ECONOMIC POLICY

NBP
National Bank of Poland

*Economic Policy*
**Fifty-fourth Panel Meeting**
**Hosted by the National Bank of Poland**
**Warsaw, 27-28 October 2011**

# Financial Liberalization and Reversals: Political and Economic Determinants

Nauro F. Campos (Brunel University)
Fabrizio Coricelli (University of Paris I)

The organisers would like to thank the National Bank of Poland for their support.
The views expressed in this paper are those of the author(s) and not those of the funding organization(s).

Centre for Economic Policy Research

CES

PARIS SCHOOL OF ECONOMICS
ECOLE D'ECONOMIE DE PARIS

# Financial Liberalization and Reversals: Political and Economic Determinants*

Nauro F. Campos
Brunel University
and IZA
*nauro.campos@brunel.ac.uk*

Fabrizio Coricelli
University of Paris 1,
Paris School of Economics and CEPR
*fabrizio.coricelli@gmail.com*

This draft: September 2011

**Abstract**: What accounts for the dynamics of financial reforms? This paper identifies the political regime as one of the main factors. Focusing on democratization and financial reform, it puts forward novel evidence for a U-shaped relation, across countries and over time, for different reform measures and a wide range of estimators. Partial democracy is a main obstacle to financial reforms and democratization, when incomplete, may lead to severe financial reform reversals. We also show that the main effects of the political regime materialize during the implementation phase of liberalizations, which determines the shift from *de jure* to *de facto* financial liberalization.

JEL: C23, D72, O38, P16
Keywords: financial reform, political liberalization, economic liberalization, reform reversals, European periphery

* We would like to thank Enrica Detragiache, Tullio Jappelli, Elias Papaioannou, Thierry Verdier, Carlos Winograd and seminar participants at the 15th World Congress of the International Economic Association (Istanbul), Development Workshop in Clermont Ferrand, Seminar of Development and Globalization at University of Paris 1-Sorbonne, Université Paris 2, CEPR-Fondazione Debenedetti Conference "Reforms without Prejudice" (Milan) and Paris School of Economics-IMF Conference "Political Economy of Crisis-induced Reforms."We also thank Zorobabel Bicaba and Lenka Gregorova for the excellent research assistance. We are responsible for all remaining errors.

## 1. Introduction

Starting in the 1990s and continuing in the first decade of the 21st century, the processes of democratization and of financial liberalization have both accelerated at the world level. Furthermore, in 2010-2011 a wave of democratization has spread throughout Northern Africa and the Middle East, with uncertain outcomes. In light of the global financial and economic crisis that started in 2007, one pressing issue is whether the crisis could determine a slowdown or even a reversal in the process of financial liberalization around the world, and especially in emerging economies. Previous literature has indeed found a significant adverse impact on financial reform coming from recessions and banking crises (Abiad and Mody, 2005) and financial reform experienced a "great reversal" in the aftermath of the great depression of the 1930s. Nevertheless, an optimistic picture arises from recent empirical literature and *de jure* reform indicators constructed by the IMF. For a large sample of countries, *de jure* financial reform has progressed continuously, with negligible episodes of backtrack and reversal (Abiad et al., 2008). Furthermore, democracy is found to positively and monotonically affect economic reform, including financial reform (Giuliano et al., 2010) and thus the continuous progress in democratization across the world would suggest little room for policy reversals. However, in this paper we suggest a more nuanced picture.

The political dimension of financial reform has been emphasized in the literature. Rajan and Zingales (2003) argue that incumbent firms may block, or even reverse, financial reform as financial development improves the conditions for entry of new firms and thus increases competition, challenging rents of the incumbents. Incumbents can in turn form blocking elites and pressure governments to retard or reverse financial reform. Full-fledged democracy might be an antidote to the power of blocking elites, as under full democracy governments are accountable to the population as a whole. Less clear is what happens away from full-fledged democracy. Is the power of blocking elites monotonically increasing, or there could be a non-monotonic relationship between degree of democracy and power of economic elites? Is it conceivable that the power of economic elites reaches its peak in intermediate regimes, regimes of "partial democracy", in which economic elites "capture" the government? By contrast, in autocracies, political elites may have greater power than economic elites and thus may implement financial reforms if these increase their chances to maintain (or increase) their political power. Financial reforms, by benefiting a large share of the population, may be considered as public goods and thus provide consensus for the political elites. Moreover, as political elites aim at appropriating resources from the economy, they may have an interest in efficiency-enhancing reforms, which will increase the resources in the economy. These arguments play a role in explaining the experience of autocracies capable of implementing efficiency-enhancing reforms, as in the case of China. Political science and political economy have approached these experiences of efficient autocracies within the theory of "selectorate" (Epstein and Rosendorff, 2004, Besley and Kudamatsu, 2007).

Therefore, away from full democracy, democratization may in fact slow down or even reverse economic reforms. We find strong evidence of a non-monotonic relationship between democracy and financial reform, which suggests that the lowest level of financial reform tends to occur in intermediate regimes of "partial democracy". The non-monotonicity also implies that during the democratization process, as the system travels from autocracy to partial democracy, financial reform is likely to go through reversals (Figure 1.) The focus of this paper is on this non-monotonic relationship.

When this non-monotonicity holds, the effects of political regime changes on financial reforms depend crucially on initial conditions. Yet, cross-country analyses involving countries with highly heterogeneous starting points may generate misleading results. To tackle the identification problem and related endogeneity and omitted variables concerns we complement the analysis on the full sample of countries with an analysis of a specific set of countries, the transition countries of Eastern Europe and former Soviet Union. These countries provide a unique natural experiment situation. The variation in the level and type of political competition across these countries in the starting point of the sample, early 1989, is minimal and the same can be said of financial liberalization. Following such similar initial conditions, the sample displays significant variation in both political and financial variables over 1989-2005 as the countries in the sample followed radically different economic and political trajectories (Campos and Coricelli, 2002). In addition, we subject our main conclusions to a number of different estimators (specifically, GMM and IV) in an attempt to minimize concerns about potential endogeneity. In this light, it is worth noting that it is not our intention to give a strong causal interpretation to the main conclusions. Instead we argue, in line with previous research,[1] for the existence of important feedback effects in both directions but with the qualification, which is novel and unexplored in previous research, that this is largely because their relationship may be better described as U-shaped.

The main contributions of this paper are as follows. Firstly, the paper brings to light evidence for an "unconditional" non-monotonic association between economic and political reforms. This obtains using different measures of the two reforms, over time, across countries and in a panel setting. Secondly, it presents econometric evidence incorporating this U-shaped relationship into models of financial reform that have focused on economic determinants (Abiad and Mody 2005). This strengthens the U-shaped relation (it provides "conditional" support to this finding) and it improves the fit of previous models as the estimates of the other variables turn out to be significantly more precise (once the non-monotonicity is accounted for). Thirdly, and finally, this is the first papers to our knowledge

[1] For example, Giavazzi and Tabellini argue that "the timing of events indicates that causality is more likely to run from political to economic liberalizations, rather than vice versa: many economic liberalizations are preceded by political liberalizations, while the converse is observed less frequently—although we cannot rule out feedback effects in both directions" (2005, p.1299).

to propose and to estimate an econometric model that specifies *de jure* financial liberalization as an input to *de facto* financial liberalization. Political regimes still have a non-monotonic effect on *de facto* financial reform even after controlling for the role of *de jure* measures.[2] This suggests that the political regime plays a fundamental role in the implementation and enforcement of legislation rather than solely on the legislation itself. [3]

Although our focus is on financial reforms, we provide evidence of the presence of a U-shaped relationship for other economic reforms, namely for trade liberalization. Although it is beyond the scope of this paper to analyze the whole set of possible economic reforms, our approach suggests that the relationship between democracy and economic reforms crucially depends on the type of economic reforms considered. Each economic reform has different characteristics in terms of the cost and benefits for different groups of society and economic elites.[4] Our focus has been on reforms that have some features of public good, as they benefit large parts of the population, as in the case of the financial sector, which offers services to both enterprises and households. Similarly, trade reforms may have these features. By contrast, labour market reform and privatization, among others, involve more narrowly defined and conflicting interests. For these reasons, we focus on specific reforms, such as financial reforms, while providing evidence as well for trade reform. An analysis of the relationship between democracy and other types of reforms is an important topic for future research.

In terms of policy implications, our results highlight a U-shaped relationship, which

[2] Yakovlev and Zhuravskaya (2011) analyze the gap between *de jure* and *de facto* liberalization for Russian regions and link such gap to different governance institutions across Russian provinces.

[3] Although in this paper we stress the *de jure* vs. *de facto* differences in terms of financial liberalization, we also note that recent studies contrast *de facto* to *de jure* political reform (Acemoglu and Robinson, 2006). Our empirical analysis distinguishes between these two aspects but find that the differences are not strong enough to affect our results.

[4] Caselli and Gennaioli (2008) analyze the different political feasibility of deregulation and legal reform, which improves contract enforcement. Incumbents oppose deregulation but can favour legal reform. This implies that to buy support for deregulation, governments could implement first legal reforms.

implies that democratization does not necessarily lead to economic reform, and indeed that partial or incomplete democratization may lead instead to economic reform reversals. Another important policy implication regards the importance of the implementation phase: there seems to be a longer space than previously thought between *de jure* and *de facto* liberalization and one reason the pressure tools currently favoured by international organizations do not seem as effective is because they ignore the political system, e.g., trying to implement structural reforms in partial democracies.

The paper is organized as follows. In section 2, the data set and different measures of political and financial liberalizations are presented in order to assist in the search for the stylized facts. The main fact that emerges from this is the non-monotonic relationship between political and financial reforms. Section 3 discusses analytical issues and throws light on the conditions under which a country falls into a "reversals trap," that is, a situation in which not only political and economic liberalization co-exist, but reinforce each other. Section 4 discusses the econometric evidence for the U-shaped relation between political and financial reforms and argues that this relationship holds across countries, over time, in a panel setting as well as within a model of financial reform dynamics in which *de jure* reform is an input for *de facto* reform. Section 5 concludes.

## 2. Political and Financial Reforms: Stylized Facts

This section presents the data put together to identify the stylized facts of the relationship between financial and political reforms. We construct objective and replicable indicators of financial liberalization as well as of political reform for a yearly panel of 26 countries from 1989 to 2005, using as wide an array of indicators as possible so as to reflect the multi-faceted nature of these two processes.

We first discuss the indicators used to capture the various dimensions of financial reforms (see Levine, 2005). In particular, we try to account for both the size of the financial sector and its efficiency (the latter is the favoured measure while the former is the measure that has been used more widely.) We thus construct indicators for each of these dimensions.

The indicator of financial sector depth is based on three components: the ratio of liquid liabilities to GDP, the ratio of credit to the private sector to GDP, and the ratio of commercial and Central bank assets to GDP.[5] In order to combine these variables into a single indicator, we normalize them by equating the maximum (for all countries and years) of each component to one. We calculate the distance from each country-year data point to the global maximum (normalized to one) by (a) subtracting each country-year data point from the overall minimum (by overall we mean for all countries and all years), (b) calculating the range for each series (that is, maximum minus minimum), and (c) dividing the results from (a) by those from (b). Notice that this normalization is used for the political and economic (financial) reforms measures. In our view, this is superior to alternatives that use a subjective yardstick because, *inter alia*, there are a few countries in the last years of the sample (the new European Union members) that completed economic and political reforms and that are considered full-fledged market economies and liberal democracies.

The index of financial sector efficiency is based on two variables, obtained from the BankScope database. The first is the ratio of the bank overhead costs to total assets. The second is the net interest margin which is the bank net interest revenue as a share of its interest-bearing assets. Because in the two cases, larger values indicate less competition and "less reform," for consistency in step (a) of the normalization described above we subtract each country-year data point from the overall maximum. We argue that the index of financial efficiency is preferable to the index that captures the depth of the financial sector.

Let us turn to the measures of political liberalization. The aim was again to put

[5] Data are from the electronic version of the IMF's International Financial Statistics.

forward various measures capturing different aspects of political reform. The first measure is political rights from The Freedom House. This variable is coded in a 1 to 7 scale (with 1 indicating highest level of political rights and 7 the lowest level of political rights) and covers three main areas: the electoral process, political participation, and the functioning of the government. The Freedom House civil liberties measure uses the same scale and reflects freedom of expression and association, organizational rights, rule of law and individual rights. Notice that in the cases of political rights and civil liberties, higher values of the index indicate less rights and liberties. We collected another, finer, democracy variable from the Nations in Transit report also published by Freedom House. The Nations in Transit democracy variable is coded in a scale of 1 to 7 (with 1 highest and 7 lowest) and reflects four dimensions**:** the electoral process, civil society, independent media and governance. Finally, we also use a measure of *de jure* presidential powers, the Presidential Power Index.[6]

We generate a composite index of political reform, using the same normalization applied to the financial reform measures, and combining Freedom House's Civil Liberties and Political Rights, Nations in Transit Democracy and the Presidential Power Index. In similar fashion, we conduct the analysis using both the index and its individual components.

Figure 2 shows evidence of the presence of a U-shaped relationship across countries between political and financial reforms.[7] Figure 2 displays the "between" panel estimates focusing on the simple, bivariate, relationship between political and financial liberalization. They are obtained by regressing the various measures of political reform on the preferred

---

[6] The index is based on whether 29 powers are established by the constitution and coded as follows: 1 – if the president holds exclusively a given power; 0.5 – if the president is sharing a power with another body; and 0 – if the president does not hold the power under question. The data are from Careja et al. (2006).

[7] Annual series data on financial reform is available for all transition economies, except for Tajikistan and Turkmenistan. Guergen et al. (1999) note that both countries have announced widespread financial reform packages in 1997-1998. Political reform, on the other hand, is still extremely restricted in Tajikistan until today and was so in Turkmenistan until the death of President Niyazov in late 2006. We predict the values of the financial reform indexes for these two countries using data on other reforms, such as price liberalization, trade reform and unemployment rates (to reflect one important aspect of labour market reforms).

measure of financial reform (the one reflecting efficiency, not depth or size of the financial sector). More specifically, Figures 2 plots the predicted and actual values from a regression of the country average political rights on linear and quadratic terms of the index of financial efficiency. The fit of the quadratic specification is better than that of the linear for every measure of political reform. As it can be seen in Figure 2, the relationship between financial reform and political reform is clearly U-shaped with a turning point (in this case a minimum) approximately at the value of 5. This is a value of the index that corresponds to partial democracy, and has Russia, Georgia and the Kyrgyz Republic as examples of countries whose political regime can be well characterized by this concept.[8]

The figure also shows each country in the economic and political reform space. It is important to keep in mind that the figure has averages over the whole period for which data is available (it generally starts in 1989 for Central European and in 1991 for former Soviet Union countries.) It can be seen that countries such as the Czech and Slovak Republics and Hungary have high levels of financial and political reform, while at the other extreme for countries such as Uzbekistan, Azerbaijan and Armenia it shows high average levels of financial reform but little in terms of political liberalization. In between, there are countries that have made limited progress on each of the two reforms, with some having made more inroads in political than in economic reforms (e.g., Romania and Georgia) and others that made relatively more progress in terms of economic than in terms of political reforms (e.g., Albania and Russia).

Figure 3 focus on reform reversals. For comparability, the two reform indices are normalized to 0-1 and re-scaled so that higher values reflect more reform. We define reform as the changes in levels of the two indicators (first-differences), measured on a year-to-year basis. We associate a reversal to the case when the value of this change is negative. Using this

[8] Notice that this obtains for the whole range of political reform measures, that is, for the cases of civil liberties, political rights, two democracy indexes, and press freedom.

definition, based on the 337 country-year cells for which data on the two reforms is available, we identify political reform reversals in 48% of the cases, we detect financial reform reversals in 35% of the cells, and joint political and financial reform ("twin") reversals in 17% of all possible cases. As it can be seen in Figure 3, reversals in political or in financial reforms are detected in every single country in the sample. Moreover, in only 4 countries we do not observe joint reversals (namely, Estonia, Kyrgyz Republic, Moldova and Romania.)

Regarding the size of reform reversals and keeping in mind that both reform indices are on a 0 to 1 scale, the magnitude of the average change is 0.008 (for political reform) and 0.02 (for financial reform) with respective standard deviations of 0.09 and 0.07. In terms of ranges, the largest advance in a single year in financial reform (0.56) was for Croatia towards the end of the war in 1994 and in terms of political reform, the largest increase (0.77) was for Czechoslovakia in 1990. We find the largest reversal in a single year in terms of financial reform was for Russia in 1995 (-0.34) while in terms of political reform it is observed for Tajikistan in 1992 (-0.33). These suggest that reversals are more common than previously thought and that they tend to be rather severe. Reversals are at the root of the non-monotonic relationship among structural reforms. Box 1 describes how the experience of Russia provides support for our hypothesis on the U-shaped relationship between democracy and financial reform.

**Box 1: Russia and the U-shaped relationship between democracy and financial reforms**

The evolution of democracy and financial reform in Russia provides an interesting example of the U-shaped relationship between democracy and financial reform that we emphasize in the paper (Figure I below).

The Russian transformation which occurred during the 1990s was an attempt to rapidly introduce a private economy and establish a democratic system breaking with the legacy of the communist period. President Yeltsin was in office from 1991 to 1999. He was liberal both on economic and political issues and followed a policy of dialogue and cooperation with Western advanced countries. Summary indicators of political and economic reform confirm such ambitious transformation. However, despite Yeltsin’s ideas and approach, *de facto*, the equilibrium achieved was far from ideal democracy and market economy. Privatization of the large natural resource sector put in the hands of a small group of people, the so-called oligarchs, a large part of Russian wealth. This economic elite controlled *de facto* the political sphere, through what has been defined as “state capture” (Hellman, 1998). Economic reform and actual development in main economic areas, including financial sector development, stalled. Even though in 1999 Putin was selected as prime minister, and acting president, by Yeltsin himself with the objective of political continuity, he represented a significant break in Russian politics. Elected President of the Russian Federation in 2000, Putin introduced two main changes, both relevant for our analysis: first, he established the authority and power of the political executive over the oligarchs (i.e., economic elites); second, he centralized the political power away from the regions and from the state bureaucracy. These changes determined a switch of power away from economic elites to the state, or the political elite associated with Putin. According to measures of political freedom, there was a shift to a more authoritarian system, reflected by several political measures and by our indicator of political reform.

In spite of the setback in political freedom, financial reform sharply accelerated. According to EBRD economists (Berglof and Lehman, 2009), financial reform progressed quickly during the 2000s and became a fundamental source of economic growth in Russia. EBRD indicators suggest that during the 2000s financial sector reform showed the sharpest progress among all different reform areas. During the period of acceleration of financial reform, other reforms, such as privatization and competition policies stalled or even reversed, as in the case of large scale privatization (Figure II).

Figure I. Russia: Democracy (vertical axis) and financial reform

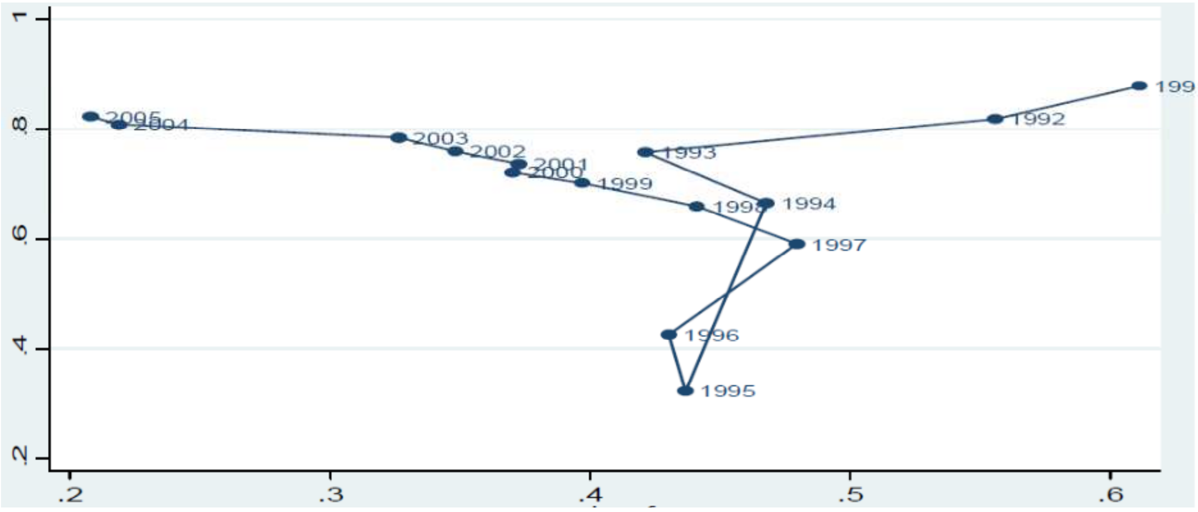
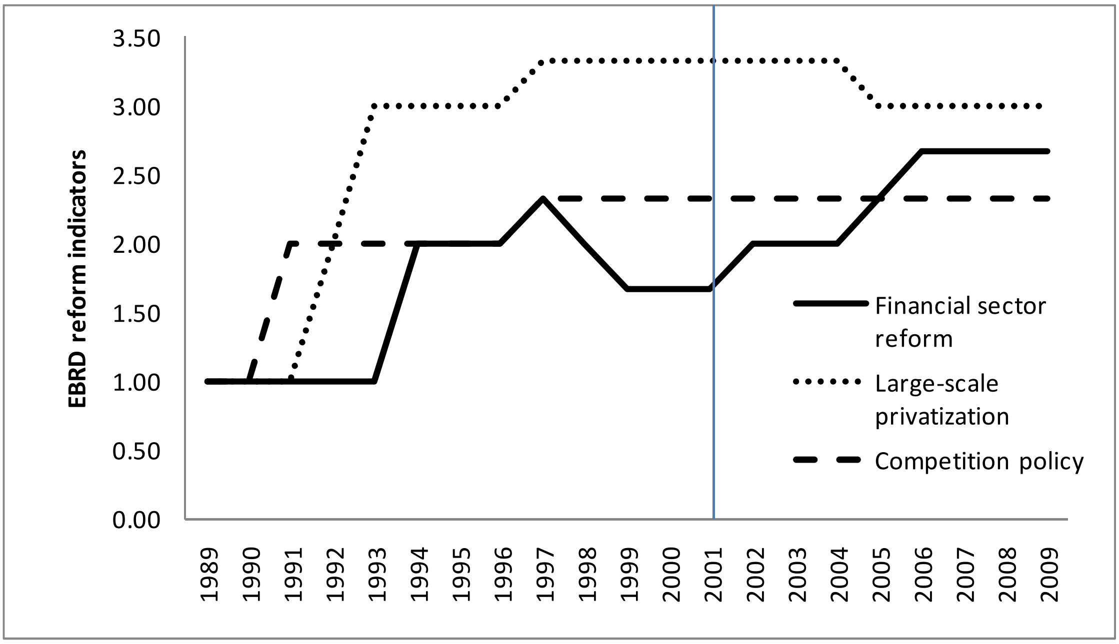



Figure II. Russia: Reform indicators (scale 1-4)




Source: EBRD, Transition Report, various issues

## 3. Explaining the U-shape

The non-monotonic relationship between degree of democracy and economic reforms implies that in intermediate regimes, regimes of so-called partial democracy, obstacles to reforms are at their peak. Analytically, two approaches can be identified in the literature. One relies on the blocking power of economic elites, which perceive that reforms would reduce their rents. The other focuses on the role of “political rents”, which are associated with maintaining political power. Although in the real world the distinction between economic and political rents is likely to be blurred, differentiating economic and political elites is crucial for our analysis.

Within the “economic rents” approach, potential losers try to defend their economic rents and lobby the governments to impede reforms. Depending on the monopoly rents threatened by reforms, there are different potential blocking interest groups. Parente and Prescott (2002) have formalized such idea, previously advanced by various authors (Kuznets, 1968, Mokyr, 2000). The blocking power of interest groups operates as well under democracy. In fact, such blocking power could be the strongest in democracy and autocracy could thus be a mechanism to reduce the power of interest groups and allow reforms to go through. Preszworski (1991) has used this approach to describe the reform process in Central and Eastern Europe.

Analyzing the transition process in Central and Eastern Europe, Hellman (1998) has advanced a different view, arguing that the net winners of transition, rather than the losers, blocked completion of reforms. “These net winners did not oppose the initiation of the reform process, nor have they sought a full-scale reversal of reform. Instead, they have frequently attempted to block specific advances in the reform process that threaten to eliminate the special advantages and market distortions upon which their own early reform gains were based. Instead of forming a constituency in support of advancing reforms, the short-term winners have often sought to stall the economy in a partial reform equilibrium that generates concentrated rents for themselves, while imposing high costs on the rest of society.” (p. 204).

This view goes under the heading of "state capture" and suggests a dynamic relationship between political and economic reforms that could give rise to an intermediate equilibrium trap of partial reforms. From the political perspective, if one defines a situation in which the state is captured as one of partial democracy, this approach is consistent with a U-shaped relationship between democracy and specific economic reforms.

Although Hellman's approach may offer an interpretation of the U-shaped relationship between democracy and economic reforms, an explanation based solely on the role of economic rents is likely to be incomplete. As argued by Acemoglu and Robinson (2006b), the relationship between political regime and economic reform is best understood by considering the role of political rents, rather than economic rents.[9]

Acemoglu and Robinson (2006b) model the non-monotonic relationship between political competition and economic reform (innovation) and find that "The impact of political competition on blocking is non-monotonic. Both elites that are subject to competition and those that are highly entrenched are likely to adopt new technologies" (2006b, p. 116.) The mechanism underlying the non-monotonicity rests on the political "replacement effect". With high political competition governments tend to innovate to avoid to be replaced. With low competition but high entrenchment incumbents innovate because there is very little risk of being replaced. Blocking of reforms takes place in intermediate regimes, whereby there is some competition and some entrenchment. To relate Acemoglu and Robinson view to our approach, note that systems with high degree of political competition can be defined as fully democratic, whereas entrenchment tends to be high in autocracy. The novelty of the Acemoglu and Robinson approach is that innovation is blocked not because it implies destruction of economic rents, but because it involves the destruction of political power.[10]

[9] We present a simple formalization of these ideas in the Appendix.
[10] An analogous result is obtained by Bueno de Mesquita and Smith (2004) in their study of the effects of different degrees of concentration of property on corporate behavior.

In the political science literature, Epstein et al. (2006) emphasize the central role of partial democracies in the dynamics of political regimes. Such intermediate regimes can be associated to what Gates et al. (2006) defined as "institutionally inconsistent political systems". These systems differ both from full-fledged, or "ideal", democracies and strong, or "ideal", autocracies. Such intermediate systems are characterized by the struggle among different elites for the control of political power, with the objective of maximizing elites' short term benefits. These systems are unstable and long-run objectives of maintaining political power do not play a key role. Economic power is sufficiently concentrated to induce elites to try to grab power and control government, as in the state capture literature. However, the concentration of power is limited and there is no political authority and/or consensus that can provide stability for such regime.

In summary, although the distinction between the political and economic rents is not very strong in practice, the political approach emphasizes the presence of a political elite capable of appropriating political rents. This distinction is crucial for our view, as it may happen that there is less power for economic elites in autocracy than in partial democracy, a situation in which economic elites can capture the state.

A non-monotonic relationship between economic and political liberalization requires the presence of at least three political regimes. The introduction of a regime of partial democracy, an intermediate regime between autocracy and full-fledged democracy, is the key element of the non-monotonicity.[11] Only in a full-fledged democracy, the majority of the population determines the decisions of the government. Away from full-fledged democracy, economic elites exert a dominant power. Traditionally, autocracy has been defined as the regime in which the elites have the absolute political power. However, non-democratic

[11] We exclude cases of military dictatorship and repression, and focus on regimes based on universal voting rights and elected governments. This assumption implies that all regimes can be considered de jure democracies, defined as systems based on universal voting rights.

regimes may be highly heterogeneous. Heterogeneity may characterize both the distinction between political and economic elites and the distinction between different economic elites. This heterogeneity allows the presence of multiple non-democratic political equilibria. Until recently, elite heterogeneity has received little attention in the political economy literature. One reason might be the difficulty in reaching general conclusions in models with heterogeneous elite. Indeed, in such a case political-economy equilibria depend on the specific nature of heterogeneity and on the specific dimensions of the political contest and economic reform areas.

A possible equilibrium under autocracy is one in which some elites form a coalition with the population in order to support a strong autocratic government that opposes the interests of other elites. We explore the possibility of emergence of a coalition between reform-oriented elites and the population to support a strong government capable to resist the pressures for blocking reforms by other elites.[12] Such coalition may support an autocratic government, in which an independent political elite retains power. By contrast, we define partial democracy as a regime in which the government is fully captured by economic elites. The objectives and constraints of the government in the two non-democratic regimes are sharply different. A strong autocratic government needs support in order to maintain its power. This support comes both from some elites and from the population. The preferences of the supporting elites and the population have to be taken into account by the autocratic government. By contrast, in partial democracy, the economic elites fully control the government. Therefore, the preferences of the dominant elites are the only ones that are taken into account in the decision making. This is the reason why this regime has been defined as "captured democracy" (Acemoglu and Robinson 2008).[13]

[12] Elite heterogeneity plays an important role also in Acemoglu (2008), who analyzes the emergence of coalitions between the poor population and the backward (low-skilled) elites.

[13] The following quote from Epstein et al. (2006) effectively summarizes the relevance of partial democracy: "We also learn that the frontier of this line of inquiry has shifted away from the study of

The definitions of the three political regimes are relevant to define the nature of policy reversals (Figure 1.) We can indeed define a threshold level for an intermediate regime. To the right- hand-side of this threshold, there is a region in which economic elites interfere with the political system and fully control the political process.[14] Moving left and crossing the threshold, there is a region in which the State may regain power against the economic elites by strengthening the position of the political elites. In this region, the political system relies on a coalition between some elites and the population. Therefore, depending on the relative position with respect to the threshold, a lower level of democracy may reflect two different configurations of power of economic elites. This is the hypothesis that we try to empirically verify in this paper.

In summary, the non-monotonicity between political regime and economic reforms arises because the power of interest groups may be weakened either in a full-fledged democracy or in a more autocratic regime. To maintain their power, autocratic governments may favour efficiency-enhancing reforms because these will increase consensus in the population and, at the same time, the resources at disposal of the political regime to buy such consensus. Such efficiency-enhancing reforms may favour as well certain economic elites, which participate in a coalition with the population to support the autocratic government. Lacking support by some economic elites, the autocratic government will be overthrown by opposing elites. Heterogeneity of elites is a distinguishing feature of our analysis and helps to explain why autocratic governments tend to implement fundamental economic reforms concentrated in specific areas, rather than ranging over a broad spectrum as in democracy.[15]

---

autocracies and democracies and toward the study of partial democracies. As we show here, the behavior of these systems largely determines the level, rate, and properties of democratization. While thus influential, partial democracies, being highly heterogeneous, are poorly understood. The study of democratization, we therefore conclude, should place them at its focus" (p. 552).

[14] This is the region that Rajan and Zingales (2003) have studied in connection with the role of interest groups in opposing financial development.

[15] Our approach has also some similarities with Rajan (2009), although our characterization of different political regimes is different.

The financial sector is one of the areas in which autocratic governments have carried out significant reforms.

Although it is likely that there is a positive correlation between different economic reforms, such correlation is far from perfect. In fact, in autocracy, and even more in the intermediate region of partial democracy, there may be less convergence between different areas of reforms.[16] Economic elites may block reforms in specific areas, whereas reforms can proceed in areas where there are not strong vested interests.[17] The functioning of the financial sectors may affect asymmetrically different elites. The presence of heterogeneous elites seems to be a useful assumption to understand the political economy of financial sector reform.

We see the link between the financial sector and political reforms working through two distinct channels. One can be thought as the defence of rent-seeking through barriers to financial development (in line with Rajan and Zingales, 2003). One elite benefit directly from blocking financial sector development. The other channel has to do with government revenues, as financial repression can be an important way for the state to raise revenue.[18]

While one elite benefit from financial repression, the other elite and the population are negatively affected. The elites controlling financial institutions have a direct interest in expanding their activities. Similarly, large manufacturing firms may need significant external finance and thus a developed financial sector. Finally, when the banking system is controlled by the State, political elites can use the banking sector as a powerful economic lever in their own interest.

From the above, it is apparent that we expect financial sector development to be faster

[16] For instance in Russia, during the shift towards more authoritarian government under Putin, financial sector reform improved markedly, while competition policy stalled and large scale privatization reversed as a result of major re-nationalizations. Braga de Macedo and Olivera Martins (2008) analyze the complementarity of reforms.

[17] This phenomenon may be reinforced by external pressures arising from increased international integration of the economy. With economic integration there is less scope for barriers to reform and thus protection of monopoly rents tend to be concentrated in a smaller set of sectors.

[18] High reserve requirements or ceilings on deposit rates increase bank margins and thus taxable income from banks.

(*ceteris paribus*) in dictatorships than in partial democracies. Both autocratic and democratic governments tend to foster financial development. Reversals in financial liberalization, however, are more likely in the transition from an autocratic regime towards a more democratic regime. Full-fledged democracy seems to be the best antidote against reversals. However, power groups may gain strength even in democracy and push for reversals of financial sector reform, in order to create barriers to entry and protect their monopoly positions as incumbents (Rajan and Zingales, 2003). Furthermore, the nature of financial sector reform in dictatorships is likely to be different from the one in democracies. Rather than financial reform geared towards increasing competition in the system, dictatorship may aim instead at financial sector reforms that increase the power and the revenue of political elites in the economy.[19]

## 4. Econometric Evidence on the Relationship between Political and Financial Reforms

This section presents and discusses econometric results that help to shore up and evaluate the existence of a non-linear relationship between political and economic (financial) liberalization. The discussion is organized in three main parts: (1) fixed-effects estimates focusing on the cross-country, over time relationship between the two reforms, (2) a structural model of the determinants of financial liberalization (Abiad and Mody, 2005), and (3) instrumental variables panel estimates accounting for the relationship between *de jure* and *de facto* dimensions of financial liberalization.

### *4.1 Fixed-Effects Estimates*

Table 1 presents fixed-effects panel estimates for the relationship between political and

[19] An interesting area for future research is the analysis of the different nature of financial sector development in connection with democracy, economic opportunity and more open societies. Recent work in the finance literature (Demirguc-Kunt and Levine, 2007) has emphasized the importance of the formal financial system in affecting the degree to which economic opportunities are defined by talent rather than by parental wealth and social connections.

financial reforms. The first column shows the results for the measure of financial depth and the second has the results for the index of financial efficiency, while the right-hand side has just the composite political liberalization index (the latter covering four different components as described in Section 2 above.) As it can be seen, there is strong evidence for a U-shaped relationship between financial and political liberalizations with the turning points being reached at the area we call partial democracy. We calculate the minimum values for financial depth and for financial efficiency occur when the political reform indexes are at 0.31 and 0.37, respectively (recall the political reform index is normalized to a 0 to 1 scale, with 1 indicating high levels of political liberalization.) It is worth illustrating these results by noting that the value of the political reform index in 1999, for instance, is .39 in Russia and .36 in the Kyrgyz Republic. One may think these values are somewhat "too low" but this may largely be due to the possibility of omitted variables. Indeed, the results presented in the rest of this section confirm this suspicion and help place the turning points closer to the .5 value, which may provide a better characterization of a situation of partial democracy.

It should also be mentioned that these simpler results obtain irrespective of which financial reform index we may concentrate on, irrespective of which individual component of any of the two financial reform indexes, and irrespective of which components of the political reform index we use.[20] These econometric results are equally strong for *civil liberties* and for the Nations in Transit's *democracy index* as they are for *press freedom*. For these three aspects of political liberalization, a strong U-shaped relationship emerges whether we focus on any of the aggregate financial reform indexes or on any of their five individual components. The results for the *presidential power index* and for *political rights* are somewhat not as strong. For the presidential power index, the U-shape relationship obtains only for the case of the Index 2 of financial reform, the one capturing efficiency. For political

[20] These are not shown for the sake of space, but are available from the authors upon request.

rights, the U-shaped relationship actually obtains for the two aggregate financial reform indexes, but it is weaker for index 1 than for Index 2 in that it fails to materialize for two individual components of index 1 (financial depth).

*4.2 Reform Reversals in the Abiad-Mody Model*

A critic may argue that the results above only support an "unconditional U-shaped" relationship between political and economic reform reversals. "Unconditional" because it does not depend on any other potentially important explanatory variable. Yet one concern is that the omission of other important determinants of any of the two reforms may unduly bias these results. In order to minimize this concern, we use an influential model of the determinants of financial liberalization.

The main objective of Abiad and Mody (2005) is two-fold: to create an index of financial liberalization across countries and over time, and to study how different political economy theories of reform succeed in explaining the dynamics of such indicator.[21] Their financial liberalization index is constructed for 35 (developing and developed) countries, annually from 1973 to 1996. The components of their Financial Liberalization Index are as follows: credit controls, interest rate controls, entry barriers in banking, operational restriction on banks (e.g. branching regulations), privatization, and restrictions on international financial transactions (e.g., multiple exchange rates.) For each dimension in each year, a country receives a score on a graded scale, with zero being "fully financially repressed," one "partially repressed," two "largely liberalized" and three "fully liberalized." It is clear that while the index from Abiad and Mody is a *de jure* measure, ours is a *de facto* measure of reform.[22]

---

[21] Notice that the sample in Abiad and Mody (2005) does not include any transition economy so unfortunately there is no overlap between their sample and ours.
[22] This is a crucial distinction in the financial liberalization literature (Kose et al, 2009). The next sub-section investigates how these two *de jure* and *de facto* dimensions relate and whether their relationship affects the finding of a non-linear relationship between economic and political reforms.

The empirical model from Abiad and Mody (2005) nests the main hypothesis from the political economy of reform literature. They argue that the various determinants of reform fall into the following categories: (a) *shocks* such as crises of various types; (b) *learning* about the effects of previous reforms, (c) *ideology* of those in charge of setting the agenda, negotiating political support and implementation, and (d) the *political and economic structures* which conditions the decision to embark in a given reform programme.

Their baseline econometric specification has financial reform as a function of a *learning* term reflecting the initial level of reform and the convergence effect between actual and desired level of reform. Moreover, Abiad and Mody (2005) also include various factors to reflect the role of shocks, namely balance-of-payment crises, banking crises, recessions and high-inflation periods. The influence of international financial institutions is assessed through a dummy variable for participation in an IMF program and that of global factors is proxied by the U.S. interest rate. For the political orientation of the government, they include dummy variables for left-wing and right-wing governments ("center" being the omitted category). The political and economic structured is proxied by the degree of trade openness of the economy.

In this paper, we tried to replicate their model as closely as possible. We collected data on all the explanatory variables in Abiad and Mody and measure them in exactly the same way as they did. There are only two main differences. They include a dummy variable for the political honeymoon period, the first year of a new government in office. During this period, the implementation of painful reforms is said to be easier because the newly elected government has political capital to spend. We could not include this variable in our specifications because, unsurprisingly, it turned out to be correlated with our political reform index. The second change was that Abiad and Mody also add a regional element to their learning story (i.e., countries learn about reform from their regional "neighbours.") In our case, all countries are from the same region so in our model we assume learning only takes place over time (that is, it does not happen at different speeds within different regions.)

Abiad and Mody find that while banking crises hinder, balance-of-payment crises foster financial reform. They find the initial level of reform matters. Declines in global interest rates exert a positive effect on domestic financial liberalization, but there is little evidence to suggest that recessions and high-inflation episodes are systematically associated with financial liberalization. Similar conclusions are reached with respect to participation in an IMF program. Finally, there is little evidence for the honeymoon political effect, for whether the government is left or right-wing and for the role of trade openness.

Table 2 presents our estimates of the Abiad-Mody model of the determinants of financial reform. First we report the tobit panel estimator because our financial reform index (the left-hand side variable) is constrained to the 0 to 1 interval. We report results for our financial efficiency index and our overall political reform index. In order to minimize obvious concerns about reverse causality, we lagged all variables by one-period (except political reforms, although we find that also lagging these makes the estimates even more precise.)

As it can be seen in Table 2, our findings are similar to those from Abiad and Mody (2005). Debt crises help financial reform, while banking crises hinder it. Lower U.S. interest rates boost domestic financial reform, while recessions and high-inflation show a systematic negative effect on financial reform. The results also show that the coefficients on IMF program, left-wing and right-wing are not statistically significant different from zero.

Yet the more important result from Table 2 is that the two terms for political reform are significant throughout and carry the same signs as in Table 1 above. These results suggest that the relationship between financial and political reforms is indeed U-shaped. Moreover, minimizing potential omitted variables contributed to better placing the turning points inside the partial democracy zone. For example, while in column 1 the minimum is reached for the value of .39 of our 0-1 index of political reform which is not substantially different from the values obtained in Table1, in the latter columns showing the complete Abiad-Mody model the minimum is reached at .45 (e.g., in column 5) which provides a better fit to the situation of partial democracy that is central to the explanations we develop in Section 3 above.

Table 3 uses the same specifications but now for the fixed-effects panel estimator. As it can be seen, there is no main qualitative change in the main conclusions. We replicate Abiad and Mody main findings and show that incorporating political reform is important to improve the predictive power of the model. Once again we estimate the turning point in the simplest specification (column 1) to be approximately .41 while the minimum in the complete model is reached at .52, that is, well within the partial democracy zone.

Table 4 contains some important changes. Chiefly among them is that now the left-hand side variable is *change* in the levels of reform (that is, the first-differences of the financial reform index). Moreover, we now cluster the standard errors at the country level in order to account for country-specific errors. As it can be seen, compared to the original Abiad-Mody results these are slightly worse than above in that a few important variables loose statistical significance (although most of the signs are still consistent). Among the results which remain, debt crisis spurs while recession dampens financial reform. Interestingly, left-wing governments are, ceteris paribus, more likely to implement financial reforms than right-wing and centre governments. More importantly, political reform is still a powerful variable explaining the evolution of financial reform across countries and over time, and that this relationship seems indeed to be U-shaped. In this case, the turning point seems to be reached at exactly .5 (in columns 4, 5 and 6) of the political reform index, and at .52 in column 7, all pointing towards well within the area of partial democracy.

The central claim of this paper is that the relationship between political and financial liberalizations follows a U-shaped pattern. In order to assess the strength of this claim, we focus our attention on the experience of the European periphery, more precisely on the group of countries known as the transition economies. All of these countries emerged from communism between 1989 and 1991 and as a group they provide a good setting to test these ideas because their levels of political and financial development were practically identical and effectively zero. Under communism, there was a dictatorship and hence no political rights and also there was very little financial development with, for example, no individual access to bank accounts. In this paper we have provided a conceptual account of this relationship and presented supporting econometric evidence. Yet a critic may charge that our findings may not be generalizable and that the U-shaped relation is a particularity of the transition process. For these reasons, in Table 5 we report results showing that the U-shaped relation between financial and political liberalizations also obtain for a much larger sample of developing and developed countries, using panel data with yearly frequency from 1973 to 2005.

The sources for the data set we assemble for this exercise are essentially the same as above but the time coverage is more extensive, starting in year 1973 and ending in 2005. The largest number of countries for which we have data on political and financial liberalization is 134 and this unbalanced panel gives us 1463 observations. The data covers 23 industrial and 111 non-industrial countries. The regional distribution of the developing countries sample is as follows: the data covers 16 countries in Asia, 24 in Central Asia, 35 in Sub-Saharan Africa, 24 in Latin America, and 12 in the Middle East and North Africa.

Table 5 shows panel estimates supporting the U-shaped relationship between financial and political liberalization for this large sample of countries. One difference worth mentioning between these results and those focusing on the transition countries above is that the turning points (minima) for the former, while still within the partial democracy zone, are reached at somewhat larger values. Specifically, while similar specifications for the transition economies support turning points at about .52 (Table 4), those for the larger sample of countries indicate turning points at around .64 (Table 5). One possible explanation for this is that these larger samples are much more heterogeneous than the transition economies, in particular regarding the levels of political reform (note that the sample starts in 1973 with a “democratization wave” starting in the early 1980s.) Regarding the other results of the original Abiad-Mody study, one observes the somewhat surprising finding that the roles of debt and banking crises have now inverted. The effect of the former is for the larger sample never statistically significant while that o the latter tends now to be positive (suggesting that banking crises propel financial liberalization, all else the same). It is also interesting to note that the role of the U.S. interest rates for the larger sample of countries since 1973 is significant and now carries the expected negative sign, which is closer to the original result from Abiad and Mody than to the results presented in the main body of this paper for the transition economies.  In any case, the main message is that the U-shaped relationship between political reform and financial liberalization does not seem restricted to the European periphery. Evidence for this important non-monotonicity also obtains for a much larger sample of developing and developed countries, covering a substantially longer period of time.

Returning to the “transition” sample, the estimates in Table 4 are our preferred estimates. GMM estimates are widely used because of their ability to deal with potential endogeneity concerns but more recently they have been criticized, inter alia, because of the somewhat mechanic process of instrument selection. Table 6 report GMM estimates of the same specifications as above. As it can be seen, the support for the hypothesized relationship between political and financial reforms is undiminished. Turning points are reached at around .38 (e.g., column 7), still within the partial democracy zone. These GMM results also support the contrasting effects of banking and debt crises, the negative effects of U.S. interest rates, high-inflation and recessions, and the role of left- and right-wing governments.

An additional issue we address is whether this non-monotonicity is exclusive to the relation between political reform and financial liberalization. That is, whether other economic reforms also reveal a similar relationship. Table 7 presents GMM estimates which support a U-shaped relationship between political and *trade liberalization* for a sample of more than 100 developing and developed countries with yearly data since 1973.

In the discussion above, we justify the focus on financial liberalization on conceptual and practical grounds. Conceptually, financial reform has large, widespread and long-lasting economic impacts. There are many other reforms one could analyse (such as privatization or labour reforms) but few could justify the expectation of similar impacts. The 2007 crisis has added a great sense of policy urgency to understanding the dynamics and consequences of financial regulation. In practical terms, financial reform is arguably the one for which the quantity and quality of available empirical measures is greatest. Despite these important reasons, one may question whether the U-shaped relationship between political and economic reforms obtains exclusively for the case of financial liberalization. In other words, it is desirable to present evidence supporting the view that this non-monotonicity is more general in that it can be also observed for other important economic reforms. Which reform to chose becomes an important question. We decided to investigate trade liberalization because this is an equally important structural reform, it has a large literature evaluating its impacts, and also because using the same reform data as we do in this section, Christiansen et al. (2009) find that the two reforms which generate the most substantial effects on economic growth are financial and trade liberalization. IMF (2008) has further details of the construction of this indicator of trade liberalization (which is a *de facto* measure based on information on tariffs) as well as details on the sample of developing and developed countries for which it is available. The largest number of countries for which we have data on political and financial liberalization is 135 and this unbalanced panel gives us 943 observations. We chose to use a similar set of determinants as in the case of financial reform (all are the same with the exception of the US interest rate) because this would allow a clearer comparison of the main results of interest (i.e., those for political reforms.)

Table 7 below reports our main results. It is evident from the table that there is strong support for a non-monotonic, U-shaped relationship between political reforms and trade liberalization. Interestingly, the estimated turning points in this relationship are comparable to those obtained above for financial liberalization and fall again well within the partial democracy zone, with calculated minimum values ranging from about .44 in column 1 to about .46 in column 7. It is also evident that the other determinants that have been identified in previous research for financial liberalization do not perform as well in this case. Ideological orientation of government policies (whether right or left leaning) and a broad array of economic crises show little effects on the dynamics of trade reform once political liberalization is taken into account.

The main message from this exercise is that a U-shaped relationship between political liberalization seems to occur not only with respect to financial liberalization but also with respect to other important structural reforms, such as trade liberalization.

### *4.3 Instrumental Variables Estimates of* De Jure *and* De Facto *Financial Liberalization*

This sub-section presents another way of assessing the severity of endogeneity concerns regarding the U-shaped relation between political and economic reforms. One of the central distinctions in the literature on financial liberalization is that between *de jure* and *de facto* measures (Kose et al, 2009). *De jure* measures reflect changes in the legal framework, laws, rules and regulations that affect the financial system, while *de facto* indexes capture the size and actual workings of the financial system. The index developed and used above is therefore a *de facto* index, while Abiad and Mody's is a *de jure* measure. Kose et al. (2009) argue that many discrepancies in the literature on the impacts of financial liberalization can be traced back to this distinction.

One natural extension would be then to ask whether the results hold if instead of *de facto* we use *de jure* measures. However, instead of just substituting different types of measures, we investigate an issue that has been largely unexplored, namely how *de jure* affects *de facto* liberalization. This issue can be thought of in a production function framework. Specifically, *de facto* financial liberalization may be driven by two components: one is changes in laws and regulation (inputs) and the other is changes in the quality of the enforcement of these laws ("technology"). The question in this sub-section is whether the non-monotonic relationship between political and economic (financial and *de facto*) liberalizations obtains even once the role of the legal inputs is taken into account in this process.

The original index by Abiad and Mody (2005) has been updated by Abiad et al. (2008) and extended to more developed and developing countries, 16 of which are in our transition sample. The revised Financial Liberalization Index captures seven factors: (a) capital account restrictions, (b) interest rate controls, (c) competition (entry barriers in banking), (d) banking supervision, (e) privatization (and state involvement in the financial system), (f) capital flows restrictions, and (g) policies to develop securities in stock markets. One main source of data is the IMF's Annual Report on Exchange Arrangements and Exchange Restrictions (AREAER).

Table 8 presents instrumental variable estimates using these data. Panel A of Table 8 contains the second-stage regression in which changes in the *de facto* measure of financial liberalization is regressed on, as before, lagged level of *de facto* liberalization, linear and square terms for political liberalization and, now added, the variables reflecting Abiad et al.'s financial liberalization reforms. The latter enter one-by-one (results for each of the seven components are presented). Columns 1 to 7 contain each one of the seven components described above, while column 8 contains the results for the aggregate *de jure* index of financial liberalization. Panel B at the bottom of Table 8 contains the first stage results for the *de jure* measures, using the Abiad and Mody specification as in section 4.3. For example, column 1 in panel B shows the first-stage results for *capital controls* as the endogenous variable: column 1 shows our IV results for the case in which *capital controls* enters the *de facto* reform equation (Panel A), with *capital controls* instrumented using the original Abiad and Mody model (Panel B).

As expected, the variables in the Abiad and Mody model as a whole are strong predictors of the inputs or *de jure* measures of financial liberalization. Table 8 reports the F statistic for the excluded regressors, which is significant in all cases. The Hansen's *J* statistic according to which the null hypothesis that the instruments are valid, uncorrelated with the residuals and thus correctly excluded from the second stage regression is also supportive.

There are four main results from Table 8. The first is that there is further corroborating evidence for a non-monotonic relationship between political and economic reforms. The two coefficients on political reform, linear and square, are statistically significant in all but one case (column 7, for the stock market policies component). Moreover, their magnitude is strikingly similar to that obtained above. Indeed, turning points are calculated to be in the range from .53 (column 2) to .67 (column 3), again well within the range of values of the index of political reform that correspond to our notion of partial democracy.

The second important result is that the exogenous component of the *de jure* financial liberalization index is a strong predictor of *de facto* financial liberalization in all cases but one (namely, competition policies in the banking sector.) This suggests that actual financial liberalization seldom takes place without first a change in the relevant laws and regulations.[23]

[23] We stress that to understand the dynamics of actual financial liberalization, in addition to the effects from financial reform inputs (*de jure* indexes), it seems imperative to also take into account political reforms.

The third result worth mentioning is related to this last one: political reform has a first-order, direct impact on *de facto* financial liberalization and, more importantly, there is no evidence of any confounding indirect effect of political reforms on actual financial liberalization through changes in the laws and regulations that govern the financial sector. Our evidence shows that the main role of political reforms is to affect the enforcement of those regulations, and not the regulations themselves.

The fourth noteworthy result is that the Abiad and Mody model seems to work much better for explaining *de facto* (as discussed above) than *de jure* liberalization (Panel B of Table 8). For instance, it is difficult to find a single variable in the Panel B of Table 8 that shows a consistent effect across columns 1 to 8, with the sole exception of trade liberalization. In the case of debt crisis, depending on the component of *de jure* liberalization, it can have a statistically significant, positive or negative impact.

In summary, we find that there is strong evidence for a U-shaped relationship between political and economic reform in our data. This result seems robust to a wide array of estimators, a strong identification strategy, and various measures of the two reforms, with the relevant linear and quadratic terms almost always statistically significant and always supporting turning points well with the range of values of the political reform index that we identify as partial democracy.

## 5. Concluding remarks and policy implications

This paper presents novel theoretical motivation and robust econometric evidence for a non-monotonic, U-shaped, relationship between financial liberalization and political reform, which stresses the previously neglected yet crucial role played by reform reversals. We believe this to be a main contribution of the paper, which is supported by an identification strategy based on a selected group of countries, which shared remarkably similar initial conditions, characterized by extremely low levels of political and economic liberalization (thus with the pre-reform periods acting as control in the analysis of the reform periods). Furthermore, it introduces a new perspective on the relationship between *de jure* and *de facto* financial liberalization. Rather than choosing one of the two measures, we used the *de jure* liberalization as an input for the *de facto* liberalization. It turned out that political regimes play a crucial role in affecting the implementation stage, namely the effectiveness with which *de jure* reforms are transferred into *de facto* financial liberalization.

What are the main policy implications from these results? A U-shaped relationship implies that democratization does not necessarily lead to economic reform, and indeed that partial or incomplete democratization may lead to economic reform reversals. The key challenge in the initial phases of democratization is to reduce the power of economic elites. A second implication regards the importance of the implementation phase: there is a long way from *de jure* to *de facto* liberalization and one reasons the pressure tools currently favoured by international organizations are not as effective is because they ignore the implementation phase in partial democracies. Last, but far from least, there is some agreement between our results and those in Giavazzi and Tabellini (2005), in the sense there is some indication that sequencing matters and that there seem to be payoffs to try to implement as much economic reform as possible before opening up the political process. However, our results suggest that any conclusions on the optimal sequence should be understood very carefully because even in a relatively homogenous group of countries at the outset, we find difficult evidence for one direction of causality or the other. We envisage three main directions to extend the analysis: towards a deeper understanding of the nature of the political and of the economic reversals, on how complementarity among reforms (or the lack of) affects the occurrence and severity of reversals, and the impact that financial and economic liberalizations have on overall economic performance (taking into account the role of reversals in defining their joint dynamics). On the nature of reversals, we are interested in assessing whether their size and duration systematically vary across political regimes and types of economic reforms. In addition, the analysis should be carried out more systematically for a larger set of economic reforms (including for instance privatization and regulatory reforms) and study as well the complementarity between different reforms. Our conjecture is that different political regimes may not only imply different depth of specific reforms but also a different range or choice of reforms.

## References


Abiad, A. and Mody, A. (2005), "Financial Reform: What Shakes It? What Shapes It?" *The American Economic Review* 95(1): pp. 66-88

Acemoglu, D. (2008), "Oligarchic vs. democratic societies", *Journal of the European Economic Association*, 6, 1-44.

Acemoglu, D. and J. Robinson (2006a), *Economic origins of dictatorship and democracy,* Cambridge University Press.

Acemoglu, D. and J. Robinson (2006b), "Economic backwardness in political perspective", *American Political Science Review*, 100, 115-131.

Acemoglu, D. and J. Robinson (2006c), "De Facto Political Power and Institutional Persistence," *American Economic Review*, 96, 325-330.

Acemoglu, D. and J. Robinson (2008), "Persistence of Power, Elites, and Institutions", *American Economic Review*, 98:1, 267-293.

Acemoglu, D., S. Johnson, J. Robinson and P. Yared (2005), "Income and Democracy," *American Economic Review*, 98, 808-842.

Braga De Macedo, J. and J. Oliveira Martins (2008), "Growth, reform indicators and policy complementarities," *Economics of Transition* 16(2): 141-164.

Berglof, E. and A. Lehmann (2009), "Sustaining Russia's Growth: The Role of Financial Reform," *Journal of Comparative Economics*, vol. 37(2), pages 198-206.

Besley, Timothy and Kudamatsu, Masayuki (2007). "Making Autocracy Work," CEPR Discussion Papers 6371.

Bueno de Mesquita, B. and A. Smith (2004), "The Political Economy of Corporate Fraud: A Theory and Empirical Test," Unpublished, New York University.

Campos, N. and F. Coricelli (2002) "Growth in Transition: What We Know, What We Don't, and What We Should," *Journal of Economic Literature*, XL (3): 793-836.

Campos, N. and R Horvath (2006), "Reform Redux: Measurement, Determinants and Reversals," CEPR DP 5673.

Caselli, F. and N. Gennaioli, (2008), "Economics and Politics of Alternative Institutional Reforms," *The Quarterly Journal of Economics*, vol. 123(3), pages 1197-1250, August.

Christiansen, L., M. Schindler and T. Tressel (2009), "Growth and Structural Reforms: A New Assessment," IMF Working Paper WP/09/284, Washington DC.

Coricelli, F. (2007), "Democracy in the Post-Communist World: Unfinished Business", *East European Politics & Societies*, Vol. 21, No. 1, 82-90

Demirgurc-Kunt, A. and R. Levine (2008), “Finance and opportunity”, World Bank Policy Research papers, n 4468.

Dewatripont, M. and G. Roland (1995), "The Design of Reform Packages under Uncertainty," *American Economic Review*, vol. 85(5): 1207-23.

Drazen, A. (2000), *Political Economy in Macroeconomics*, Princeton University Press.

Epstein, D. and P. Rosendorff (2004), “When are autocracies economically efficient?”, mimeo.

Epstein, D.L., R. Bates, J. Goldstone, I. Kristensen, and S. O’Halloran (2006), “Democratic Transitions,” *American Journal of Political Science*, Vol. 50, No. 3: 551–569.

Gates, S., H. Hegre, M.P. Jones and H. Strand (2006), “Institutional Inconsistency and Political Instability: Polity Duration, 1800–2000, *American Journal of Political Science,* Vol. 50, No. 4, October 2006, Pp. 893–908

Giavazzi F. and G. Tabellini (2005), “Economic and political liberalizations" *Journal of Monetary Economics*, vol. 52(7):1297-1330.

Giovannini, A. and M. de Melo (1993), “Government Revenue from Financial Repression,” *American Economic Review* 83 (4): 953-963.

Ghosal, S. and E. Proto (2008), “Democracy, Collective Action and Intra-elite Conflict,” Warwick Economic Research Papers No 844.

Guergen, E. Snoek, H. Craig, J. McHugh, J. Izvorski, I. and R. Van Rooden (1999), “Economic Reforms in Kazakhstan, Kyrgyz Republic, Tajikistan, Turkmenistan, and Uzbekistan,” IMF Occasional Paper No. 183,.

Haber, S. and E. Perotti (2007), “The Political Economy of Finance”, Stanford and Amsterdam, mimeo.

Hellman, J. S. (1998), “Winners Take All: The Politics of Partial Reform in Postcommunist Transitions”, *World Politics*, 50.2 (1998) 203-234.

International Monetary Fund, 2008, “Structural Reforms and Economic Performance in Advanced and Developing Countries*”, IMF Occasional Paper* 061008 (Washington DC).

Kaminsky, G. and S. Schmukler (2003), Short-Run Pain, Long-run Gain: The Effects of Financial Liberalization, NBER Working Paper No. 9787.

Kose, A., E Prasad, K. Rogoff and S. Wei (2009), “Financial Globalization and Economic Policies,” CEPR DP 7117.

Kuznets, S. (1968), *Towards a Theory of Economic Growth*. New Haven: Yale University Press.

Leonida L., D. Maimone Ansaldo Patti and P. Navarra (2008), “Political and Economic Liberalization: Is this Relationship Non-Linear?”, mimeo.

Levine, R. (2005). Finance and Growth: Theory and Evidence. In Aghion, P. and S. Durlauf (Eds.), *Handbook of Economic Growth*. Elsevier, Amsterdam.

Loayza, N. V. and R. Rancière (2006). “Financial Development, Financial Fragility and Growth”. *Journal of Money Credit and Banking*, 38, 1051-1076.

Mokyr, J. (2000), *The Level of Riches.* New York: Oxford University Press.

Pagano, M. and P. Volpin (2008), “Labor and finance”, mimeo.

Papaioannou, E. and G. Siourounis, "Democratization and Growth", *Economic Journal*, 118(10): 1520-1555

Parente, S.L. and E.C. Prescott (2002), *Barriers to Riches*, The MIT Press.

Persson, T. and G. Tabellini, (2000), *Political Economics: Explaining Economic Policy*, MIT Press.

Prachi M., P. Giuliano and A. Spilimbergo (2010), "Democracy and Reforms: Evidence from a New Dataset," IMF Working Papers 10/173.

Prasad, E.S., Rogoff, K.S., Shang-Jin Wei. and M. A. Kose (2004), “Financial Globalization, Growth and Volatility in Developing Countries”, NBER Working Paper 10942.

Preszworski, A. (1991), *Democracy and the Market.* Cambridge University Press.

Rajan, R.G. (2009), “Rent preservation and the persistence of underdevelopment”, *American Economic Journal: Macroeconomics,* 1:1: 178-218.

Rajan, R. and L. Zingales. 2003. “The Great Reversals: The Politics of Financial Development in the Twentieth Century.” *Journal of Financial Economics*, 69(1): 5–50.

Rajan, R.G. and L. Zingales (2003), *Saving capitalism from the capitalists*, Random House.

Yakovlev, E. and E. Zhuravskaya (2011), “The Unequal Enforcement of Liberalization: Evidence from Russia’s Reform of Business Regulation”. Unpublished, Berkley University and Paris School of Economics.

**Figure 1: Dynamics of political and economic reforms**

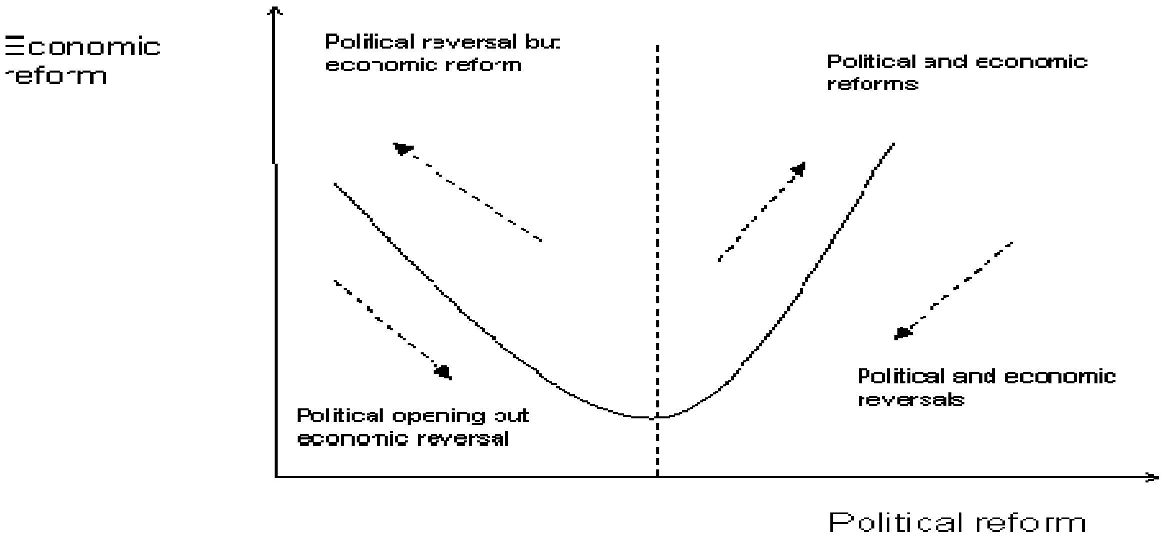



**Figure 2.**
**Freedom House's Political Rights and Financial Efficiency**
**Between-effect panel estimates, 1989-2005**

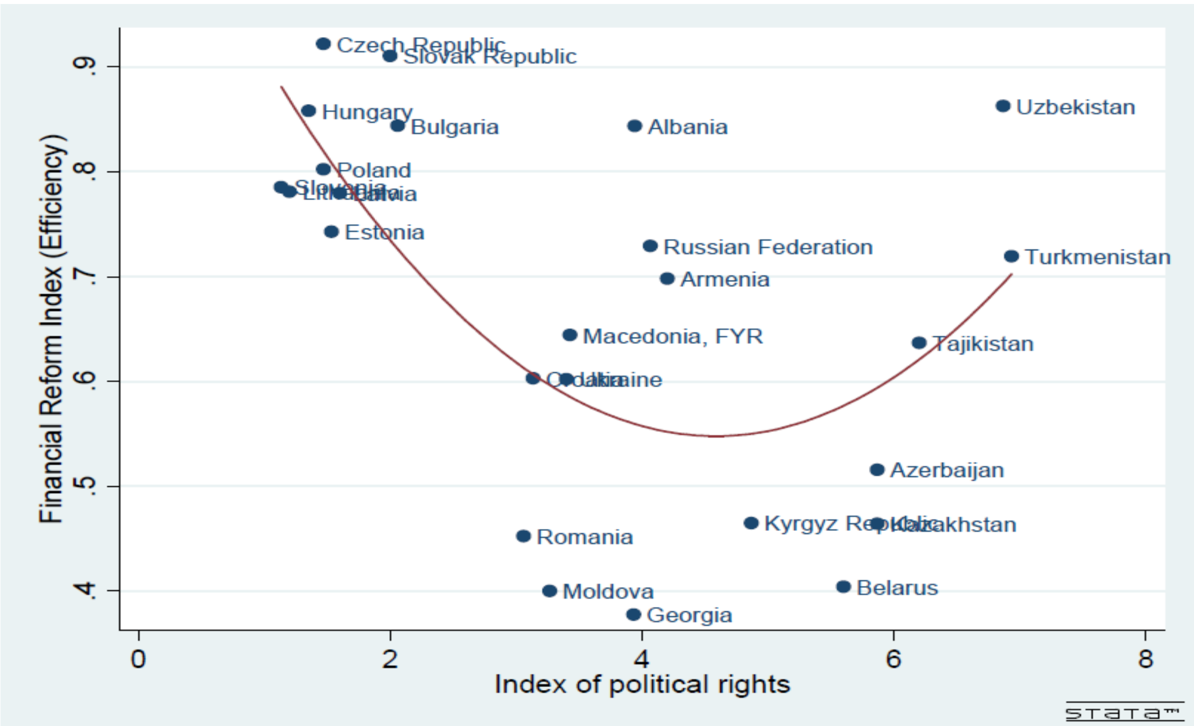


**Table 1 Panel evidence**
**Fixed-Effects Estimates, 1989-2005**

| | **Financial Depth** | **Financial Efficiency** |
|---|---|---|
| Political reform | -0.330* | -0.556** |
| | [0.174] | [0.222] |
| Political reform square | 0.533*** | 0.754*** |
| | [0.170] | [0.226] |
| Constant | 0.454*** | 0.709*** |
| | [0.0444] | [0.0536] |
| Observations | 300 | 360 |
| Number of countries | 19 | 23 |
| R-squared | 0.071 | 0.043 |

Notes: Standard errors in brackets: *** p<0.01, ** p<0.05, * p<0.1. Turning points (minimum) in the partial democracy zone, at 0.31 and 0.37, respectively.

Figure 3. The Occurrence of Reversals across Countries and Over Time:
Political Reform Reversals, Financial Reform Reversals, and Twin Reversals

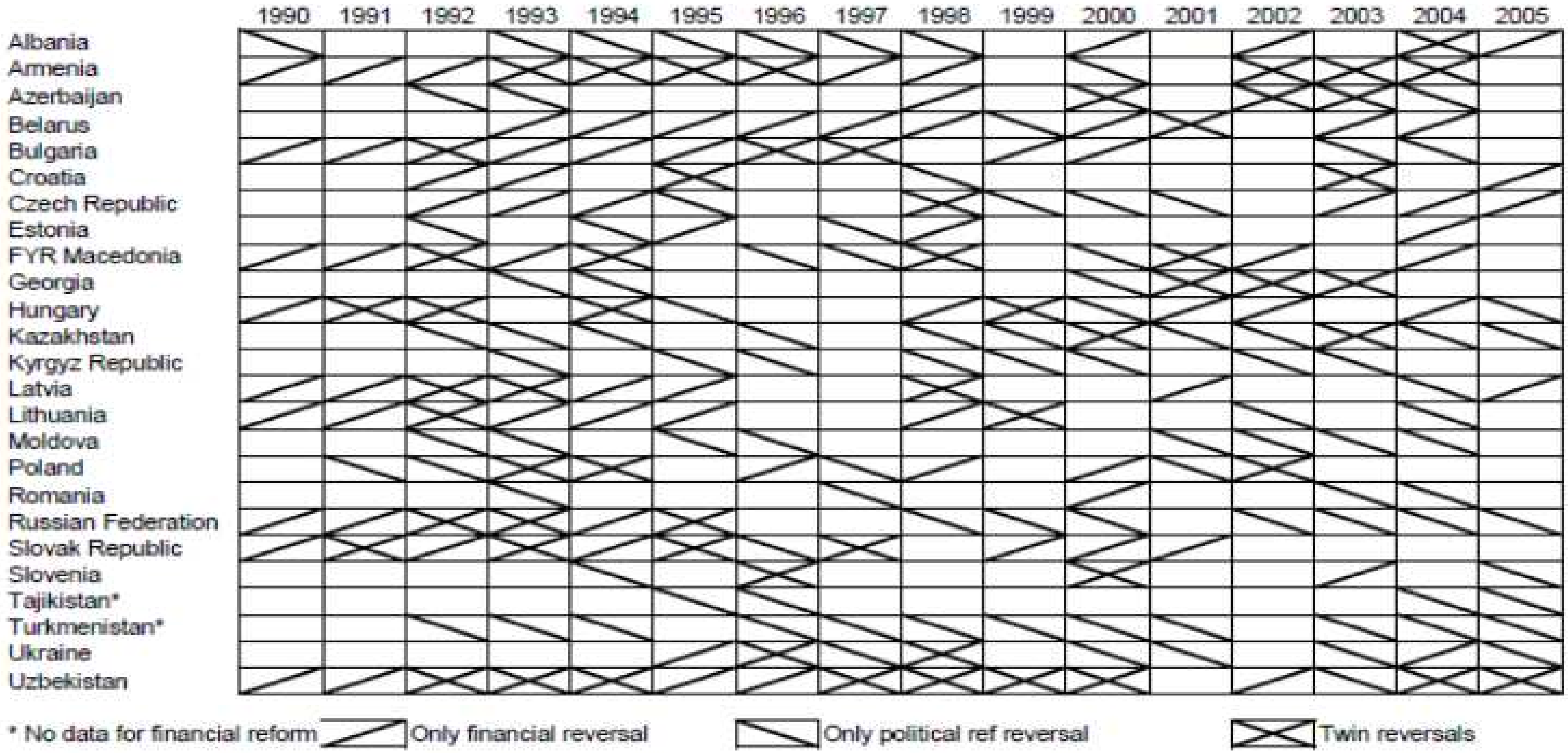


**Table 2** **Panel Tobit Estimates (all RHS variables lagged one-period, except political reform)**
**Dependent variable is level of financial reform**

| | [1] | [2] | [3] | [4] | [5] | [6] | [7] |
|---|---|---|---|---|---|---|---|
| AMteta1 | 0.0148 | 0.0725 | -0.0931 | -0.0667 | -0.088 | -0.0737 | -0.0877 |
| | [0.17] | [0.17] | [0.14] | [0.14] | [0.14] | [0.14] | [0.14] |
| Political reform | -0.840*** | -0.859*** | -0.611*** | -0.652*** | -0.644*** | -0.614** | -0.647*** |
| | [0.24] | [0.24] | [0.23] | [0.23] | [0.23] | [0.24] | [0.24] |
| Political reform squared | 1.070*** | 1.084*** | 0.717*** | 0.714*** | 0.710*** | 0.685*** | 0.713*** |
| | [0.22] | [0.21] | [0.21] | [0.20] | [0.20] | [0.21] | [0.21] |
| Banking crisis | | -0.0882*** | -0.0552** | -0.0533** | -0.0578*** | -0.0552** | -0.0577** |
| | | [0.028] | [0.023] | [0.022] | [0.022] | [0.022] | [0.023] |
| Debt crisis | | 0.118** | 0.131*** | 0.120*** | 0.126*** | 0.121*** | 0.126*** |
| | | [0.055] | [0.044] | [0.044] | [0.044] | [0.044] | [0.044] |
| IMF Programme | | | 0.0213 | 0.0127 | 0.0133 | 0.0116 | 0.0134 |
| | | | [0.021] | [0.021] | [0.021] | [0.021] | [0.021] |
| U.S. interest rates | | | -0.0200*** | -0.0190*** | -0.0199*** | -0.0190*** | -0.0199*** |
| | | | [0.0043] | [0.0046] | [0.0047] | [0.0046] | [0.0047] |
| Recession | | | -0.149*** | -0.0908*** | -0.0931*** | -0.0906*** | -0.0931*** |
| | | | [0.016] | [0.022] | [0.022] | [0.022] | [0.022] |
| High inflation | | | | -0.0695*** | -0.0693*** | -0.0700*** | -0.0692*** |
| | | | | [0.022] | [0.022] | [0.022] | [0.022] |
| Trade liberalization | | | | 0.0623 | 0.0509 | 0.0576 | 0.0512 |
| | | | | [0.043] | [0.044] | [0.044] | [0.044] |
| Left-wing government | | | | | | -0.0102 | 0.000833 |
| | | | | | | [0.019] | [0.021] |
| Right-wing government | | | | | 0.0314 | | 0.0318 |
| | | | | | [0.023] | | [0.025] |
| Constant | 0.742*** | 0.745*** | 0.911*** | 0.903*** | 0.908*** | 0.901*** | 0.908*** |
| | [0.073] | [0.072] | [0.066] | [0.074] | [0.074] | [0.074] | [0.074] |
| Observations | 353 | 353 | 345 | 345 | 345 | 345 | 345 |
| Number of countries | 23 | 23 | 23 | 23 | 23 | 23 | 23 |

Note: Standard errors in brackets, *** p<0.01, ** p<0.05, * p<0.1

Table 3 **Panel Fixed-Effects Estimates (all RHS variables lagged one-period, except political reform)**
**Dependent variable is level of financial reform**

| | [1] | [2] | [3] | [4] | [5] | [6] | [7] |
|---|---|---|---|---|---|---|---|
| AMteta1 | 0.192 | 0.193 | 0.00418 | 0.0239 | 0.00216 | 0.0143 | 0.000686 |
| | [0.24] | [0.24] | [0.19] | [0.19] | [0.19] | [0.19] | [0.19] |
| Political reform | -0.869** | -0.883** | -0.607* | -0.641** | -0.636** | -0.574* | -0.609* |
| | [0.38] | [0.38] | [0.31] | [0.31] | [0.32] | [0.33] | [0.34] |
| Political reform squared | 1.062*** | 1.071*** | 0.611** | 0.608** | 0.612** | 0.554** | 0.590** |
| | [0.31] | [0.31] | [0.25] | [0.25] | [0.25] | [0.26] | [0.27] |
| Banking crisis | -0.0813*** | -0.0909*** | -0.0591*** | -0.0572*** | -0.0612*** | -0.0600*** | -0.0619*** |
| | [0.022] | [0.023] | [0.020] | [0.019] | [0.019] | [0.019] | [0.019] |
| Debt crisis | | 0.111** | 0.127*** | 0.117*** | 0.123*** | 0.119*** | 0.123*** |
| | | [0.046] | [0.036] | [0.039] | [0.039] | [0.040] | [0.039] |
| IMF Programme | | | 0.0262 | 0.0168 | 0.0172 | 0.0154 | 0.0165 |
| | | | [0.017] | [0.017] | [0.017] | [0.017] | [0.017] |
| U.S. interest rates | | | -0.0206*** | -0.0194*** | -0.0201*** | -0.0194*** | -0.0200*** |
| | | | [0.0047] | [0.0048] | [0.0049] | [0.0048] | [0.0049] |
| Recession | | | -0.148*** | -0.0880*** | -0.0898*** | -0.0877*** | -0.0895*** |
| | | | [0.017] | [0.022] | [0.022] | [0.022] | [0.022] |
| High inflation | | | | -0.0704*** | -0.0700*** | -0.0711*** | -0.0704*** |
| | | | | [0.025] | [0.025] | [0.025] | [0.025] |
| Trade liberalization | | | | 0.0683 | 0.059 | 0.0615 | 0.0572 |
| | | | | [0.043] | [0.045] | [0.043] | [0.044] |
| Left-wing government | | | | | | -0.0153 | -0.00626 |
| | | | | | | [0.019] | [0.022] |
| Right-wing government | | | | | 0.0285 | | 0.0252 |
| | | | | | [0.022] | | [0.025] |
| Constant | 0.745*** | 0.747*** | 0.942*** | 0.925*** | 0.927*** | 0.919*** | 0.924*** |
| | [0.13] | [0.13] | [0.100] | [0.11] | [0.11] | [0.11] | [0.11] |
| | 353 | 353 | 345 | 345 | 345 | 345 | 345 |
| Observations | 23 | 23 | 23 | 23 | 23 | 23 | 23 |
| Number of countries | 0.09 | 0.1 | 0.4 | 0.43 | 0.43 | 0.43 | 0.43 |

Note: Robust standard errors in brackets, *** p<0.01, ** p<0.05, * p<0.1

Table 4 Panel Estimates (all RHS variables lagged one-period, but political reform; s.e. clustered at country)
Dependent variable is change in financial reform

| | [1] | [2] | [3] | [4] | [5] | [6] | [7] |
|---|---|---|---|---|---|---|---|
| AMteta1 | -0.133*** | -0.136*** | -0.174*** | -0.176*** | -0.176*** | -0.176*** | -0.177*** |
| | [0.019] | [0.019] | [0.023] | [0.025] | [0.025] | [0.025] | [0.025] |
| Political reform | -0.106 | -0.117 | -0.107** | -0.119** | -0.119** | -0.112** | -0.120** |
| | [0.070] | [0.073] | [0.047] | [0.055] | [0.055] | [0.056] | [0.056] |
| Political reform squared | 0.113* | 0.124** | 0.117*** | 0.119** | 0.119** | 0.112** | 0.115** |
| | [0.057] | [0.060] | [0.043] | [0.050] | [0.050] | [0.050] | [0.051] |
| Banking crisis | | -0.00299 | -0.000804 | -0.000661 | -0.000665 | -0.0037 | -0.00261 |
| | | [0.013] | [0.013] | [0.013] | [0.013] | [0.013] | [0.013] |
| Debt crisis | | 0.0234** | 0.0330** | 0.0328*** | 0.0328*** | 0.0356*** | 0.0361*** |
| | | [0.010] | [0.013] | [0.012] | [0.012] | [0.013] | [0.014] |
| IMF Programme | | | 0.00495 | 0.00285 | 0.00284 | 0.00324 | 0.00467 |
| | | | [0.0074] | [0.0076] | [0.0080] | [0.0078] | [0.0082] |
| U.S. interest rates | | | -0.00306* | -0.00248 | -0.00248 | -0.00327 | -0.00345 |
| | | | [0.0017] | [0.0017] | [0.0017] | [0.0021] | [0.0022] |
| Recession | | | -0.0328*** | -0.0192** | -0.0192** | -0.0217** | -0.0227** |
| | | | [0.0093] | [0.0097] | [0.0098] | [0.010] | [0.0099] |
| High inflation | | | | -0.0133 | -0.0133 | -0.0139 | -0.0128 |
| | | | | [0.012] | [0.012] | [0.012] | [0.012] |
| Trade liberalization | | | | 0.0229 | 0.0228* | 0.0107 | 0.0139 |
| | | | | [0.015] | [0.014] | [0.015] | [0.014] |
| Left-wing government | | | | | | 0.0193* | 0.0230** |
| | | | | | | [0.010] | [0.011] |
| Right-wing government | | | | | -0.0000192 | | 0.0076 |
| | | | | | [0.0054] | | [0.0055] |
| Constant | 0.128*** | 0.131*** | 0.178*** | 0.172*** | 0.172*** | 0.177*** | 0.176*** |
| | [0.020] | [0.021] | [0.022] | [0.028] | [0.028] | [0.029] | [0.030] |
| Observations | 353 | 353 | 345 | 345 | 345 | 345 | 345 |
| Number of countries | 23 | 23 | 23 | 23 | 23 | 23 | 23 |

Note: Robust standard errors in brackets, *** p<0.01, ** p<0.05, * p<0.1

**Table 5** Panel Estimates (all RHS variables lagged one-period, but political reform; s.e. clustered at country)
Dependent variable is change in financial reform; Sample is Whole World

| | [1] | [2] | [3] | [4] | [5] | [6] | [7] |
|---|---|---|---|---|---|---|---|
| Lag financial liberalization | -0.273*** | -0.279*** | -0.250*** | -0.156*** | -0.156*** | -0.157*** | -0.158*** |
| | [0.0311] | [0.0316] | [0.0320] | [0.0268] | [0.0266] | [0.0277] | [0.0276] |
| Political reform | -0.0767*** | -0.0751*** | -0.0665*** | -0.0453*** | -0.0464*** | -0.0452*** | -0.0468*** |
| | [0.0206] | [0.0206] | [0.0219] | [0.0165] | [0.0164] | [0.0165] | [0.0163] |
| Political reform squared | 0.0603** | 0.0581** | 0.0521** | 0.0350* | 0.0353* | 0.0347* | 0.0345* |
| | [0.0246] | [0.0246] | [0.0258] | [0.0204] | [0.0203] | [0.0207] | [0.0206] |
| Banking crisis | | -0.0187* | -0.0172 | -0.0190 | -0.0189 | -0.0190 | -0.0188 |
| | | [0.00992] | [0.0109] | [0.0152] | [0.0153] | [0.0152] | [0.0152] |
| Debt crisis | | -0.0124 | -0.0177 | -0.0122 | -0.0121 | -0.0124 | -0.0127 |
| | | [0.0247] | [0.0413] | [0.0419] | [0.0419] | [0.0418] | [0.0417] |
| U.S. interest rates | | | -0.000640 | -0.00181** | -0.00178** | -0.00181** | -0.00174** |
| | | | [0.000734] | [0.000822] | [0.000830] | [0.000818] | [0.000830] |
| Recession | | | -0.00725 | -0.00352 | -0.00391 | -0.00343 | -0.00380 |
| | | | [0.00742] | [0.00827] | [0.00822] | [0.00815] | [0.00814] |
| High inflation | | | | 0.00310 | 0.00361 | 0.00301 | 0.00355 |
| | | | | [0.00786] | [0.00780] | [0.00797] | [0.00782] |
| Trade liberalization | | | | 0.00640 | 0.00657 | 0.00632 | 0.00641 |
| | | | | [0.00589] | [0.00585] | [0.00586] | [0.00589] |
| Left-wing government | | | | | -0.00209 | | -0.00300 |
| | | | | | [0.00273] | | [0.00333] |
| Right-wing government | | | | | | -0.000669 | -0.00208 |
| | | | | | | [0.00364] | [0.00429] |
| Constant | -0.0217*** | -0.0220*** | -0.0164*** | -0.00621 | -0.00533 | -0.00606 | -0.00446 |
| | [0.00333] | [0.00339] | [0.00441] | [0.00412] | [0.00423] | [0.00416] | [0.00448] |
| Observations | 1,463 | 1,463 | 1,097 | 668 | 668 | 668 | 668 |
| Number of countries | 134 | 134 | 107 | 97 | 97 | 97 | 97 |

Note: Robust standard errors in brackets, *** $p<0.01$, ** $p<0.05$, * $p<0.1$

Table 6 **GMM Estimates (Instruments: GMM is political reform and its square, IV is year dummies)**
**Dependent variable is level of financial reform**

| | [1] | [2] | [3] | [4] | [5] | [6] | [7] |
|---|---|---|---|---|---|---|---|
| AMteta1 | -0.543*** | -0.467*** | -0.754*** | -0.677*** | -0.669*** | -0.697*** | -0.671*** |
| | [0.055] | [0.060] | [0.071] | [0.071] | [0.071] | [0.072] | [0.072] |
| Political reform | -0.565*** | -0.619*** | -0.403*** | -0.456*** | -0.465*** | -0.437*** | -0.468*** |
| | [0.062] | [0.067] | [0.080] | [0.078] | [0.078] | [0.079] | [0.079] |
| Political reform squared | 0.817*** | 0.874*** | 0.610*** | 0.627*** | 0.632*** | 0.604*** | 0.616*** |
| | [0.054] | [0.058] | [0.069] | [0.067] | [0.067] | [0.068] | [0.068] |
| Banking crisis | | -0.0961*** | -0.0430*** | -0.0276** | -0.0253* | -0.0395*** | -0.0335** |
| | | [0.013] | [0.014] | [0.014] | [0.014] | [0.014] | [0.014] |
| Debt crisis | | 0.138*** | 0.149*** | 0.124*** | 0.124*** | 0.133*** | 0.133*** |
| | | [0.022] | [0.025] | [0.025] | [0.025] | [0.025] | [0.025] |
| IMF Programme | | | 0.00876 | -0.00307 | -0.00184 | -0.0027 | 0.00222 |
| | | | [0.012] | [0.012] | [0.012] | [0.012] | [0.012] |
| U.S. interest rates | | | -0.0201*** | -0.0225*** | -0.0225*** | -0.0244*** | -0.0250*** |
| | | | [0.0024] | [0.0025] | [0.0025] | [0.0025] | [0.0025] |
| Recession | | | -0.149*** | -0.0808*** | -0.0815*** | -0.0846*** | -0.0882*** |
| | | | [0.0091] | [0.013] | [0.013] | [0.013] | [0.013] |
| High inflation | | | | -0.111*** | -0.110*** | -0.112*** | -0.109*** |
| | | | | [0.013] | [0.013] | [0.013] | [0.013] |
| Trade liberalization | | | | 0.00182 | 0.00694 | -0.0231 | -0.01 |
| | | | | [0.022] | [0.023] | [0.023] | [0.024] |
| Left-wing government | | | | | | 0.0541*** | 0.0693*** |
| | | | | | | [0.012] | [0.013] |
| Right-wing government | | | | | 0.00761 | | 0.0299*** |
| | | | | | [0.0094] | | [0.010] |
| Constant | 0.775*** | 0.777*** | 0.942*** | 0.969*** | 0.965*** | 0.982*** | 0.972*** |
| | [0.018] | [0.019] | [0.024] | [0.026] | [0.026] | [0.026] | [0.026] |
| Observations | 353 | 353 | 345 | 345 | 345 | 345 | 345 |
| Number of countries | 23 | 23 | 23 | 23 | 23 | 23 | 23 |

Note: Robust standard errors in brackets, *** $p<0.01$, ** $p<0.05$, * $p<0.1$

**Table 7** **GMM Estimates (Instruments: GMM is political reform and its square, IV is year dummies)**
**Dependent variable is trade liberalization, sample is whole world**

| | [1] | [2] | [3] | [4] | [5] | [6] | [7] |
|---|---|---|---|---|---|---|---|
| Lagged Trade Lib | -0.0908*** | -0.0888*** | -0.0951*** | -0.0982*** | -0.0981*** | -0.0997*** | -0.0997*** |
| | [0.0129] | [0.0128] | [0.0149] | [0.0158] | [0.0155] | [0.0162] | [0.0161] |
| Political reform | -0.0654** | -0.0687** | -0.102*** | -0.103*** | -0.104*** | -0.102*** | -0.105*** |
| | [0.0292] | [0.0292] | [0.0372] | [0.0385] | [0.0383] | [0.0384] | [0.0382] |
| Political reform squared | 0.0738** | 0.0770** | 0.116** | 0.114** | 0.115** | 0.113** | 0.113** |
| | [0.0361] | [0.0360] | [0.0463] | [0.0485] | [0.0481] | [0.0484] | [0.0480] |
| Banking crisis | | 0.0197*** | 0.0247*** | 0.0254*** | 0.0255*** | 0.0253*** | 0.0256*** |
| | | [0.00704] | [0.00664] | [0.00706] | [0.00720] | [0.00697] | [0.00723] |
| Debt crisis | | 0.0221* | 0.00880 | 0.00904 | 0.00934 | 0.00790 | 0.00803 |
| | | [0.0126] | [0.0108] | [0.0112] | [0.0115] | [0.0110] | [0.0115] |
| Recession | | | -0.00190 | -0.00105 | -0.00137 | -0.000338 | -0.000681 |
| | | | [0.00759] | [0.00798] | [0.00807] | [0.00806] | [0.00807] |
| High inflation | | | | 0.00136 | 0.00199 | 0.000807 | 0.00194 |
| | | | | [0.0157] | [0.0150] | [0.0157] | [0.0147] |
| Left-wing government | | | | | -0.00226 | | -0.00544 |
| | | | | | [0.00803] | | [0.00979] |
| Right-wing government | | | | | | -0.00468 | -0.00724 |
| | | | | | | [0.00706] | [0.00884] |
| Constant | 0.0246*** | 0.0238*** | 0.0304*** | 0.0313*** | 0.0325*** | 0.0333*** | 0.0370*** |
| | [0.00555] | [0.00550] | [0.00669] | [0.00691] | [0.00860] | [0.00801] | [0.0117] |
| Observations | 943 | 943 | 702 | 676 | 676 | 676 | 676 |
| Number of countries | 135 | 135 | 103 | 100 | 100 | 100 | 100 |

Note: Robust standard errors in brackets, *** p<0.01, ** p<0.05, * p<0.1

Table 8
Panel Data Instrumental Variables Estimates
Endogenous variables are changes in de facto financial reform and de jure financial reform measures
Standard errors in  brackets and clustered at country level, robust to heteroscedasticity
(all RHS variables in first-stage lagged one-period, except political reform)

| | [1] | [2] | [3] | [4] | [5] | [6] | [7] | [8] |
|---|---|---|---|---|---|---|---|---|
| Financial reform | -0.17*** | -0.145*** | -0.116** | -0.179*** | -0.178*** | -0.162*** | -0.201*** | -0.169*** |
| | [0.057] | [0.053] | [0.046] | [0.055] | [0.051] | [0.053] | [0.056] | [0.053] |
| Political reform | -0.374** | -0.358** | -0.275* | -0.378** | -0.351** | -0.395*** | -0.25 | -0.337* |
| | [0.18] | [0.18] | [0.15] | [0.19] | [0.17] | [0.15] | [0.16] | [0.17] |
| Political reform squared | 0.313** | 0.332* | 0.201* | 0.311* | 0.233 | 0.341** | 0.102 | 0.262* |
| | [0.15] | [0.17] | [0.12] | [0.16] | [0.15] | [0.15] | [0.13] | [0.14] |
| De jure financial reform | 0.0896* | 0.0829** | 0.0973 | 0.0625*** | 0.0699*** | 0.0623*** | 0.114*** | 0.0973*** |
| | [0.047] | [0.038] | [0.081] | [0.024] | [0.023] | [0.023] | [0.039] | [0.038] |
| *Endogenous de jure financial reform* | Capital controls | Interest rates | Compe-tition | Supervi-sion | Privatiza-tion | Capital flows | Securities | Fin. Lib Index |
| F test of excluded instruments | 8.240 | 9.06 | 5.17 | 16.12 | 32.43 | 39.85 | 12.59 | 38.18 |
| | [0.0002] | [0.0001] | [0.002] | [0.0000] | [0.0000] | [0.0000] | [0.0000] | [0.0000] |
| Hansen *J* statistic | 9.590 | 6.993 | 7.902 | 6.127 | 4.619 | 5.578 | 3.774 | 5.269 |
| | [0.295] | [0.537] | [0.443] | [0.633] | [0.797] | [0.694] | [0.8769] | [0.7285] |
| Observations | 237 | 237 | 237 | 237 | 237 | 237 | 237 | 237 |
| Number of countries | 16 | 16 | 16 | 16 | 16 | 16 | 16 | 16 |

Note: Standard errors in brackets, *** p<0.01, ** p<0.05, * p<0.1

**Appendix: Modelling the U-Shaped Relation between Financial and Political Reforms**

In this appendix, we present an extremely simple framework to account for the nonlinear relationship between political regime and financial reform. The model is a simple extension of the Acemoglu and Robinson (2006a) workhorse model, which focuses on redistributive politics. One extension of this model is that we assume that the government, in addition to determining tax rates and transfers, also selects the level of financial reform. Financial reform produces efficiency gains but at the same time reduces government revenue per unit of output. The other extension is given by the presence of heterogeneous elites, associated with different sectors of the economy. We assume the economy is composed by two sectors, a "modern" sector and a "traditional" sector, for instance a sector based on natural resources or traditional technologies. We call capitalists in the former sector as the "modern" elite and the owners of the firm in the other sector as "traditional" elite. Workers form the majority of the population and are employed in both sectors. Population is formed by $N^b$, members of the "traditional" elite, $N^g$, members of the "modern" elite, $L^m$, workers in productive sector, $L^o$, workers in the "traditional sector." Total population, $N$, is normalized to be equal to 1.

Output in the productive sector can be produced with two technologies, an advanced and a traditional one. The advanced technology requires a sufficient level of financial development. Thus, output in the productive sector is given by:

$Y^m = F(K, L^m)I(Z)$ for $Z \geq Z^*$

or

$Y^m = L^m$ for $Z \leq Z^*$

where $Z$ represents the level of development of the financial sector and with

$I(Z) > 1$ for $Z \geq Z^*$.

Workers earn $w^m I(Z)$ for $Z \geq Z^*$ or $w^m$ for $Z \leq Z^*$.

In this specification, financial development appears as a public good. The elite and workers in the good sector favour financial development.

In the "traditional" sector, output is produced by labour and a natural resource $R$. If labour falls below a given threshold, output cannot be extracted in the sector. Therefore, owners of natural resources have to pay the same wage as in the productive sector. As a result, workers in the natural resource sector benefit as well from financial development. However, financial reform reduces government revenues, and in particular those generated by financial repression. We define such revenue cost as $C(Z)$.

Incomes of the different groups are taxed with the same tax rate $\tau$. Income taxes lead to inefficiencies, measured by a loss function $C(\tau)\overline{y}$, with $C'(\tau)>0$, and $\overline{y}$ denoting average income in the economy. The government uses tax revenues to redistribute income through transfers, $T$ in per capita terms, which we assume are the same across groups. In autocracy part of the transfers are directly appropriated (or "grabbed") by the government.

Given these assumptions, there are three possible equilibria in the model: (i) democracy, with the preference of the workers (the majority of the population) determining policy outcomes; (ii) autocracy, with a political elite in power that wins a political contest against the "traditional" elite. The autocratic government is based on consensus from the "modern" elite and from the worker-population; (iii) partial or captured democracy, with the "traditional" elite dominating the political scene; such regime is unstable as it has no consensus on any parts of the population.

The worker-population prefers high redistribution of income, thus high tax rates, as its income is lower than average income. It also favours financial reform. The "modern" elite has a preference for low income taxes and it favours financial reform. The "modern" elite cannot form a coalition with the "traditional" elite as its income crucially rests on the presence of financial development. However, the "modern" elite is averse to redistribution and thus has a preference for an autocratic regime that can deliver financial reform and lower taxation. In contrast, democracy will ensure financial reform but will imply high tax rates.

Full democracy and partial democracy are relatively easy to characterize, as they reflect the preference of the worker-population and of the "traditional" elite, respectively. The equilibrium in autocracy is more complex, as the government has two objectives: one, is retaining its power, which requires sufficient consensus from the heterogeneous groups; the other, is the appropriation of resources ("grabbing hands"). We will characterize three different political equilibria, related to different reform policies. First, we will define the objective functions of the four players (government, two elites and the worker-population).
The indirect utility of the different players are as follows

$$V^b = (1-\tau)M/N^b + T \qquad (1)$$

for the "traditional" elite (with m= $M/N^b$ rents per rentier in the natural resource sector).

$$V^g = [(1-\tau)(1-\alpha)F(K,L^m)I(Z)]/N^g + T \qquad (2)$$

for the modern elite.

$$V^w = [(1-\tau)\alpha F(K,L^m)I(Z)(1+L^o)]/(L^m+L^o) + T \qquad (3)$$

for the worker-population.

Assuming that per capita transfers are the same across different population groups, transfers are obtained from the government budget constraint:

$$T=[\tau- C(Z)-C(\tau)]\ \bar{y} \qquad (4)$$

The payoff of the autocrat has two components, one related to the consensus motive, which involves the utility of the different parts of the population, and the other to the appropriation motive of part of tax revenues:

$$V^a = \mu\, V^b+(1+ \mu)[\, V^g+ V^w]+\beta T \qquad (5)$$

The two elites and the worker-population have different preferences over $\tau$ and $Z$, derived from the maximization of their utility. The desired tax rate for the “traditional” elite is obtained by maximizing the indirect utility with respect to $\tau$. The first order condition is

$$-m+(1- C'(\tau))\ \bar{y} = 0 \qquad (6)$$

Under the assumptions that $m> \bar{y}$, and $C'(\tau)\leq 1$, the optimal tax rate for the “traditional” elite is $\tau=0$, as the LHS is always negative (this is the same result as in Acemoglu and Robinson, 2006a). Furthermore, as financial reform affects negatively the “traditional” elite, through the increase in wage costs and through the overall negative effect on budget revenue, the optimal value of $Z$ for the “bad” elite is $Z=0$.

The optimal tax rate for the “modern” elite is also zero, again because per capita income of the “modern” elite members is higher than the average per capita income. Regarding financial reform, the “modern” elite will obviously support it and thus its optimal value of $Z$ is $Z= Z^*$. Moreover, the “modern” elite does not face a trade-off between income tax rate and financial development, as lack of financial development implies zero income for the “good” elite, irrespective of income taxes.

Finally, we solve for the optimal tax rate and optimal financial reform for the worker-population. The optimal income tax rate desired by the population satisfies:

$$((\partial V^w)/(\partial\tau))=0: \quad -w^m+(1-C'(\tau))\ \bar{y} = 0 \qquad (7)$$

Given that $w^m< \bar{y}$ then $\tau>0$.

The population desires redistribution, given that its incomes are lower than those of the elites. The optimal choice of development of the financial sector is the same as for the “modern” elite, $Z= Z^*$. Thus, the worker-population demands redistribution and favours financial development.

In democracy, the preference of the population will dominate and the outcome will thus be a positive tax rate and financial sector reform. By contrast, under partial democracy, the equilibrium reflects the preferences of one of the elites. We assume that the “traditional” elite will prevail because it possesses more resources to be spent in the process of controlling the government. This assumption implies that initially the level of financial development is low, and thus the total amount of profits of the “modern” elite is low as well. Another way to look at the two elites is thinking in terms of incumbents and entrants. The “resource” sector can be seen as representing the incumbents, while the “manufacturing” sector new entrants.

An additional assumption is that under partial democracy the government is weak and it is not able to counteract the pressure of the elite. In other words, the government is simply a “puppet”, executing the mandate of the “traditional” elite, and therefore under partial democracy $Z=0$.

Under autocracy there are equilibria with financial reform. These equilibria arise for two main reasons. The first is the “consensus motive”, as the autocrat needs consensus to maintain its power. As the utility of the “modern” elite and of the worker-population enters its objective function, the autocrat has incentive to implement financial reform. The second is the “grabbing motive”, as financial reform may increase the tax base from which the autocrat derives its income (the effect through the appropriation component of the objective function). This effect depends on the net outcome of the increase in manufacturing output and the adverse effect on loss of revenue ($C(Z)$). Therefore, financial reform may help the autocratic government to maintain its power and protect its rent appropriation.

Under autocracy, there are two possible sets of equilibria: one in which the government bases its power on the “traditional” elite, the other in which the base for the government power is due to a coalition of the “modern” elite and the population. Given our assumptions on the technology in the manufacturing sector, if the government gets support from the “traditional elite” (thus $\mu=1$), $Z=0$ and output in the economy comes solely from the resource sector. Thus, the indirect utility of the government becomes:

$$V^a = V^b+\beta T \qquad (5')$$

or

$$V^a = (1-\tau)M/N^b+(1+\beta)[\tau- C(\tau)]\ \bar{y}$$

And

$$\bar{y} =( M/N^b )( N^b /N)$$

where $N$ is the total population.

The tax rate that maximizes the above indirect utility is obtained from the following condition:

$$-1+(1+\beta)[1- C'(\tau)] ( N^b /N)=0$$

If $(1+\beta) ( N^b /N)<1$ then $\tau=0$, otherwise $\tau>0$. If the “grabbing hand” objective is high (high $\beta$), tax rates can be positive. However, considering that $N^b$ is a small proportion of total population, positive tax rates imply that $\beta$ has to approach *1*, an unlikely scenario. In the more likely scenario of zero tax rate, the government does not appropriate any resources, and at the same time faces high risks of losing power, given the opposition of the large majority of the population. Thus, this equilibrium is consistent only with a situation in which the "traditional" elite captures the government. In other words, the political elite is powerless. This is of course always a possible equilibrium under autocracy and may well reflect backward autocratic regimes, as illustrated by Acemoglu and Robinson (2006b). The outcome in autocracy resembles the result obtained by Goshal and Proto (2008), who model the autocratic regime as one in which the government is supported by a coalition between one elite and the population.

The second set of equilibria implies financial reform. The "traditional" elite opposes such outcome and thus the consensus base is given by the "modern" elite and the worker-population. Such situation corresponds to the case in which $\mu=0$.

The objective function of the government is:

$$V^a = V^g + V^w + \beta T$$

Or

$$V^a=[(1-\tau)(1-\alpha)F(K,L^m)I(Z^*)]/N^{e2}+[(1-\tau)\alpha F(K,L^m)I(Z^*)(1+L^o)]/(L^m+L^o)+$$
$$(2+\beta)[\tau-C(Z^*)-C(\tau)]\,\overline{y}$$

The condition for the optimal tax rate is:

$$C'(\tau)=1-[F(K,L^m)I(Z^*)((1-\alpha)/N^{e2}+\alpha(1+L^o)/(L^m+L^o))]/[(2+\beta)\ \overline{y}\ ]$$

The tax rate is always positive in this case. Thus, the government can appropriate resources and, at the same time, it has a broad support from one elite and the population. Financial reform is a key element for such consensus. If the government cares about consensus, the equilibrium supported by the coalition of the "modern" elite and the population dominates.

In sum, the discussion so far has illustrated the fact that financial sector reform decreases during the shift from autocracy to partial democracy, whereas it increases with the shift from partial to full democracy. The model predicts a non-linear relationship between democracy and financial sector reform.