back some of the liberalization reforms.[16]

The stable democracy variable is positive and significant at the 1% level in model 3. In models 1 and 2, stable democracy is only significant for the 5 year dependent variable, while it is insignificant in the remaining equations. Some degree of collinearity seems to be present between the stable democracy variable and initial income, which would explain its missing significance in Eqs. (5) and (8). Regarding the coefficients in model 3, these would indicate that compared to a stable autocracy, a stable democracy is associated with a 0.18 higher change in EFW after 5 years, a 0.34 higher change after 10 years, and a 0.48 higher change after 15 years. In contrast with the transition to democracy variable, the coefficient for the stable democracy variable continues to rise as the time frame increases from 5, to 10, and 15 years. So overall there is some indication that stable democracies achieve larger increases in economic freedom than authoritarian regimes. This positive relation between long-term democracies and economic freedom is also supportive of the research of de Haan and Sturm (2003), Lundström (2005), and Pitlik (2008).

Interestingly, while the unstable regime variable is always negative, it is only significant at the 10% level in the 5 year dependent variable (Eqs. (2) and (3)). The coefficients indicate that an unstable transition is on average associated with a 0.1 lower change in EFW after 5 years, compared to stable autocracies. The size of the coefficients is again similar to the fixed effects

[16] The latter is also in line with the results of Berggren et al. (2009), who show that some degree of institutional adjustment is associated with higher economic growth in democracies.

model. So generally speaking, there is also some evidence in the random effects model that unstable transitions to democracy exert a negative impact on economic liberalization.

Given the estimated impact of democratization on EFW, what is the expected impact on long-term economic growth? Prior research indicates that a unit change in EFW increases long-term growth by 1.28 to 1.90 percentage points when both the direct effects and indirect effects through a higher rate of investment are considered (i.e. Gwartney et al., 2006). This would imply that the increases in EFW after 10 years following a transition to democracy would increase long-term economic growth by 0.4 to 0.8 percentage points.[17] In order to further investigate the impact of democratization on growth, the change in the growth rate following democratization was substituted for the change in EFW, as the dependent variable within the framework of the fixed effects model. Eqs. (1), (4), and (7) of Table 3 were run with the growth rate of real GDP per capita during the 5, 10, and 15 years subsequent to the democratization. The coefficients on the transition to democracy variable were 0.8, 0.7, and 0.6 for the 5, 10 and 15 year periods, respectively. All of the coefficients were significant at the 5% level or higher. These estimates indicate that the 0.4 to 0.7 percentage point increase in long-term annual growth, implied by the increases in EFW accompanying democratization are highly reasonable. So while the estimated impacts of transitions to democracy on growth are not huge, neither are they inconsequential.

4. Conclusions

During the past 15 years, several studies have found that economic liberalization exerts a powerful impact on economic growth and income levels. However, economic institutions and policies are an outgrowth of the political process. This elevates the importance of political institutions and their impact on economic liberalization. Prior empirical research has used the Freedom House and Polity IV measures of democracy to investigate this relationship. In general, these studies indicate that countries with more democratic political institutions tend to follow economic policies more consistent with economic freedom.

However, no one has explicitly examined the impact of transitions from authoritarian to democratic political regimes on economic liberalism. This paper fills this vacuum. The data of Cheibub et al. (2010) are used to examine the impact of transitions to democracy. In this data set, a country is defined as democratic if both its legislative and executive officials are chosen in contested and popular elections. Because the indicator of democracy is dichotomous, taking the value of one for democracy and zero otherwise, it is not necessary to make an arbitrary decision on what type of variable increase should be called a democratization. Furthermore, this narrow definition of democracy minimizes the potential of overlap with specific components of the economic freedom index, particularly those in the legal structure area.

There were 48 transitions from authoritarian to democratic regimes during 1975–2009 for which the EFW data are available. Both cross-sectional and panel analyses were used to analyze the impact of these transitions within the framework of both, fixed- and random effects models. The results indicate that shifts to democracy resulted in a positive and highly significant impact on economic freedom. This was true for the cross-sectional analysis and for the panel analysis utilizing both fixed and random effects models. These results held after controlling for a variety of other factors, including initial per capita GDP, initial EFW rating, and the geographic-locational variables stressed by Sachs and others. The robustness of these results provides strong evidence that shifts to democracy enhance the conditions for economic reforms consistent with the principles of economic freedom.

Interestingly, the path of economic liberalization appears to follow the pattern of an inverted U. There was a significant increase in economic freedom 5 years after the transition to democracy and the movement toward liberalization continued through year 10. However, it began to recede thereafter. This is consistent with the view that the primary economic liberalization effects occur during the 10 years immediately following the transition and, as democracy becomes more institutionalized, its positive impact on economic liberalization tends to reverse.

There was also evidence that stable (long-term) democracies achieved larger increases in economic freedom than authoritarian regimes. These findings are supportive of those of de Haan and Sturm (2003), Lundström (2005), and Pitlik (2008). In contrast, the results indicate that an unstable shift to democracy exerts an adverse impact on economic freedom, and this is still the case after accounting for the impact of armed conflict.

The results highlight the uncertainty accompanying the political transitions of the Arab Spring. If these transitions to democracy are stable and long-term, they are likely to lead to economic liberalization and more rapid growth in the region. However, if the transitions are unstable, the most likely outcome is an adverse impact on economic freedom and continuation of the poor economic performance of these countries.

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[17] For the 10 year dependent variable, the estimated size of the transition to democracy coefficient was 0.3 to 0.4. When these figures are multiplied by the 1.28% to 1.90% increase in annual growth rate, accompanying a one-unit increase in EFW, this implies a 0.4 to 0.8 increase in economic growth accompanying transitions to democracy.

Appendix A

Table A1
Transitions to democracy.

Country	Year of democratic transition	Analysis of democratic transition in …				
		1980–2000 cross sec.	1990–2009 cross sec.	5-year panel	10-year panel	15-year panel
Albania	1991	No	Yes	No	No	No
Argentina	1983	Yes	No	Yes	Yes	Yes
Bangladesh	1986	Yes	No	Yes	Yes	Yes
Benin	1991	No	Yes	Yes	Yes	Yes
Bolivia	1983	Yes	No	Yes	Yes	Yes
Brazil	1985	Yes	No	Yes	Yes	Yes
Bulgaria	1990	No	Yes	No	No	No
Burundi	1993	No	Yes	Yes	Yes	Yes
Ctr. Af. Rep.	1993	No	Yes	No	No	No
Chile	1990	No	Yes	Yes	Yes	Yes
Congo, Rep.	1992	No	Yes	Yes	Yes	Yes
Cyprus	1983	Yes	No	Yes	Yes	Yes
Ecuador	1979/2002	No	No	Yes	Yes	Yes
El Salvador	1984	Yes	No	Yes	Yes	Yes
Fiji	1992	No	Yes	Yes	Yes	Yes
Ghana	1993	No	Yes	Yes	Yes	Yes
Guatemala	1986	Yes	No	Yes	Yes	Yes
Honduras	1982	Yes	No	Yes	Yes	Yes
Hungary	1990	No	Yes	Yes	Yes	Yes
Indonesia	1999	No	Yes	Yes	Yes	No
Kenya	1999	No	Yes	Yes	Yes	No
Korea, Rep.	1988	Yes	No	Yes	Yes	Yes
Madagascar	1993	No	Yes	Yes	Yes	Yes
Malawi	1994	No	Yes	Yes	Yes	Yes
Mali	1992	No	Yes	Yes	Yes	Yes
Mexico	2000	No	No	Yes	No	No
Nepal	1990	No	Yes	Yes	Yes	Yes
Nicaragua	1984	Yes	No	Yes	Yes	Yes
Niger	1993	No	Yes	Yes	Yes	Yes
Nigeria	1979/1999	No	Yes	Yes	Yes	Yes
Pakistan	1988	Yes	No	Yes	Yes	Yes
Panama	1989	Yes	No	Yes	Yes	Yes
Paraguay	1989	Yes	No	Yes	Yes	Yes
Peru	1980/2001	Yes	No	Yes	Yes	Yes
Philippines	1986	Yes	No	Yes	Yes	Yes
Poland	1990	No	Yes	No	No	No
Portugal	1976	No	No	Yes	Yes	Yes
Romania	1990	No	Yes	No	No	No
Senegal	2000	No	No	Yes	No	No
Sierra Leone	1998	No	Yes	Yes	Yes	No
Spain	1977	No	No	Yes	Yes	Yes
Sri Lanka	1989	Yes	No	Yes	Yes	Yes
Taiwan	1996	Yes	Yes	Yes	Yes	No
Thailand	1979	No	No	Yes	Yes	Yes
Turkey	1983	Yes	No	Yes	Yes	Yes
Uruguay	1985	Yes	No	Yes	Yes	Yes
Total	48	18	22	41	39	35

Sources: Cheibub et al. (2010).

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