Diffusion or Confusion?

Debt and Democratization around the World*

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Abstract

Recent years have witnessed the diffusion of an influential literature on democratization. Scholars, observing patterns of spatial and temporal clustering in the transition to democracy, argue that democratization in neighboring states causes democratization at home as citizens demand the same reforms they witness abroad. We disagree. The present paper asserts that the diffusion of democracy literature neither explains democratization nor properly tests for diffusion. More specifically, (1) it neglects the temporal component of democratization by testing the effect of levels of democracy rather than transitions to democracy; (2) it relies on problematic assumptions about the democratization process; and, most critically, (3) it systematically neglects common international economic and political shocks. We advance an alternative theory to explain clustering in democratization. Synchronous regional economic shocks disrupt the patronage networks on which autocrats depend. Where sovereign debt is high, autocrats have less recourse to external financing needed to buy off opposition and finance repression. Spatial clustering of debt levels — itself a product of regional terms of trade, comparative advantage and development strategies — magnifies the clustered effect of common economic shocks.

Warning: This paper is a bit of a construction site! Comment very welcome.

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> *"A wave of democratization is a group of transitions from nondemocratic to democratic regimes that occur within a specified period of time and that significantly outnumber transitions in the opposite direction during that period of time."*
>
> – Samuel Huntington, 1991, p. 15.

1 Introduction

Transitions to democracy occur in clusters and waves. Democratization – the shift from autocratic to democratic rule – is neither randomly distributed in time nor in place but quite often occurs in multiple countries in given regions at specific moments. Since Samuel Huntington (1991) famously identified three waves of global democratization since 1828, numerous scholars have identified numerous regional and temporal clusters, raising the question of what explains these patterns.

Until now, the dominant explanation has been "diffusion." Cross-border dependencies between states explain why democratization is more likely to occur once democracy has taken hold in neighboring states. Specifically what constitutes a cross-border dependency varies considerably in the literature, where the literature chooses to define it at all. The research that mentions a mechanism beyond simple "neighbor emulation" has speculated that democratic neighbors create a less threatening regional environment that bolsters domestic reformers, that democracies may be likely to support democratic opposition abroad, and that autocratic leaders might fear the redistribution associated with democratization less if democratization in neighboring states did not entail confiscation of the elite's wealth (Gleditsch and Ward 2006). Rather puzzlingly, however, empirical tests of the diffusion hypothesis almost uniformly study the effect of democratic neighbors on changes in democracy at home, largely ignoring the mechanism of how such an effect comes about.

Equally, if not more, puzzling as the failure to test mechanisms is that these tests, regardless of their results, do not test their theory. Although waves of democratization motivate the study of diffusion, most of the literature on diffusion ignores the temporal

component of diffusion by only testing whether the presence of democratic neighbors is associated with democratization. Thus, in these models, it does not matter when a neighbor democratized, only that it is a democracy. The democratization of Mexico in 2000, for example, would count as evidence of diffusion of democracy, since it borders the United States, a country that democratized over 200 years earlier. There is much convincing research that democratic neighbors increase the probability of transition to democracy at home but these results hardly explain why democratization clusters in time. In short, what the literature demonstrates is not diffusion and empirical tests that would explain diffusion are not robust.

Moreover, the diffusion literature relies on problematic assumptions about the democratization process. The transition from autocracy to democracy is not only conditional on mass behavior or on elite behavior but on both. As Houle (2009) explains, in contrast to democratic breakdown which requires only a decision by the elite to seize power, democratization requires both demand from the masses and an elite decision to accommodate them. Thus, while ideas can diffuse internationally among the elite – witness the international spread of pension reforms (Brooks 2005) or economic liberalization (Simmons and Elkins 2004) – and even across the masses – consider the spread of revolts against authoritarian governments across multiple countries during the "Arab Spring" of 2011 – diffusion is much less likely to occur with democratization. In fact, as explained below, while the masses may indeed emulate their neighbors in developing more effective tools in pressing autocratic regimes to democratize, the ruling elite also learns from the mistakes of overthrown dictators (Koesel, Bunce and Wolchik 2011). In other words, diffusion is double-edged: it affects not only the ability of the masses to demand democracy but also that of the ruling elite to resist them. The literature on diffusion has omitted any discussion of how diffusion affects different actors during the democratization process.

While we are not the first to observe inconsistencies in the foundation of the diffusion of democracy literature (e.g., Leeson and Dean 2009), we are the first, to the best of our knowledge, to offer a credible rival explanation. We propose (and test) an

explanation of democratization that takes account of both international influences and domestic processes. Temporal and geographic clustering of democratization comes about from common international shocks that reduce the capacity of the regime to remain in power through coercion and patronage. International economic shocks – such as the debt crisis of the 1980s in Latin America – often disrupt the patronage networks upon which many autocrats rely for their authority. Democratization emerges in waves and clusters because developing countries have similar economic profiles across regions and are subject to synchronous international economic crises. International political shocks can also trigger waves of democratization; witness, for example, the abandonment of the Brezhnev doctrine by Gorbachev in 1988 which almost immediately led to the collapse of communist regimes throughout Eastern Europe. What explains the temporal and spatial clustering of democratization is not diffusion, but the exposure to similar international economic and political shocks.

2 Theory

Scholars going back to at least Marx (1848) have posited an economic origin for democratization. Like Marx, most contemporary scholars have focused on conditioning variables, economic variables that increase the likelihood of regime change, rather than on economic variables more causally connected to the democratic transition. Lipset (1959) and Lerner (1964) argued that new behavioral norms such as moderation emerge together with economic development, enabling the emergence of democratic governance. Scholars such as Moore (1966), Boix (2003) and Acemoglu and Robinson (2006) have returned to Marx, asserting that the economic interests of classes underlie democratization while others argue that economic conditions have little effect on democratization, albeit a clear effect on consolidation (Przeworski et al 2000; Houle 2009). On the question of the immediate causes of democratization, however, most of the literature remains mute or simply posits an exogenous economic or political shock (Geddes 1999).

The proximate – as opposed to structural – causation of authoritarian breakdown and democratization has gained importance with the emergence of attempts to explain synchronous international shifts to democracy. If democratization does indeed occur in waves (Huntington 1991), then we should expect a synchronous international stimulus. Like the democratization literature, however, authors explaining the "diffusion" of democracy, have sidestepped the questions of causation, content with demonstrating that countries near democracies are more likely to democratize. Harvey Starr (1991) pioneered the study of diffusion effects on democratization, regressing the government transition dependent variable on the proportion of global, regional and neighboring democracies.

The proportion or number of democracies nearby has remained the key independent variable in the subsequent literature. Brinks and Coppedge (2006) extend the findings to the degree of democracy by showing that states converge to the polity score level of their neighbors. The actual cause of democratization, however, and an explanation for geographic, let alone temporal, clustering are left unaddressed. Gleditsch and Ward (2006) come closest to establishing proximate causation, including among the static democratic neighbor variables a dummy variable indicating a contemporaneous transition to democracy occurs in a neighboring states within 500km. They find that transitions to democracy in neighbors significantly decrease the probability that an autocracy endures.[1] The central finding of the diffusion of democratization literature – that democratic neighbors are a strong predictor of democratization at home – is indisputably important. It, however, neither explains the temporal clustering of democratization nor democratization itself.

Not only does the diffusion of democratization literature fail to test its theory properly, but it also relies on problematic assumptions about the democratization process. As argued by Houle (2009), democracy is a compromise between different social groups. The population demands regime change, but, in the end, it is the ruling class that decides whether to concede it. Democratization is thus consensual, in the sense that it usually

[1] Gleditsch and Ward also discuss (p. 924) the construction of a variable to measure external economic exposure which is not included in their analysis.

requires the agreement of both the elites and the masses. Democracy is, at least, a second-best outcome for all groups of actors. The elites prefer to retain autocracy. However, they would rather live in a democracy in which they share power with the poor and in which their interests are protected by the rule of law than in another dictatorship, from which they are totally excluded. Their opponents within the population might like to install a new autocracy in which they dominate, but prefer democracy to the current regime. It is the fear of being overthrown by the population and the cost of preventing it that ultimately push the elites to democratize.

The problem with the arguments proposed by the diffusion literature is that diffusion is always double; it affects both the population and the ruling elites (Koesel, Bunce and Wolchik 2011). Not only does the population learn from successful regime transitions abroad, but the ruling elites also learn from the mistakes of fallen dictators. Koesel, Bunce and Wolchik (2011), for example, explain how the dictators in Saudi Arabia, Azerbaijan, China and Russia have used the experiences of fallen autocracies during the Color Revolutions following the disintegration of the Soviet Union and Arab Spring of 2011 to develop more effective means to retain power at home. The same type of adaptation by the ruling elites can also be seen more widely during the Arab Spring, during which autocrats have learned from the cases of Tunisia, Egypt and Yemen, and adopted more repressive measures, in particular in the cases of Libya and Syria. In a study of counter-summit protests, Della Porta and Tarrow (2012) demonstrate that both protestors and governments have adapted their protest and anti-protest techniques as a results of past experiences. Della Porta and Tarrow (2012) call this process 'interactive diffusion' and 'coevolution'. These arguments do not imply that diffusion has no effect. It is possible that cases of successful democratization abroad can demonstrate to the local population that the regime is not infallible as well as show which type of protest techniques are the most likely to destabilize the regime. However, we cannot simply assume – as the literature on the diffusion of democratization has done – that this demonstration effect will straight forwardly lead to waves of democratization. In order to understand how

international factors influence democratization, we need to account for how they affect the balance of power between key local actors. The question remains: What induces democratization? Revolts by the masses are subject to cross-border emulation but so is suppression by the elites and consensus by both groups is necessary for democratization.

Given the importance of and interest in democratization, the actual evidence of economic origin is puzzlingly sparse. Case-historical accounts of democratization overwhelmingly cite an economic impetus for democratization. Famine in France in the 1780s, possibly due to adverse weather from the 1783 Laki vulcanic eruption in Iceland and limited adoption of the hearty potato, has been cited as a cause of the French revolution in 1789. Similar economic crises emerge in a large number of the accounts of transitions to democracy, both contemporary and historical. A recent collection of essays on democratic transitions in Africa note economic crisis as preceding democratization in Niger, Mali, Benin, the Central African Republic, Madagascar and Guinea-Bissau, among others (Villalon and Von Doepp 2005).

This emphasis on an economic impetus is retained in rigorous empirical work that mixes cases and data analysis (e.g., Haggard and Kaufman 1995; van de Walle 2001) but, surprisingly, is lost in most cross-national statistical analyzes. Only one large-sample empirical article that we could identify directly tests and finds an economic source for democratization. Gasiorowski (1995) finds an effect for inflation that first inhibits democratization and then facilitates it.[2] His other key economic variable, change in gross domestic product, reveals no effect on democratization, albeit one on democratic breakdown. Most formal theoretical and cross-national empirical accounts, as we have discussed, simply bypass causation, assume an exogenous economic shock, and analyze the effect of conditioning variables such as income level (Przeworski et al 2000; Boix and Stokes 2003; Epstein et al 2006) or income inequality (Acemoglu and Robinson 2006; Boix 2003). This slippage between case-level observation on the one hand and generalized theorizing and

[2]However, other studies have used diverse economic variables as control variables (e.g., Przeworski et al. 2000; Houle 2009; and Epstein et al. 2006).

testing on the other, emerges from the difficulty of conceptualizing and operationalizing economic shocks.

We propose a measure of economic shocks that is is both closely linked and theoretically relevant to democratization: Sovereign debt. Research on the functioning and stability of autocratic regimes commonly describes them as clientelist states, rentier states, or simply emphasizes that the ruling elite secure power through targeted patronage. Rivals are coopted in a process, to paraphrase Geddes' (1999) description of single party hegemony, in which "both mass and elites are better off supporting the ruling party and opponents are trapped investing in the survival of the autocratic status-quo." When patronage networks are disrupted, however, the elite's grip on power can slip, clearing the way for democratization (Diaz-Cayeros et al 2003; Magaloni 2006).

Numerous events can disrupt an elite's ability to coopt potential rivals via patronage and different states have varying abilities to absorb economic and other shocks. Indeed, economic variables have shown weak and inconsistent effects due to revenue smoothing. Governments have been able to borrow against the future in sparse times, through actual debt, deferred investment or other means. If governments indeed smooth their fiscal position, then national debt as a proportion of GDP is a key measure of their ability to absorb economic shocks and to support their patronage networks.

Hence our key argument: A variety of different economic shocks can bring down an autocratic government but debt levels are the best predictor of authoritarian breakdown. Indeed, after the 1980s Debt Crisis, the introduction of conditionality with IMF and World Bank structural adjustment loans could further disrupt patronage. Economic crisis can disrupt any regime type but the reliance of autocratic states on patronage makes them particularly susceptible. International economic crises – whether they originate in as a currency crisis such as the 1997 East Asian Financial Crisis, debt crisis such as began in Mexico in 1982, or credit crisis such as began in 2008 – can all induce waves of democratization. Because geographically clustered states hold similar economic positions and similar economic structures – weakly collateralized lending in East Asia in

the late 1990s, petro-dollar fueled debt in Latin America in the early 1980s – waves of democratization are often regionally clustered.

There is much evidence that what has often been claimed to be evidence in favor of the diffusion of democratization was in fact evidence in favor of the role of international political and/or economic factors that affected regimes from the same regions in a similar way. For example, in a study of 43 cases of liberalization, Ulfelder (2009) found evidence of diffusion in only seven of them. In 33 of them, he found that the main immediate cause of democratization was economic crisis. Moreover, six of the seven cases where diffusion played an important role are countries from Eastern Europe as well as Mongolia – Mali being the only exception. However, there is much evidence that what created the wave of democratization in Eastern Europe and Mongolia was not diffusion per se, but the end of the Brezhnev doctrine, which had been abandon by Gorbachev in 1988 (Janos 2000; Thompson 2001). Without the threat of a Soviet invasion, communist regimes throughout Eastern Europe would most likely have fallen before 1989 (see Boix and Stokes 2003). It thus seems that even in these cases, common causation – the end of the Brezhnev doctrine – rather than diffusion played the key role.

This situation is even more clear in other regional waves of democratization. Joseph (1997), for example, argues that the wave of democratization in sub-Saharan Africa in the early 1990s was caused by three main factors. The first one was the economic crisis of the 1980s, which was partially caused by the deterioration of the terms of trade of most African countries. The economic crisis forced the ruling elites to continually increase their debt level, which prevented them from maintaining the patronage networks which formed the basis of the regimes. As argued by Bratton and Van de Walle (1994, p.100), "Perversely, the economic crisis undercut the material foundations of neopatrimonial rule: With ever fewer resources to distribute, political elites faced a growing problem of how to maintain control of clientelist networks." Consequently, African countries became increasingly dependent on international donors. In exchange for further support, international donors imposed structural adjustment programs, aimed at decreasing the size of African

governments and at making them more efficient. This further decreased the capacity of these regimes to hold to power, for example, by providing highly paid jobs in the public sector. The final factor is the end of the Cold War that pushed international lenders not only to demand economic but also political changes to the African government in exchange for financial support. Notice that all of these factors are related to the exposure of similar economies to similar international shocks – none of them is related to diffusion.

A common economic shock also seems to explain another celebrated cluster of democratization, that in Latin America in the 1980s. Following independence, many Latin American countries turned to the policies of import substitution (ISI) in an attempt to industrialize. They systematically overvalued their currencies in order to make the import of machine tools and industrial materials more affordable. This had the unintended consequence of making their own mostly agricultural and commodity exports more expensive on world markets which, in turn, reduced inflows of foreign currency, depleted reserves and stoked inflation. Unsound fiscal and monetary positions, however, were not an impediment for lending from Western banks flush with petrodollars from the 1973 and 1979 oil embargoes. This pattern of cheap petrodollar loans to cover the hard currency needs of Latin American countries running trade deficits from ISI policies came to an abrupt halt, however, in 1979 when Paul Volcker, the chairman of the US Federal Reserve Board, worried about US inflation and raised interest rates. Suddenly, multiple developing countries in Latin America (and elsewhere) could not afford to refinance their debts leading the the Debt Crisis and the beginning of what is sometimes called the "lost decade" in Latin America (Oatley 2006, Ch. 14; Frieden 2006, Ch. 16). Interestingly, it was also this period that saw democratization arrive 12 times in the region, beginning with Bolivia, Brazil and Ecuador in 1979 and continuing to Guatemala in 1986. As with Africa in the 1990s, it was a common economic shock imposed on countries in similar economic positions that provided the impetus for geographically and temporally clustered democratization. Diffusion of policy ideas might explain the regional adoption of ISI policies the eventually placed most countries in the region in a similar economic position. But the

most direct cause for the wave of democratization was mostly likely simultaneous debt crises in multiple countries that damaged autocrats' patronage networks and undermined their ability to buy off opposition.

3 International Shocks and Democratization Waves

Before we turn to explaining how international shocks can and do induce waves of democratization, let us examine both phenomena with simple descriptives. Table 1 lists all transitions to democracy between 1961 and 2008. Seven periods emerge that might be considered regional "waves" of democratization: Latin America from 1979 to 1986; Africa from 1990 to 1994 and, again, from 1998 to 2000; Asia from 1988 to 1992 and 2007 to 2008; and Europe from 1974 to 1977 and 1989 to 1990.[3] 54 out of 94 transitions to democracy since 1961 actually occurred in temporal and regional proximity. Democratization does occur in waves.

Even a casual consideration of history associates several of these clusters of democratization in Table 1 with common regional economic or political shocks, for example, the 1980s debt crisis in Latin America, the end of cold war subsidies to African (and other) strongmen in the early 1990s, and the demise of the Soviet Union and its dominance of Eastern Europe in 1989. Other clusters, however, are less easily explained. If synchronous political and economic shocks, more so than diffusion, do explain the temporal and geographic clustering of transitions to democracy, we should expect that our key explanatory variables indeed covary in time and space. We turn to this question here. Our political shock, the end of the cold war — and the concomitant decline in US and Soviet support to often autocratic client states — requires little exposition: it occurred internationally

[3]Of course, regions can be defined differently and many of these countries in a given wave differ notably geographically, economically and culturally. This section categorizes regions on a broad (continental) level to illustrate basic relationships as simply as possible. The statistical tests in the following section will define regions more precisely by measuring the distance between countries.

Regions			
Americas	Africa/Middle East	Asia	Europe
Argentina (1963)	Turkey (1961)	Pakistan (1972)	**Greece (1974)**
Peru (1963)	Sudan (1965)	Thailand (1975)	**Portugal (1976)**
Domin. Rep. (1966)	Ghana (1969)	Thailand (1983)	**Spain (1977)**
Guatemala (1966)	Ghana (1979)	Philippines (1986)	
Honduras (1971)	Nigeria (1979)		**Poland (1989)**
Argentina (1973)	Uganda (1980)	**Pakistan (1988)**	**Hungary (1990)**
	Turkey (1983)	**South Korea (1988)**	**Romania (1990)**
Bolivia (1979)	Sudan (1986)	**Sri Lanka (1989)**	**Bulgaria (1990)**
Brazil (1979)		**Nepal (1991)**	**Czech. (1990)**
Ecuador (1979)	**Comoros (1990)**	**Bangladesh (1991)**	
Peru (1980)	**Cape Verde (1991)**	**Mongolia (1992)**	Albania (1992)
Bolivia (1982)	**Sao Tome (1991)**	**Thailand (1992)**	Moldova (1996)
Honduras (1982)	**Benin (1991)**		Georgia (2004)
Argentina (1983)	**Zambia (1991)**	Taiwan (1996)	
El Salvador (1984)	**Mali (1992)**	Indonesia (1999)	
Nicaragua (1984)	**Congo (1992)**	Kyrgyzstan (2005)	
Grenada (1984)	**Lesotho (1993)**		
Uruguay (1985)	**Madagascar (1993)**	**Bhutan (2007)**	
Guatemala (1986)	**Burundi (1993)**	**Thailand (2008)**	
	CAR (1993)	**Nepal (2008)**	
Suriname (1988)	**Niger (1993)**	**Maldives (2008)**	
Panama (1989)	**Ghana (1993)**	**Pakistan (2008)**	
Chile (1990)	**South Africa (1994)**		
Haiti (1994)	**Malawi (1994)**		
Suriname (1991)			
Guyana (1992)	Sierra Leone (1996)		
Haiti (1994)			
Mexico (2000)	**Kenya (1998)**		
Peru (2001)	**Sierra Leone (1998)**		
Ecuador (2002)	**Nigeria (1999)**		
	Senegal (2000)		
	Ivory Coast (2000)		
	Niger (2000)		
	Guinea-Bissau (2000)		
	Comoros (2004)		
	Guinea-Bissau (2004)		
	Burundi (2005)		
	Liberia (2006)		
	Mauritania (2007)		

Table 1: *Transitions by Region. Bolded names represent regional waves.*

and suddenly. The economic variables, however, demand closer attention and the specific economic variables emerge from our hypothesis.

We argue above that patronage is the key to autocratic longevity. Autocrats often hold on to power though a combination of repression and clientalism. Repression increases the cost of opposition and patronage and clientalism increase the opportunity cost of opposition for those who benefit from the status quo. Both activities are expensive for autocrats. Thus, when dictators lose access to revenue they also lose security in power. Autocrats can use present revenue streams from the economy to pay their security forces and buy off opposition or they can revenue smooth by borrowing from international markets. We hypothesize that when both revenue sources are impinged, autocrats are most likely to negotiate a transition to democracy that will protect their wealth rather than face the possibility of a full loss of power and wealth.

The two key economic variables that emerge from our hypothesis are growth in real GDP and international debt. Growth proxies for an autocrat's revenue stream via taxes or simple seizure of other's income while debt – more specifically total external debt as a percentage of gross national income – measures access to external revenue. When debt is high and growth contracts, we expect autocrats to democratize in order to avoid a possibly worse fate. But are these two economic variables geographically and temporally clustered?

Figure 1 examines growth in four continents. The points represent the median growth rate in real GDP for all countries on a given continent in a given year. Years with strong international shocks are consequently easy to identify. For example, as the first panel in the figure shows, the economies in half of the countries in Africa shrank by more than two percent in 1980 and the continent experienced a similar regional shock in 1992. The Latin American debt crisis of the early 1980s is also apparent. Half of the economies in the Americas shrank by more than 2.6 in 1982 and then again half shrank by 1.7 percent in

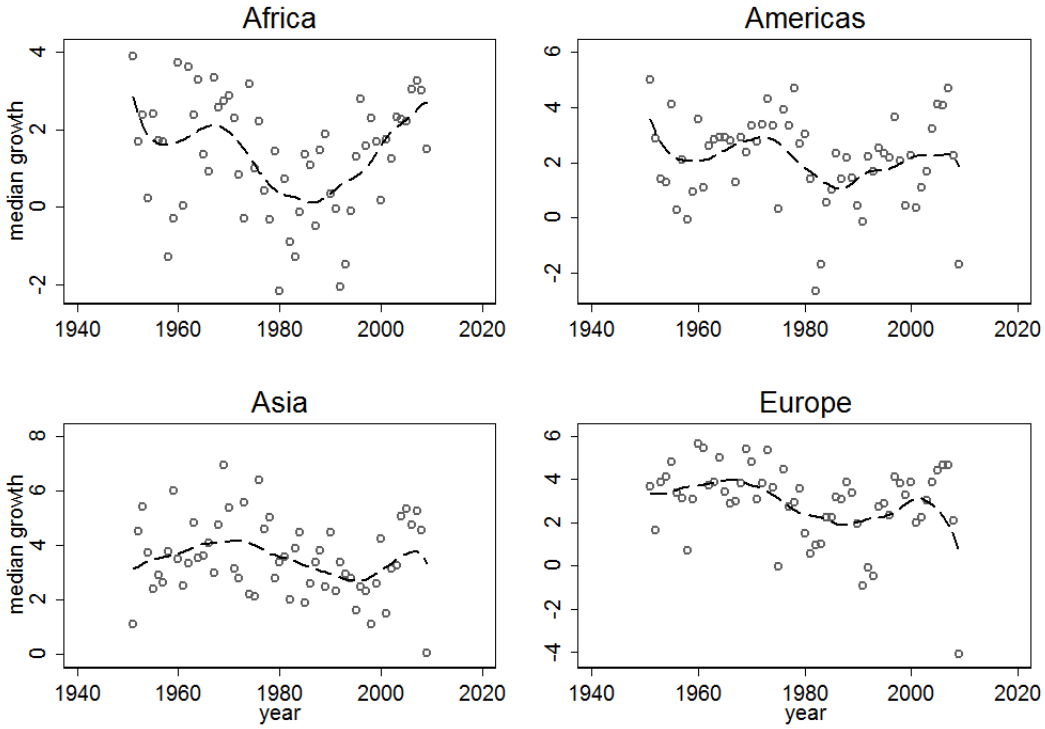


Figure 1: *Median growth rates in real GDP in four continents, 1951-2009. Dashed lines depict lowess smoother, bandwidth =.4. The Americas combine North and South America. Oceana, the fifth continent in the UN's definition, is not shown.*

1983. Medians, of course, ignore much variation and the experience in many countries was much more dramatic. Nevertheless, for our purposes the medians identify international shocks quite well. The international financial crisis, for example, shows up dramatically in the Americas, Asia and Europe in 2009 but left Africa relatively unscathed.

The international debt levels in Figure 2 also display a clear regional pattern. One observes that African debt steadily rose from the early 1970s to the mid-1990s, when over half of all African countries had an external debt level over 100 percent of gross national income, before steadying and then tapering off in the early 2000s. The Americas actually experienced two debt spikes, the famous one in the early 1980s and another after

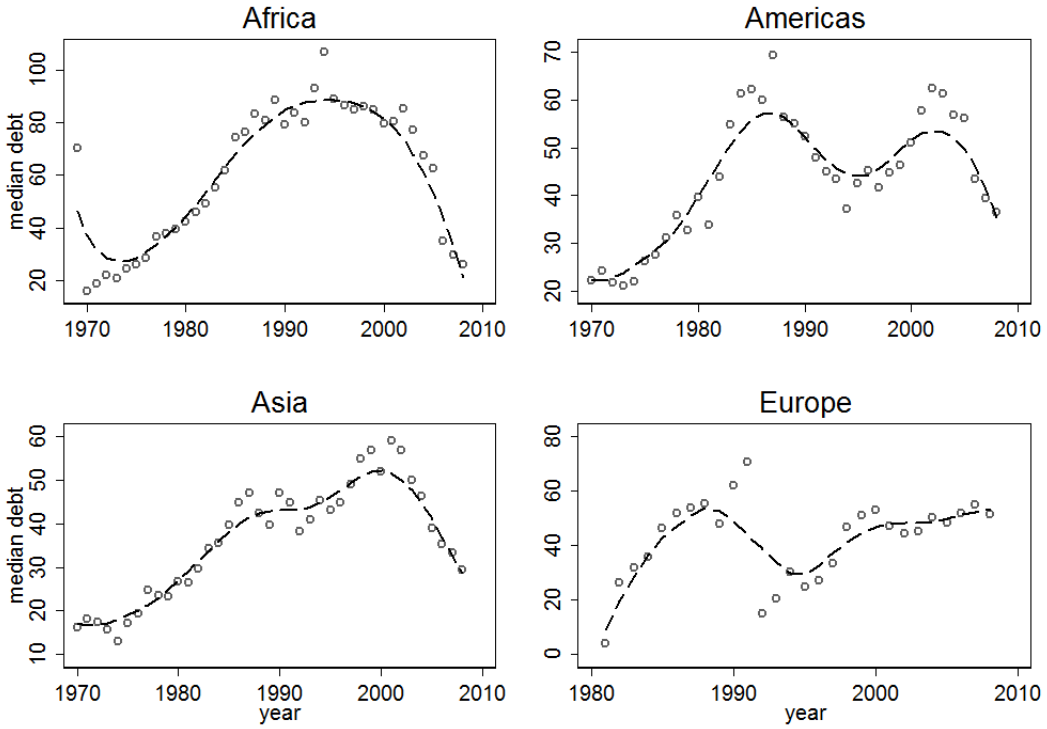


Figure 2: *Median debt levels in four continents, 1969-2009. Total external debt stocks as percent of gross national income. Dashed lines depict lowess smoother, bandwidth =.4. The Americas combine North and South America. Oceana, the fifth continent in the UN's definition, is not shown.*

2000. Asian debt peaked shortly after the Asian financial crisis and then declined steadily. Regional trends are clearly present.

4 Analysis

4.1 The Data

4.1.1 The Dependent Variable

We code regime type following the extended database of Przeworski et al. (2000), which covers most countries from 1950 to 2002. There are two types of regimes: democracies and autocracies. To be defined as democratic, a country must satisfy four conditions: (1) the chief executive must be elected either directly or indirectly by the population; (2) the

legislature must be elected directly by the population; (3) there must be more than one party; and (4) there must have been at least one alternation in power due to elections.[4] Any regime that does not satisfy one of these conditions is authoritarian.

4.1.2 Independent Variables

Diffusion: As discussed above, previous authors have typically used highly questionable measures of diffusion. Instead of looking at diffusion, they have looked at the impact of having democratic neighbors. But, as illustrated by the example of Mexico and the United States, if an autocracy democratizes after it had a democratic neighbor for an extended period of time, then it cannot be considered as evidence of diffusion. Diffusion must take place within a reasonable period. We thus define the diffusion variable as being the change within a given period in the proportion of neighbors that are democratic.[5] We calculate eight diffusion variables that cover between one and eight years. For example, the diffusion lag 3 variable measures the proportion of neighbors that are democratic today minus the proportion that were democratic three years ago, with each variable scaled from -1 to 1. It thus gives the change in the proportion of neighbors that are democratic over the last three years. A value of one signifies that while none of a country's neighbors were democracies three years ago, they are now all democracies.

International Shocks: Four measures of international shocks are included. First, we introduce a cold war dummy to account for the change in the international political system driven by the end of the cold war. As discussed above, the end of the Brezhnev doctrine was a key factor in explaining the collapse of authoritarian regimes in Eastern

[4]The last rule is applied retrospectively. For example, in Japan the LDP (Liberal Democratic Party) won all elections until 1993 when it lost and voluntarily relinquished power. Because the LDP respected the electoral results, Japan is coded as democratic during the full period. Malaysia held three elections between 1957 and 1969. The incumbent party won the first two, but not the third. Even so, it refused to cede power. Malaysia and similar cases are autocracies during the whole period. Finally, there are instances, such as Botswana, where the incumbent party never lost elections. As one cannot know whether it would give up power, Przeworski et al. (2000) assume that these countries are not democratic.

[5]A neighbor is defined as any country that shares a border or that is within 150 miles by water.

Europe and Mongolia. The cold war dummy captures this important change in the world's international political order.

Our three other variables measure economic variation. The first is the growth rate of GDP per capita. Many scholars argue that economic performance influences the stability of political regimes (e.g., Gasiorowski 1995; Haggard and Kaufman 1995). Recent studies have shown that economic growth has a more robust effect on the survival of autocracies than on that of democracies (e.g., Epstein et al. 2006; Houle 2009). Autocracies that perform badly economically are more likely to democratize. Notice that domestic economic performance is influenced by international factors. As discussed above, for example, the weak economic performance of most African economies during the 1980s can be at least partially explained by the deterioration in the terms of trade of products such as coffee and cocoa.

Our second economic variable is the level of debt as a percentage of GDP. As argued above, debt often leads to regime change because it disrupts patronage networks. Indebted countries are also more vulnerable to demand for economic and political reforms from international donors. High levels of debt clearly played a significant role in the democratization waves of both Latin America and sub-Saharan Africa.

Finally, we use trade openness, measured as the sum of the value of imports and exports divided by GDP. As argued by Ahlquist and Wibbels (2012), trade openness may affect the balance of power between the owners of labor and capital – respectively, the masses and the ruling elites. Increasing trade openness, for example, may increase the well-being of the masses who become less inclined to demand regime change for instrumental reasons, such as redistribution. We include this variable because countries from the same regions tend to have similar degree of trade openness and to trade similar goods. Consequently, an international shock to the value of a traded good would have a similar effect on countries from the same region.

Notice that these variables do not, in any way, exhaust all of the possible sources of common causation. One of the main problems associated with testing the effect of

diffusion is that all of the correlation in regime change among neighbors is automatically attributed to diffusion although, in principal, such correlation could be caused by either diffusion or common causation. Here we simply account for some potential mechanisms that could explain why countries from the same regions tend to democratize concurrently. Other potential mechanisms could be, for example, pressure from international donors which could be captured by the level of dependence on foreign aid or any of multiple other sources of synchronous shocks. We could certainly include all of these other potential sources of common causality in our models but as is unfortunately often the case in the developing world, data are simply not available for most countries and for extended periods of time. Moreover, the relevant variables are likely to differ across region as illustrated by the comparison of Eastern Europe on the one hand – where the end of the Brezhnev doctrine was the key factor – and Latin America and sub-Saharan Africa on the other hand – where economic factors were much more important. Therefore, the fact that when we include this limited set of variables the effect of diffusion almost completely vanishes strongly suggests that the previous literature has overestimated the true effect of diffusion on democratization.

4.1.3 Control Variables

In order to avoid choosing the control variables that simply support our hypothesis, with two exceptions which will be discussed below, we use the same set of domestic control variables as Przeworski et al. (2000).[6] Many economic variables, that are not directly related to international shocks, have been claimed to affect democracy. The modernization literature, for example, argues that wealthy autocracies are more likely to democratize (e.g., Lipset 1959). Further, countries relying heavily on natural resources are often

[6]Przeworski et al. (2000) also include the proportion of the countries in the world that are democracies which is meant to capture diffusion. Since the inclusion of this variable may reduce the effect of diffusion, and does not properly test diffusion theories, we did not include it in our main analysis. However, when the proportion of the countries in the world that are democracies is included in the analysis, our results strengthen while interestingly the coefficient on the proportion of the countries in the world that are democracies is negative and not statistically significant (available upon request).

argued to be less likely to be democratic (Ross 2001). One possible explanation is that the revenues emanating from natural resources are usually controlled by the state, which increases the resources available for repression or cooption. The analysis thus controls for GDP per capita and for being a large oil exporter.[7]

The social and cultural context has also been argued to influence democracy. Islam and Catholicism are thought to be harmful and Protestantism conducive to democracy (e.g., Huntington 1991). In addition, some scholars suggest that divided societies are less likely to establish and maintain democratic institutions (e.g., Dahl 2000). Variables measuring the proportion of the population that is Muslim, Catholic and Protestant are included, as well as variables measuring ethnic and religious fractionization. The latter give the probability that two individuals selected randomly are from different groups.

Some political factors are also important. For example, British colonies are often argued to have inherited institutions favorable to democracy (e.g., La Porta et al. 1998). A dummy variable for former British colonies is included. We also add a dummy variable for countries that became independent after 1945. This is important because such countries may, for example, have weaker institutions, reducing their chances of establishing stable democracies. Moreover, previous studies typically find that countries that have experienced many transitions in the past are more likely to experience transitions in the future. We add a variable measuring the number of democratic breakdowns that a country has experienced.

Finally, since the publication of Przeworski et al. (2000), a number of studies have stressed the importance of accounting for the age of political regimes (e.g., Svolik 2008). Therefore, we add a variable not included by Przeworkski et al., the age of the autocracy. In order to address a criticism often made about Przeworski et al. (2000) — that GDP per capita alone is not sufficient to measure economic development — we also add the

[7]The latter is a dummy variable which indicates whether the average ratio of fuel exports to total exports in 1984-86 is greater than 50 percent.

proportion of the population that lives in urban areas.[8] All control variables are taken from the extended data set of Przeworski et al. (2000).

4.2 Method

Many democratization papers rely on Markov transition models. As we posit that transitions to and from democracy are substantively distinct, as discussed above, we estimate transitions in only one direction: from autocracy to democracy. A binary logit or probit would often serve well to model the type of discrete outcomes that we wish to predict but the small number of democratizations in our sample raise concerns about bias. Maximum likelihood estimation of logistic models suffers from small-sample bias, the degree of which is associated with the number of cases in the less frequent of the two categories. We therefore rely on the rare events logit technique, a form of penalized likelihood, proposed by King and Zeng (2001) to reduce any possible bias. Standard errors are clustered on country. As the authors note, penalized likelihood has the benefit of producing finite, consistent estimates of regression parameters in the case of logistic regression when the maximum likelihood estimates do not even exist because of complete or quasi-complete separation.[9]

4.3 Results

4.3.1 Diffusion without economic shocks

It is often best to start as simply as possible. In Table 1 above we listed all transitions to democracy organized by region and date and noted the pattern of spatial and temporal clustering. In Table 2 we now present the results of a diffusion variable (*Change in the % of democratic neighbors*) intended to explain such clustering of democratization. The first two columns in Table 2 present the same-period effect of our diffusion variable in a bivariate model and then in a model that repeats the specification from Przeworski et al

[8]The results do not depend on the inclusion of these two variables (available upon request).
[9]Implementation is aided with a software package, ReLogit, by Tomz, King and Zeng (2003).

(2000). A substantively and statistically significant positive effect emerges in both models suggesting that democratization in neighboring states is associated with democratization domestically. We employ the Przeworski et al (2000) specification both to assure ourselves that we have reasonable controls for other potential sources of democratization but we also, as noted above, hope to assure readers that we have not selected the specification most advantageous to purposes. All control variables are lagged by one period.

We constructed the diffusion variable using 5 different lags but in a manner intended to give the diffusion variable the greatest opportunity to show an effect. Thus, a 3-year lag, for example, is not the present period's change in the percentage of democratic neighbors, but rather the change in the percentage of democratic neighbors over the previous 3 years. Consistent with the diffusion results in the first two models, the diffusion variable shows a strong and significant positive effect with all lag definitions, albeit less resounding than in models that that use democracy level, not changes to democracy, for operationalizing diffusion. This finding illustrates the importance of using the appropriate measure of diffusion. The previous literature, by focusing on the effect of the *level* of democracy abroad on change in democracy at home – instead than on the effect of *change* in democracy abroad on change in democracy at home – has overestimated the effect of diffusion. The few studies that have looked at the effect of change in democracy abroad have typically omitted the issue of regime transition. For example, Leeson and Dean (2009) look at how changes in the Polity score abroad affect the Polity score at home. However, they do not account for whether variation in the Polity score is caused by the breakdown of democracy, democratization or an increase in the quality of democracy in already democratic states. Differentiating between these possibilities is important because the previous empirical literature has found that different variables affect democratization and the survival of democracy (Przeworski et al. 2000; Houle 2009).

Table 2: Dictatorship to Democracy: The Diffusion Effect

	Bivariate	PACL	Full Model				
			lag 1	lag 2	lag 3	lag 4	lag 5
Change % dem. neigh.	2.393	2.283	2.352	2.255	1.321	1.262	1.267
	(1.094)**	(.713)***	(.719)***	(.554)***	(.589)**	(.541)**	(.468)***
Age		-.013	-.002	-.003	-.003	-.004	-.004
		(.004)***	(.005)	(.005)	(.005)	(.005)	(.005)
Muslim		-.006	-.006	-.006	-.006	-.006	-.006
		(.006)	(.006)	(.006)	(.006)	(.006)	(.006)
Oil		-.695	-.576	-.557	-.555	-.548	-.541
		(.707)	(.585)	(.581)	(.579)	(.575)	(.573)
Ethnic frac.		-.011	-.008	-.008	-.009	-.009	-.009
		(.006)**	(.005)	(.005)	(.005)*	(.005)*	(.005)*
Log GDP $_{PC}$		.115	.019	.018	.009	.006	.002
		(.177)	(.171)	(.171)	(.171)	(.171)	(.171)
New country		-1.137	-.645	-.627	-.661	-.666	-.684
		(.387)***	(.418)	(.418)	(.417)	(.415)	(.414)*
British colony		-.067	-.084	-.080	-.078	-.077	-.074
		(.422)	(.373)	(.373)	(.371)	(.371)	(.372)
Religious frac.		.003	.001	.002	.001	.002	.002
		(.008)	(.008)	(.008)	(.008)	(.008)	(.008)
Catholic		.001	.0004	-.00009	.0004	.0003	.0002
		(.006)	(.006)	(.007)	(.007)	(.007)	(.007)
Protestant		-.009	-.006	-.007	-.007	-.007	-.007
		(.010)	(.009)	(.009)	(.009)	(.009)	(.009)
No. Past Transitions			.547	.544	.528	.517	.502
			(.129)***	(.128)***	(.127)***	(.125)***	(.125)***
Constant	-3.903	-2.736	-2.985	-3.002	-2.828	-2.768	-2.679
	(.140)***	(1.522)*	(1.395)**	(1.403)**	(1.409)**	(1.405)**	(1.405)*
No. Obs.	4321	3485	3485	3435	3377	3317	3244

Note: Rare events logit. Lags report the number of years in the single lag, not the number of years a single observation is lagged. A 3-year diffusion 'lag' thus is the difference in the percentage of neighboring states that are presently democracies compared to three years prior. Explanatory variables lagged by one year. Urbanization, a variable in the PALC specification, is omitted because of a high proportion (51%) of missing observations. It is largely orthogonal to the diffusion and economic variables anyhow. Standard errors clustered by country. ***$p < .01$, **$p < .05$ and *$p < .1$.

4.3.2 Diffusion versus common economic shocks

To test our argument empirically that political and economic shocks account for the observed effect of diffusion, we analyze three additional regression set-ups. In Table 3, we rerun the previous regressions with the addition of the variables capturing economic variation. Table 4 repeats table three but divides the sample into Cold War and post Cold War periods. Finally, Table 5 interacts debt levels and economic shocks. In all three tables, we find that the effect of diffusion diminishes substantially and that it almost always disappears after we control for economic and/or political shocks.

Table 3: Dictatorship to Democracy: Economic Variables

	Number of years in the lag				
	1-year	2-years	3-years	4-years	5-years
Change % dem. neigh.	1.395	1.781	.618	.851	.802
	(1.046)	(.767)**	(.829)	(.693)	(.641)
Age	-.005	-.005	-.006	-.005	-.006
	(.005)	(.005)	(.005)	(.005)	(.005)
Muslim	-.009	-.009	-.009	-.009	-.009
	(.007)	(.007)	(.007)	(.007)	(.007)
Oil	.276	.264	.280	.268	.258
	(.556)	(.541)	(.557)	(.548)	(.547)
Ethnic frac.	-.009	-.009	-.009	-.009	-.009
	(.007)	(.007)	(.007)	(.007)	(.007)
Log GDP $_{PC}$	-.115	-.124	-.117	-.119	-.120
	(.225)	(.226)	(.224)	(.225)	(.225)
New country	-1.544	-1.469	-1.545	-1.513	-1.510
	(.500)***	(.499)***	(.502)***	(.499)***	(.495)***
British colony	.337	.333	.340	.339	.341
	(.382)	(.384)	(.383)	(.383)	(.383)
Religious frac.	.011	.011	.011	.011	.011
	(.012)	(.012)	(.012)	(.012)	(.012)
Catholic	-.005	-.005	-.005	-.005	-.005
	(.008)	(.008)	(.008)	(.008)	(.008)
Protestant	-.027	-.028	-.027	-.028	-.028
	(.010)***	(.010)***	(.010)***	(.010)***	(.010)***
No. past transitions	.305	.323	.300	.302	.301
	(.126)**	(.125)***	(.127)**	(.127)**	(.127)**
Trade openness	-.002	-.002	-.002	-.002	-.002
	(.004)	(.004)	(.004)	(.004)	(.004)
Growth shock	.368	.345	.371	.370	.382
	(.278)	(.280)	(.284)	(.281)	(.280)
Log debt	.615	.583	.605	.584	.576
	(.155)***	(.151)***	(.148)***	(.147)***	(.150)***
Constant	-3.944	-3.893	-3.882	-3.846	-3.810
	(2.013)*	(2.002)*	(2.006)*	(2.003)*	(2.003)*
No. observations	2243	2236	2222	2205	2185

Note: Rare events logit. Standard errors clustered by country. $^{***}p < .01$, $^{**}p < .05$ and $^{*}p < .1$. Diffusion effect is sporadic. Regains sig with seven-year lag. Multicollinearity does not account for volatile diffusion coefficient. Diffusion's $\frac{1}{VIF} = .98$ in Model (1). `Growth shock` indicates negative growth in the current or previous year.

In Table 3, the most striking finding is that effect of the diffusion variable drops to statistical insignificance for all of the lags except for lag 2, where the effect of diffusion diminishes from its counterpart in Table 2 but remains statistically significant at the five percent level. As implied by our argument, the coefficient on the debt variable is positive and statistically significant at the one percent level in all eight regressions. Substantively, using the estimates from the first model in Table 3, a one percent increase in the debt level is associated with an .018 change in the odds of democratization.[10] The more debt a country bears, the more likely it will democratize, holding other conditions constant. Likewise, although not significant in this table, a country is more likely to democratize when its economy experiences slow (or negative) growth in either or both of the preceding periods. Finally, trade openness has a negative but not statistically significant effect on democratization, which is consistent with the previous literature that finds a weak negative relationship between trade openness and the level of democracy (see Milner and Mukherjee 2009). Different external factors tend to be important in different regions.

Predicted probabilities are sometimes more intuitive for interpretation than factor changes in odds ratios. Figure 3 compares the predicted probabilities of a transition to democracy at different levels of the diffusion variable from models that control for economic variables (solid red line) and those that do not (dotted blue line). The difference is substantial. The probability of democratizing when all of an autocracy's neighbors democratize drops by up to 35% (and 14 percentage points). Other lags and diffusion values show smaller effects but the predicted effect of diffusion on democratization is uniformly lower for positive values of diffusion at all lag levels when economic shocks are controlled for.

Diffusion is at best a weak predictor of democratization. But if diffusion does not explain the clustering of democratization shows in Table 1, then what does. Our argument is that common economic shocks to autocracies with similar regional debt levels (from

[10]Exponentiating β in order to interpret the logit with factor change in odds, noting the level-log set-up for elasticities: $\frac{e^{.615}}{100}$.

similar economic policies, e.g. ISI) at least partly explains the clustering of democratization. High debt removes the ability of autocrats to draw on outside financing to pay off opposition (and finance suppression) when the domestic economy is not performing. We now shift our focus to the economic variables as well as diffusion.

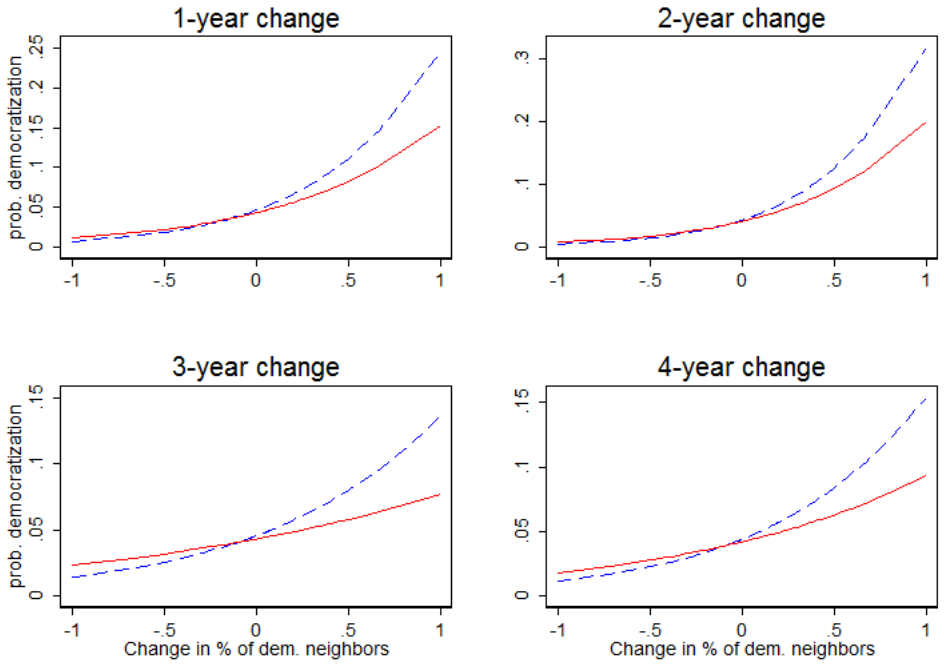


Figure 3: *Predicted probabilities of democratization at different changes in the percentage of democratic neighbors. Dashed line estimated from PACL specifications in Table 2. Solid line estimated from models with economic covariates (Table 3). Other interval level covariates held at means. Dichotomous covariates set at zero. Samples for all models restricted to match that of Table 3, Model 4.*

Moving beyond substantive effects, Figure 4 plots 95% confidence intervals for the effect of diffusion on the probability of democratization for four diffusion-lag variables as estimated in Table 3. The effect of diffusion on democratization is statistically indistinguishable from zero for most levels of diffusion above 50% and only marginally significant for much of the range below that. Diffusion continues to have an effect but it is a weak effect in both substantive and statistical significance.[11]

[11]Moreover, in models that impute values for missing data (AMELIA), its effect nearly completely disappears.

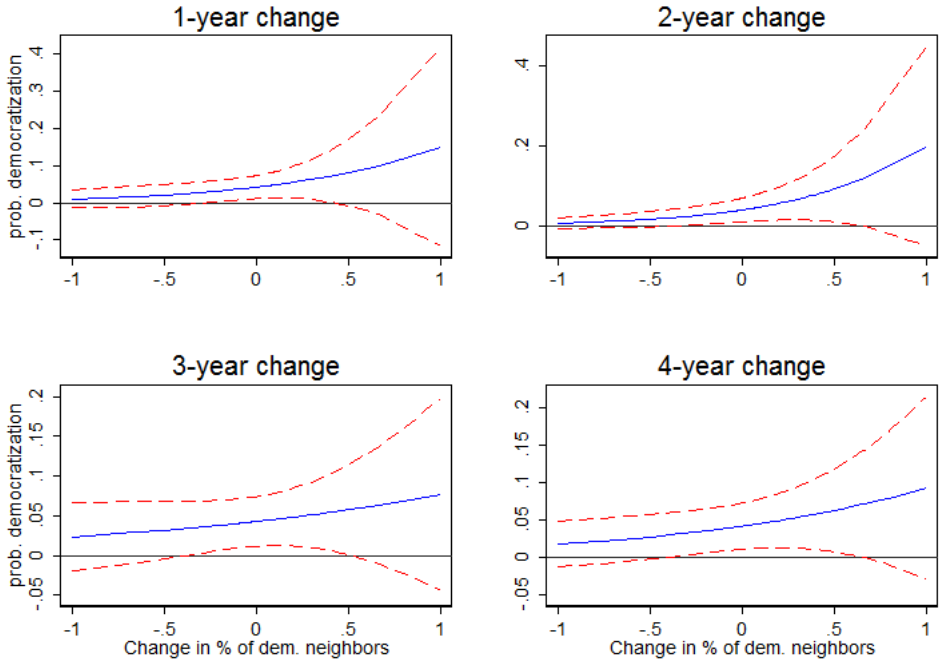


Figure 4: *Predicted probabilities of democratization at different changes in the percentage of democratic neighbors. Estimated from models with economic covariates (Table 3). Dashed lines are 95% confidence intervals. Interval level covariates held at means. Dichotomous covariates set at zero.*

4.3.3 The Cold War

Until now, we have added only economic control variables. Table 4 now addresses the possibility that an epochal political variable – the Cold War – could influence the relationship between diffusion, economics and democratization. In a period in which the Soviet Union and the United States supported (and even militarily intervened in) client states, it is possible that political considerations might trump all others. Table 4 replicates the models of Table 3 in the Cold War and post Cold War periods. A distinct pattern emerges. Diffusion shows volatile and sporadically significant positive effects during the Cold war but never reaches standard levels of significance in the post-Cold War, a period in which the economic variables – growth shocks and debt – show large and statistically significant effects. It seems that the economy mattered much more for democratization after the Cold War ended and diffusion not at all.

Table 4: Dictatorship to Democracy: Cold War and After

	Cold War					Post Cold War				
	Number of years in lag									
	1-year	2-years	3-years	4-years	5-years	1-year	2-years	3-years	4-years	5-years
Change % dem. neighbors	.766	3.195	1.917	1.924	1.946	2.563	1.359	-.125	.378	.027
	(2.058)	(1.306)**	(1.281)	(1.015)*	(.816)**	(1.373)*	(1.230)	(1.509)	(1.260)	(1.270)
Age	-.011	-.009	-.009	-.009	-.009	-.009	-.009	-.009	-.010	-.010
	(.009)	(.010)	(.009)	(.009)	(.009)	(.008)	(.008)	(.008)	(.008)	(.008)
Muslim	-.0009	-.002	-.002	-.002	-.002	-.012	-.012	-.011	-.011	-.011
	(.015)	(.015)	(.015)	(.014)	(.014)	(.007)*	(.007)*	(.007)	(.007)	(.007)
Oil	1.004	1.029	1.028	1.042	1.044	.221	.227	.221	.220	.205
	(.739)	(.782)	(.762)	(.768)	(.778)	(.625)	(.625)	(.636)	(.634)	(.643)
Ethnic frac.	-.013	-.016	-.015	-.016	-.018	-.007	-.008	-.009	-.008	-.008
	(.010)	(.011)	(.011)	(.011)	(.011)	(.008)	(.008)	(.008)	(.008)	(.008)
Log GDP $_{PC}$	-.204	-.231	-.226	-.227	-.218	-.122	-.122	-.116	-.123	-.122
	(.386)	(.398)	(.393)	(.395)	(.401)	(.239)	(.239)	(.241)	(.239)	(.239)
New country	-2.318	-2.052	-2.152	-2.120	-2.088	-1.963	-1.991	-1.999	-1.995	-2.001
	(.723)***	(.714)***	(.712)***	(.703)***	(.696)***	(.673)***	(.676)***	(.677)***	(.675)***	(.677)***
British colony	.692	.779	.779	.821	.862	.300	.304	.306	.299	.300
	(.681)	(.676)	(.680)	(.681)	(.682)	(.492)	(.494)	(.488)	(.495)	(.493)
Religious frac.	.026	.033	.031	.032	.033	.008	.008	.008	.008	.008
	(.022)	(.022)	(.023)	(.023)	(.023)	(.013)	(.013)	(.013)	(.013)	(.013)
Catholic	-.007	-.008	-.007	-.007	-.007	-.0001	.0002	.0006	.0005	.0007
	(.016)	(.017)	(.016)	(.016)	(.016)	(.008)	(.008)	(.008)	(.008)	(.008)
Protestant	.001	-.002	-.002	-.004	-.006	-.033	-.033	-.032	-.032	-.032
	(.024)	(.024)	(.024)	(.024)	(.025)	(.013)**	(.013)**	(.013)**	(.014)**	(.014)**
No. previous transitions	.388	.461	.431	.441	.453	.053	.042	.036	.031	.027
	(.154)**	(.153)***	(.155)***	(.156)***	(.155)***	(.292)	(.294)	(.293)	(.293)	(.294)
Trade openness	-.009	-.007	-.008	-.007	-.007	.003	.003	.002	.003	.003
	(.008)	(.008)	(.008)	(.008)	(.008)	(.003)	(.003)	(.003)	(.004)	(.004)
Growth shock	-.196	-.323	-.282	-.323	-.317	.889	.862	.873	.884	.887
	(.481)	(.485)	(.499)	(.503)	(.497)	(.396)**	(.387)**	(.386)**	(.386)**	(.390)**
Log debt	.417	.348	.364	.351	.335	.611	.614	.618	.598	.597
	(.270)	(.246)	(.249)	(.256)	(.266)	(.201)***	(.202)***	(.202)***	(.204)***	(.207)***
Constant	-2.963	-3.164	-3.016	-3.002	-3.071	-3.481	-3.418	-3.375	-3.286	-3.246
	(3.451)	(3.585)	(3.521)	(3.539)	(3.587)	(2.445)	(2.454)	(2.482)	(2.483)	(2.501)
No. observations	1121	1117	1112	1105	1095	1122	1119	1110	1100	1090

Note: Rare events logit. Standard errors clustered by country. ***$p < .01$, **$p < .05$ and *$p < .1$.

4.3.4 Debt-Shock Interaction

Our theory stipulates that debt creates the structural conditions in which autocrats have less recourse to outside financing needed to buy political support when economic shocks occur. The effect of growth shocks on democratization is therefore conditional on debt levels and implies that empirical tests should interact economic shocks and debt. Table 5 does so in three time periods: the whole sample, the Cold War and the post-Cold War. Diffusion never reaches standard levels of significance in either period.

Growth, however, shows markedly different results. Again, as effects are difficult to interpret, especially in a logit interaction (Ai & Norton 2003), we plot out the marginal effect of a growth shock on the predicted probabilities of democratization at increasing levels of (logged) debt. Figure 5 not only shows that a growth shock can have a large effect on the probability of democratization – as high as 30% at high debt levels (*lnDebt=6*) but reveals another effect as well. Previous transitions to democracy increase the ease with which subsequent transitions occur. The solid (black) line in Figure 5 shows the estimated probability of democratization for countries that have had five previous democratizations; the dotted line at the other extreme (light blue) shows the predicted probabilities for countries that have never had a previous democratization. There is nearly a 20 percentage point difference in the effect of an economic shock on democracy when comparing the two groups at a high debt level. (*lndebt=.6*).

Setting previous transitions at the sample mean (0.313), we now turn to the conditional predicted probabilities in all three time periods. Figure 6 plots out the marginal effect of a growth shock (defined as negative growth in either of the previous two periods) on the probability of democratization at increasing levels of debt. A striking result emerges. Growth shocks have no effect on democratization during the Cold War but a large effect at high debt levels after the Cold War. In highly endebted countries, a contracting economy can have a 50% probability of inducing democracy. Debt at lower levels shows a markedly

milder effect and is often not statistically distinguishable from no effect. The economy does matter for democratization but only notably after the Cold War.

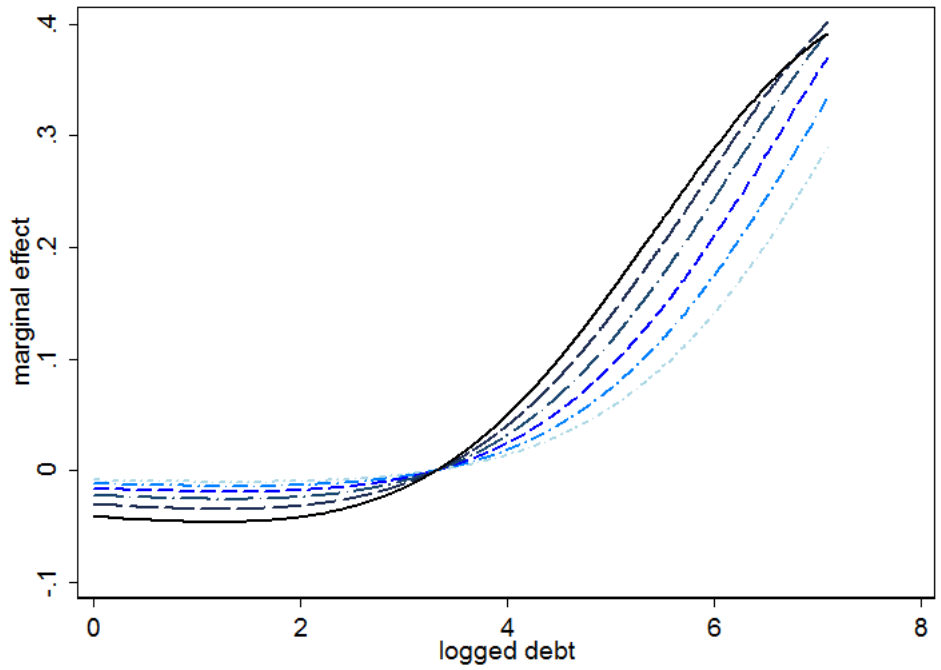


Figure 5: *Marginal effect of a growth shock on the predicted probability of democratization at various number of previous transitions: Shortdash-dot = 0; dash-dot = 1; dash = 2; longdash-dot = 3; longdash = 4; solid = 5. Other interval level covariates held at means. Dichotomous covariates set at zero. All years. Based on Model 1 in Table 5.*

5 Conclusion

This paper has made three important contributions to the literature on waves of democratization. First, it develops a more appropriate test of the diffusion theory, according to which democratization abroad induces democratization at home. Previous authors have usually test how the likelihood of regime transition is affected by transition in neighboring countries, but how it is affected by the level if democracy of its neighbors. The few studies that look at the effect of change in democracy ignore the question of whether such changes are associated with democratization or democratic breakdown (e.g., Leeson and

Table 5: Dictatorship to Democracy: Shock-Debt Interactions

	All years	Cold War	Post Cold War
Change % dem. neigh.	1.439	.792	2.700
	(1.068)	(2.092)	(1.421)*
Age	-.005	-.011	-.008
	(.005)	(.009)	(.008)
Muslim	-.008	-.002	-.010
	(.007)	(.015)	(.007)
Oil	.237	1.108	.178
	(.557)	(.818)	(.615)
Ethnic frac.	-.009	-.013	-.007
	(.007)	(.011)	(.009)
Log GDP $_{PC}$	-.125	-.218	-.127
	(.224)	(.391)	(.238)
New country	-1.521	-2.316	-1.897
	(.502)***	(.739)***	(.685)***
British colony	.314	.667	.254
	(.383)	(.685)	(.494)
Religious frac.	.010	.027	.006
	(.012)	(.023)	(.013)
Catholic	-.004	-.008	.002
	(.008)	(.016)	(.008)
Protestant	-.027	.0007	-.034
	(.010)***	(.024)	(.014)**
No. previous transitions	.323	.379	.076
	(.127)**	(.157)**	(.289)
Trade openness	-.002	-.010	.003
	(.003)	(.008)	(.003)
Growth shock	-1.491	1.471	-2.485
	(1.094)	(1.817)	(1.614)
Log debt	.333	.697	.100
	(.208)	(.461)	(.283)
*Shock * Log(debt)*	.450	-.454	.766
	(.260)*	(.501)	(.344)**
Constant	-2.781	-3.761	-1.217
	(2.120)	(3.753)	(2.700)
No. observations	2243	1121	1122

Note: Shock-Debt Interaction. Rare events logit. Diffusion variable uses single year in lag. Standard errors clustered by country. ***$p < .01$, **$p < .05$ and *$p < .1$.

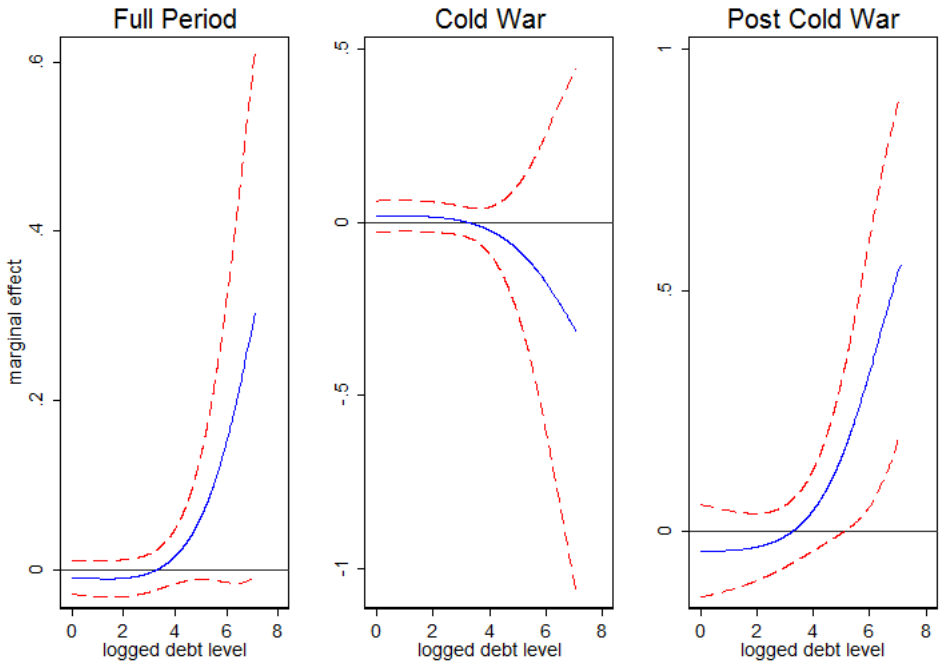


Figure 6: *Marginal effect of a growth shock on predicted probabilities of democratization at given levels of logged debt. Interval level covariates held at means. Dichotomous covariates set at zero. Dashed lines represent 95% confidence intervals. Based on Table 5.*

Dean 2009). This is important because many empirical studies show that democratization, democratic breakdowns and democratic deepening are influenced by different factors (e.g., Przeworski et al. 2000; Houle 2009). Studies – such as that Leeson and Dean (2009) – conflate the effect of diffusion on democratization with its effect on many other different types of transitions (or even change in democracy level without transition).

Second, we have shown that the diffusion literature relies on problematic assumptions about the democratization process. Its basic argument rests on the 'demonstration effect' – when the masses witness that their counterpart in a neighboring countries was able to overthrow a similar regime, they realized that their own authoritarian regime is not infallible and they also learn about the most effective means to bring it down. For example, after the democratization of Serbia in 2000, pro-democratic forces throughout the Balkans and Central Asia used the combination of street protests and electoral victories to end dictatorships. More recently, the successful overthrow of authoritarian regimes in Tunisia

and Egypt have spurred waves of protests throughout the Middle East and North Africa. Just as in the cases of Tunisia and Egypt these protests have taken place in town squares and usually on prayers days. The problem with this argument, however, is that democratization does not come about straight forwardly from mass protests. Democratization is indeed often demanded by the masses, but democratization usually only happens if the elites concede the regime. If, as has been the case in Libya for example, the ruling elites refuse to cede power, the population is highly unlikely to overthrow the regime and establish a democracy, unless external powers support the rebels militarily.

The problem for the diffusion argument is that the masses are not the only ones that learn from past experiences; autocrats also learn from fallen dictators. Syria and Libya, for example, used much more repressive measures to squeal the revolts early on than Tunisia and Egypt did earlier. Other countries, such as Saudi Arabia, quickly made key economic concessions to key actors in order to prevent protests from spreading at home. Koesel, Bunce and Wolchik (2011) show that even geographically remote countries like Azerbaijan, China and Russia have adopted more repressive measures as a results of the Arab Spring. This does not mean that diffusion plays no role, but that we cannot simply assume – like the diffusion literature has done – that the 'demonstration effect' will enable the diffusion of regime change from one country to another. We need to develop causal mechanisms that relate international factors to the domestic process of democratization.

Third, and most importantly, we propose a new explanation of why transitions to democracy tend to cluster in space and time. We argue that the exposure to common economic and political international shocks – not diffusion of democratization from one country to another – explains why countries from the same regions tend to democratization at the same time. Neighboring countries tend to be vulnerable to the same shocks, because they usual share similar economic profiles or are dependent on the same external powers, as in the case of the communist regimes of Eastern Europe. Therefore, the same adverse international shocks – such as the deterioration in the terms of trade, the rise in the

international interest rate or the rise in the price of food – will tend to destabilize similar regimes within a given region; thus provoking regional waves of democratization.

Our empirical results strongly support our arguments. Even when we do not account for international political and economic shocks the effect of diffusion is much weaker than that reported by previous studies – which use incorrect measures of diffusion. When we do include measures of international shocks, however, the effect of diffusion disappears almost completely, while our indicators of economic and political shocks are significantly related to democratization. One of our strongest findings is that autocracies with high debt levels are much more likely to transition to democracy. This finding support our argument that debt threaten the patronage networks upon which autocracies depend to retain power. Similarly, autocracies that are experiencing economic crises are more likely to democratize. Consistent with the anecdotal evidence about the effect of the end of the Cold War on democratization in Eastern Europe and sub-Saharan Africa, for example, we find that the Cold War dummy is negative and highly significant. These findings strongly suggest that both of our political and economic shocks variables are important for the understanding of democratization and that the effect of diffusion could simply be an illusion.

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6 Appendix

Variable	Mean	Std. Dev.	N
democracy	0.025	0.157	2243
diffusion11	0.006	0.079	2243
lagedem	32.423	30.034	2243
lmoslem	36.739	39.474	2243
loil	0.097	0.296	2243
lethnic	59.654	25.827	2243
lnlrgdpch	7.461	0.932	2243
lnewc	0.775	0.418	2243
lbritcol	0.292	0.453	2243
lreligion	73.86	20.033	2243
lcath	23.681	30.65	2243
lprot	11.773	16.672	2243
lstra	0.313	0.766	2243
lopenk	67.913	40.228	2243
gshocklt0lag2	0.543	0.498	2243
lndebtv3	3.879	0.972	2243

Table 6: Appendix. *Summary statistics. Using sample from Table 3, Model 1.*

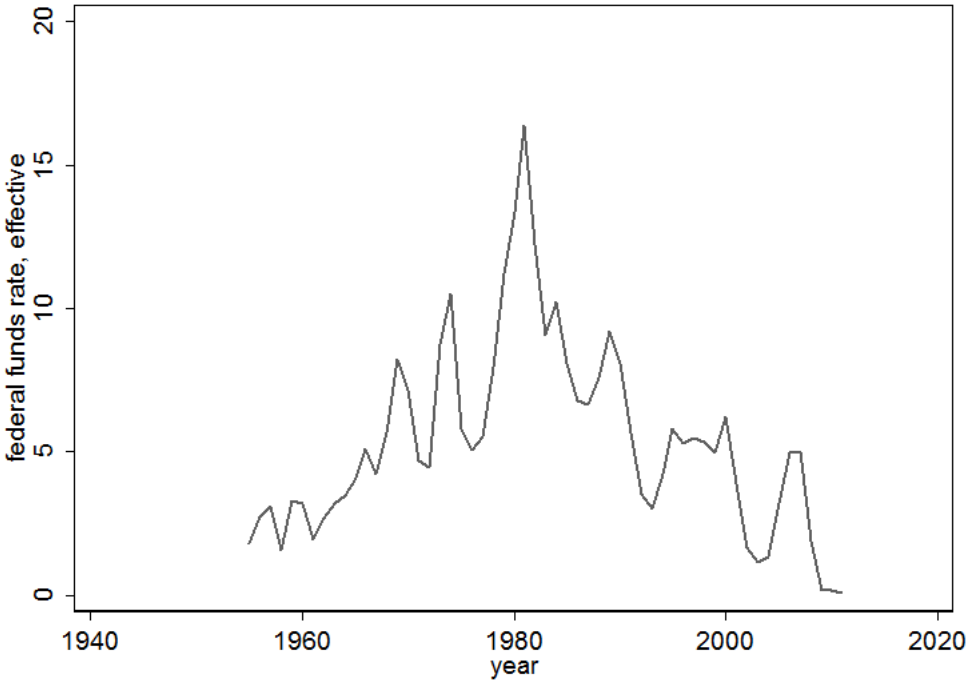


Figure 7: Appendix. US Federal Funds rate over time.

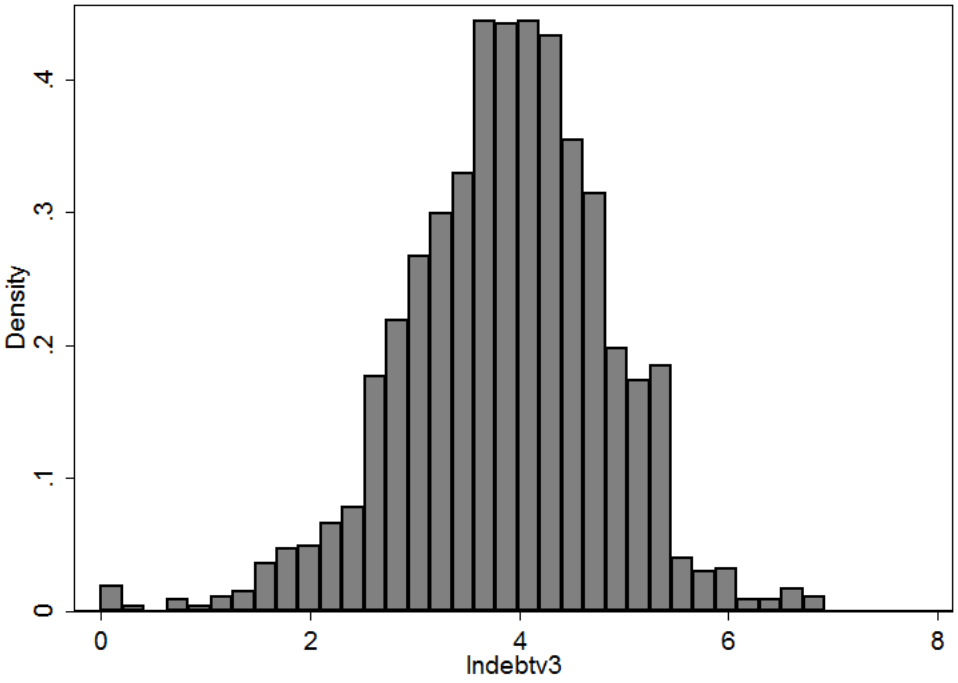


Figure 8: Appendix*Sample from Table 3 , Model 1.*