Does Rapid Liberalization Increase Corruption?

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Corruption scandals seem to abound in countries that have recently undergone reform. Despite the proliferation of stories in the news media, no one has examined whether reform—be it democratization or economic liberalization or both—actually causes an increase in corruption. Theory provides no guidance as to the direction of causality—on the one hand, reforms make politicians accountable to voters, as well as introduce more competition, which should decrease corruption. On the other hand, the need for politicians to now raise campaign funds, as well as the increased availability of rents that results from economic liberalization provides for an incentive for corruption. This paper uses the numerous cases of democratizations and economic liberalizations that occurred in the 80s and 90s to examine this issue. The paper finds that undertaking both reforms in rapid succession actually leads to a decrease in corruption, while countries that democratized more than 5 years after liberalizing experienced an increase in corruption.

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1. Introduction

If one goes by the news media alone, it would seem that every country that has undertaken political and economic reforms[1] is now suffering from rampant corruption. For instance, the *New York Times* has published 99 stories about corruption in Brazil since the country returned to democracy in 1985, with 86 of these coming after economic liberalization in 1991. A broader search in LexisNexis yields more than 1000 stories during both time periods. The same is true for Mexico, which underwent political reform in 1994 following economic liberalization in 1986. Corruption also appears to be a major problem in the transition countries.

Is it true, then, that corruption has actually *worsened* following reforms? It may appear obvious that such is not the case; that what we are observing is merely a result of a freer press that is more engaged in sniffing out corruption in their respective governments. But if this were the case, there would not be an awareness of increased corruption in China, which is undergoing economic but not political liberalization. Here it is not a freer press that is pursuing corruption, but the government itself, out of fear that it would bring down the Communist party.[2]

The question then is, has corruption in fact increased following these reforms? Figure 1 suggests that this may be the case for some countries. Plotting the International Country Risk Guide (ICRG) corruption index for four countries,[3] it is seen that perceived corruption has actually increased in Brazil and Argentina (though it has decreased again in the latter), while it declined at first only to increase again in Poland and Hungary. Can it be concluded, then, that these reforms have only exacerbated the problem? Furthermore, Argentina and Brazil liberalized only several years after democratization, whereas Poland and Hungary undertook both reforms

[1] I will be using the terms economic reform, economic liberalization, and trade liberalization interchangeably to mean broad trade liberalization. More details are given in Section 2.
[2] Elisabeth Rosenthal. "Details of Corruption Emerge in China." *The New York Times*, 28 January 2001, pg4 col. 4.
[3] The ICRG index rates countries on a scale from 0 (most corrupt) to 6 (least corrupt). In the graph, the index is reversed so that high values denote more corruption.

nearly simultaneously. Does the speed of reform then matter? This is the question that this paper seeks to answer.

Several countries underwent political and economic reform during the 80s and 90s, which provides for a natural experiment to address this issue. Many studies have explored the causes and consequences of corruption,[4] but few have looked at the effects of reform on corruption. Graeff and Mehlkop (2003), for instance, examine whether improvements in economic freedom have the same effect on corruption regardless of whether a country is rich or poor. They find that though restrictions on capital markets is significant for both groups of countries, the legal structure has more impact on rich countries, whereas access to sound money is significant for poor countries. To my knowledge, though, no study has directly examined the effect of different *combinations* of reform on corruption. The closest is Giavazzi and Tabellini (2004), who look at the relationship between economic and political liberalizations and their effects on growth, investment, inflation, budget surplus, institutional quality, and corruption. The authors find that in isolation, increased economic and political liberalization decrease corruption. When examining possible interactions, they find that the order in which they are enacted do not matter, but countries that undergo both types of liberalization do seem to have lower corruption than ones that only liberalize across one dimension. The effect of the second reform, however, is found to be insignificant.

This paper differs in several important ways. Firstly, the focus here is solely on the relationship between the two dimensions of liberalization and corruption, rather than growth and other economic outcomes. Secondly, Giavazzi and Tabellini only compare countries that undertook one reform with those that underwent two. This paper, on the other hand, also distinguishes between countries that had already liberalized across one dimension and those that

[4] See, for instance, Treisman (2000), Mocan (2004), and Tanzi (1998).

had not. Furthermore, although they look at whether the order of reforms matters, they do not examine whether the *speed* of reforms is of significance; in other words, whether countries that undertook two reforms in quick succession ended up with higher corruption than those whose reforms are more spread apart. Countries that undergo both reforms in quick succession may be more vulnerable to corruption than countries that have long been democracies,[5] so that relationship is an important one to explore. Finally, I test the robustness of my results by excluding high-income countries from the sample, as well as introducing other determinants of corruption and changing the definition of democratizations.

This question of whether reforms create new channels for corruption is an important one. Corruption is believed to adversely affect a country's development potential by curbing growth, investments, and the provision of public services, as well as increasing inequality, so understanding its causes is important in designing more effective development strategies. [6]

Many reasons have been introduced as to why some countries have higher levels of corruption. Among those has been whether a country is open, measured in most cases as the share of imports in GDP. The argument is that when domestic firms have to compete with foreign firms, the rents enjoyed by the domestic firms are reduced, thereby diminishing the incentive for corruption (see Ades and di Tella, 1999). Greater openness may reduce corruption, but the more corruption there is, the more rent-generating trade barriers there will be (Treisman, 2000). The *degree* to which a country is open to trade, then, is clearly endogenous; however, whether or not a country is open to trade, as well as whether the country decides to liberalize or not, is less likely to depend on the perceived levels of corruption.

[5] Treisman (2000) finds that the longer a country has been a democracy, the lower the perceived levels of corruption.
[6] See, for instance, Aidt (2003) and Jain (2001) for surveys.

Another explanation that has been frequently presented concerns the country's regime. Countries that are democratic have lower corruption levels than non-democratic ones, since free press, free speech, and protection of civil liberties allows for more transparency (see Treisman, 2000), making corrupt politicians accountable to voters. However, as has been pointed out (see Rose-Ackerman, 2001, for instance), a democratic regime does not guarantee lower corruption, as the need to raise campaign funds for electoral competition may lead to abuses of power. There are, of course, other reasons why democracies do not necessarily have lower corruption. One possibility is that voters may have incomplete information about candidates and obtaining information is too costly. This is true especially in developing countries, where high rates of illiteracy and poor access to information make the population more likely to vote to keep a corrupt politician in power, especially if said politician or party has been in power long enough to have turned into a "brand name."[7]

In what instances, then, would political and economic liberalization not lead to a decrease in corruption? For one thing, democratization entails the writing of new laws and a new constitution. This, along with whether or not those laws are enforced, may end up creating more opportunities for corruption. For example, in Brazil, the perception of corruption has increased since democratization in 1985, as new electoral rules have decreased the ability of the executive to build coalitions and assure loyalty in Congress (see Geddes & Netto, 1992). And though the press has reported extensively on corruption, punishment itself depends on congressional action. Because of uncertainty in the constitution as to what to do in such cases, and because of the ability of the president to buy congressional support, the threat of punishment is not entirely credible. One former president, José Sarney, who had served as a senator during the military dictatorship before assuming the presidency once democracy was restored, escaped punishment

[7] See Kurer (2001) for other reasons.

entirely for having sought to buy votes for a five-year presidential term, and has since returned to being a senator, even serving twice as president of the Senate.[8] Another former president, Fernando Collor de Mello, nearly managed to buy enough votes to escape impeachment for his own corrupt practices.[9] Currently, Brazil has been reeling from another major corruption scandal in which the ruling Workers' Party, which was elected under promises to clean up government, is accused of having paid a monthly stipend of $12,500 to deputies from other parties in exchange for support.[10] This then suggests that in countries where the threat of punishment is not credible, corruption may actually flourish with the reforms.

Economic liberalization in particular may create bountiful opportunities for corruption. Countries not only lower tariffs when they liberalize, but they also begin allowing former state-owned companies to become privatized. This, of course, creates a new source of rents. Politicians wishing to maximize their chances of being reelected will have an incentive in such an environment to award contracts to firms that pay them bribes, which in turn can be used to finance their campaigns. The lower the threat of punishment, the greater the incentive will be for the politician to accept the bribes. The threat of punishment, in turn, will depend not only on how much information the voters have, but also on how easy it is to change the rules of the game and/or buy votes to remain in office.[11] It is clear, then, that reform does not guarantee better governance.

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[8] Sarney's biography was taken from the Academia Brasileira de Letras website at http://www.academia.org.br/.
[9] Collor's administration was involved in a scheme that facilitated public contracts and influenced government decisions in exchange for kickbacks and commissions, with some of this money being used to pay for maintenance of Collor's house and expenses of his family (Geddes and Neto, 1992).
[10] Larry Rohter and Juan Forero. "Unending Graft is Threatening Latin America." *The New York Times*, July 30, 2005.
[11] Another former president of Brazil, Fernando Henrique Cardoso, whose administration was also rocked by corruption scandals, managed to secure a change in the 1988 constitution that dropped the one-term limit, thus allowing him to run for reelection (See http://www.freedomhouse.org/survey99/country/brazil.html).

Now, many papers looking at corruption have emphasized bureaucratic rather than political corruption. This paper, however, is concerned with how reforms affect opportunities for corruption at all levels. This emphasis is consistent with the most recent Transparency International Global Corruption Barometer[12] (see Hodess and Wolkers, 2004), which finds that the general public around the world believe that political parties, followed by parliaments or legislatures, are the institutions most affected by corruption.

One of the difficulties in modeling corruption, however, lies in how to distinguish between corruption and rent-seeking. The World Bank defines corruption as the misuse of public office for private gain. As Tanzi (1998) points out, corruption can take many forms, and may not necessarily involve the payment of bribes. And even if it does, it is difficult to distinguish between a gift and a bribe. This paper uses the International Country Risk Guide (ICRG) corruption index, which has been produced annually since 1982 by Political Risk Services, a private international investment risk service, as an indicator. This index, which measures corruption at all levels of government and bureaucracy, is based on the opinion of experts, and seeks to capture the extent to which "high government officials are likely to demand special payments" and "illegal payments are generally expected throughout low levels of government in the form of "bribes connected with import and export licenses, exchange controls, tax assessments, police protection, or loans."[13] The sample consists of an unbalanced panel[14] of up to 119 countries from 1984 to 2001, several of which underwent either one or both types of reforms during the sample period (see Table 1). This allows me to exploit both cross-country and time-series variation in the data.

[12] The Global Corruption Barometer is a public opinion survey assessing perceptions of corruption in 64 countries.
[13] http://www.icrgonline.com/page.aspx?page=icrgmethods
[14] It is an unbalanced panel because the ICRG index was not available for the entire period for some countries, and because some countries only came into existence later in the sample period.

The results, described in section 4, suggest that undertaking both reforms in rapid succession actually leads to a decrease in corruption, while countries that democratized more than 5 years after liberalizing experienced an increase in corruption. These results are robust to correcting standard errors to account for possible serial correlation, reducing the sample to exclude high income countries, using a different criterion for denoting democratizations, and to including additional control variables.

The paper is divided as follows. Section 2 provides a description of the data, while Section 3 presents the empirical specification. Section 4 examines the results and subjects them to a variety of sensitivity tests. The last section concludes.

2. Data

2.1. Corruption

There exists no objective measure of corruption, so since Mauro (1995), a number of empirical studies have employed various subjective indices that attempt to measure the perceived levels of corruption in a country. One of these indices is the International Country Risk Guide (ICRG) corruption index. The ICRG index provides an appraisal of corruption within the political system. As mentioned in the introduction, the ICRG index is based on the opinion of experts. The aim is to provide potential investors with an assessment of the likelihood of a government overthrow or a breakdown in law and order.

The index varies from 0 to 6, with higher values denoting less corruption. The data are provided on a monthly basis, so a simple annual average is used, thus making the index continuous between 0 and 6. For ease of interpretation, I reverse the index so that high values correspond to high corruption levels.

One advantage of the ICRG index over other available indices is the fact that it is available for a long time period and for a large sample of countries. It is also highly correlated to other indices that have been used in the literature, such as Transparency International and Business International (see Treisman, 2000, for more details), which suggests that they are consistent despite being a subjective rating. However, as Ades and di Tella (1999) point out, some of the disadvantages of using such subjective indices include the fact that the rankings may not be uniform, so that a change from a score of 3 to 4 is different from a change from 5 to 6. Furthermore, it is difficult to say whether changes in score reflect changes in real levels of corruption, or the addition of new data or methodological differences. Finally, there have been arguments that such corruption perception indices are more a measure of institutional quality than actual corruption. Mocan (2004), for instance, uses the United Nation's International Crime Victim Survey (ICVS) to construct a measure of actual corruption. After controlling for institutional quality, he finds that the extent of actual corruption does not have a significant effect on perceptions of corruption. The ICVS survey, however, only asks a sample of households whether "any government official asked or expected a bribe for services."[15] The ICRG index, on the other hand, is more concerned with "actual or potential corruption in form of excessive patronage, nepotism, job reservations, favor-for-favors, secret party funding, and suspiciously close ties between politics and business," in addition to financial corruption. [16] Clearly the question asked by the ICVS survey does not address these forms of corruption. Furthermore, given that such indices are used by banks and multinationals in making investment decisions, they are important in predicting a country's economic performance

[15] http://www.unicri.it/icvs
[16] http://www.icrgonline.com/page.aspx?page=icrgmethods

The sample of countries included in the analysis, shown in Table 1, are restricted to include only those for which I could obtain scores. They include countries that underwent no reform, one reform, or both reforms in the 1984-2001 period. More detail on how countries were assigned to different groups is provided below.

2.2. Economic Reform

The indicator for economic reform is constructed from the trade liberalization dates provided in Wacziarg and Welch (2003), who update the Sachs and Warner (1995) openness indicators and trade liberalization dates. The liberalization date is taken to be the date after which all of the Sachs and Warner openness criteria are continuously met. According to their criteria, a country is considered closed if one of the following conditions holds: 1. average tariffs exceed 40 percent; 2. non-tariff barriers cover more than 40 percent of trade; 3. it has a socialist economic system; 4. the black market premium on the exchange rate exceeds 20 percent; 5. there is a state monopoly on major exports. If none of those conditions apply, the country is considered open. Countries that liberalize are assigned a 1 starting on the date indicated by Wacziarg and Welch, whereas those that never meet the criteria for openness are assigned a 0.

Now, the Sachs and Warner index has been criticized by Rodriguez and Rodrik (2000) for being nearly completely determined by the last two conditions. They argued that using those two criteria alone generated a dummy variable that was different from the Sachs and Warner index in only 6 cases, whereas using the other three conditions generated a dummy that was different in 31 cases. Furthermore, they point out that the black market premium is more an index of macroeconomic imbalances than openness, while the state monopoly of exports variable is virtually indistinguishable from a Sub-Saharan Africa dummy. This criticism was leveled

against both the openness index itself, as well as the liberalization dates. However, Wacziarg and Welch argue that their updated liberalization dates do in fact reflect broader liberalization, since policy changes that reduced the black market premium or eliminated state monopolies were also in most cases accompanied by a decrease in tariffs and non-tariff barriers. Furthermore, whereas the openness dummy is based on the five criteria listed above, the dates of liberalization were cross-checked against a broad survey of country case studies. In creating the reform indicator for this paper, then, I use the liberalization dates rather than the openness dummy.

There are, of course, several alternative measures of openness. For instance, one could use a measure of imports as a percentage of GDP, which has often been employed in the literature, or even tariffs. These indicators, however, are not as broad a measure of liberalization as the Wacziarg and Welch openness dates. Furthermore, they do not provide a clear separation between open and closed countries. An alternative measure would be to use the Economic Freedom Index, which measures various aspects of economic liberalization. This index, however, is only available for every five years, so its use would substantially decrease the sample size. To ensure the validity of the liberalization dates used, though, I did compare them to the Economic Freedom Index, and found that they did correspond to periods of substantial improvements in economic freedom.

2.3. Political Reform

Political liberalization is defined here as a change from a non-democratic to a democratic regime. This means that I am considering only democratizations rather than improvements in regime.[17] Transitions are identified using the POLITY2 and the REGTRANS indicators in the

[17] Most countries that democratized in the sample moved towards a full democracy. The average POLITY2 index for countries following democratization was 6.64.

POLITY IV database, which is currently available up to 2003.[18] The variable POLITY2 is a modified version of POLITY, which codes transition years so as to detect changes in regime. The POLITY variable, for its part, is a measure of the quality of democratic institutions, and varies from +10 (strongly democratic) to -10 (strongly autocratic). The variable REGTRANS measures regime transition, with a "democratic transition" being defined as a three-point change in three years or less from autocracy to partial democracy (+1 to +6) or full democracy (+7 to +10). The variable assigns the same value for each year of the regime transition. A value of +3 is assigned for "major democratic transitions," which is defined as an increase of at least 6 points over 3 or less years; while a value of +2 is given to "minor democratic transitions," which are defined as a change of 3 to 5 points.[19] A regime change is then taken to be a change from a non-positive to a positive POLITY2 value. Countries that have changed the regime are assigned a 1 starting the year they become a democracy and 0 otherwise; all other countries that have not changed the regime are assigned a 0.

As a further check on this definition of regime change, I use the Freedom House Freedom in the World country ratings. In particular, I use the overall status to define political liberalization as a shift from a "not free" or "partly free" status to "free."[20] These ratings are generated by taking an average of a country's political and civil rights rating. The political rights index ranks countries each year in seven categories, such as the existence of fair electoral laws, equal campaigning opportunities, and whether there is a significant opposition vote. The civil rights index ranks countries on various categories including freedom of expression, assembly, association, education, and religion. The index varies from 1 (free) to 7 (not free). Countries

[18] See http://www.cidcm.umd.edu/inscr/polity/index.htm.
[19] Only 8 countries fell into this category. These were Albania (1997), Dominican Republic (1996), Ghana (1996), Guatemala (1996), Peru (1993), Paraguay (1992), Romania (1996), and South Africa (1992-94).
[20] See http://www.freedomhouse.org/ratings/index.htm.

whose ratings average 1 to 2.5 are considered "free;" 3-5 "partly free;" and 5.5 to 7 are denoted "not free." In some cases, countries switch from "free" to "partly free," but a full reversal here is only defined as a movement from "free" or "partly free" to "not free."

3. Empirical Specification

3.1. Methodology

Countries that liberalized across one or both dimensions during the period of interest fall into six categories, as shown in Table 1:

1. Closed countries that liberalized only across the political dimension;
2. Countries that were already open and now democratized;
3. Autocratic countries that became open;
4. Democratic countries that now became open;
5. Countries that democratized first and liberalized second;
6. Countries that liberalized first and democratized second.

In addition to countries that liberalized across one or both dimensions, the sample also includes countries that did not undergo any type of reform. This allows me to estimate the effects of the reforms using a difference-in-difference (DID) approach. In DID estimation, the outcome—in this case, the perceived level of corruption—is compared between two groups before and after a policy change—here political and economic liberalization. One group, denoted the "control," consists of countries that have not undergone liberalization. The other group, the "treatment," in turn includes the countries that have undertaken reform. If the two groups are very similar, so that we are comparing apples and apples rather than apples and zucchini, then any difference in outcome can be attributed to the causal effect of the treatment. This means that

the effect of the reform on corruption is then estimated from the difference in outcomes for these two groups (Meyer, 1995). An advantage of DID is that it takes care of all unobserved exogenous factors that exist before and after reform, as well as unobserved endogenous factors for each country in the sample if they are fixed before and after the reform in question.

Simply comparing countries that underwent reform with those that did not, however, is problematic. For example, the set of countries that reformed may have been structurally different in various ways, such as culture, institutional arrangements, or constitutional tradition. Furthermore, there could be general trends that affect all countries in a similar way. If these unobserved heterogeneities are not taken into account, they could bias the results. Based on previous empirical studies on the causes of corruption, it is plausible to assume that these omitted effects are fixed in nature, rather than the outcome of a random draw.[21] Because the unobservables may contain a cross-sectional as well as a temporal dimension, I include both country-specific and year-specific fixed effects in the estimated equation. This means that identification is obtained out of within group variation.

The estimated equation is of the form

$$CORR_{it} = \beta_0 + \beta_1 REFORM_{it} + \eta_i + \nu_t + \varepsilon_{it} \qquad (1)$$

where $CORR_{it}$ is the ICRG corruption index for country *i* at time *t*; $REFORM_{it}$ is dummy equal to 1 in the years after the reform for "treated" countries and 0 elsewhere; η_i captures the country-level fixed effects, which are assumed constant over time; ν_t is the year-specific fixed effect, which is assumed constant across countries; and ε_{it} is the unobserved error term.[22] Because there

[21] Some of the variables that have been used in cross-sectional studies of corruption include ethnolinguistic division, an indicator for colonial origin, an indicator for legal system origin, and an indicator for federalism. See Treisman (2000).

[22] Standard errors are heteroskedasticity-consistent unless otherwise specified. More detailed is provided in the next section.

could also be factors that evolve over time in different ways across countries, I also experiment with including time-varying, country-specific determinants of corruption as a robustness check.

The main coefficient of interest is β_1, which measures the effect of the reforms on the levels of corruption.[23] To see this, define Δ_C as the change in corruption for the control group and Δ_T as the change in outcome in the treatment group. Then we have

$$\Delta_C = (\beta_0 + \nu_t) - (\beta_0) = \nu_t, \qquad \text{and}$$

$$\Delta_C = (\beta_0 + \beta_1 + \nu_t) - (\beta_0) = \nu_t + \beta_1$$

The difference between these two differences is then:

$$\Delta = \Delta_T - \Delta_C = (\nu_t + \beta_1) - \nu_t = \beta_1$$

Countries are defined as "treated" only if they underwent reform during the period under consideration. More specifically, "treated" countries are the ones that reformed in the period starting from one year following the start of the sample and ending three years before the end of the sample. This is to allow for the delay between a reform and its effect on perceptions of corruption. In a few cases, democratizations were reversed.[24] For instance, Albania first democratized in 1990, then underwent a period of reversal in 1996, only to revert back to a democracy in 1997. If a country remained democratic for at least 5 years before reverting back to an autocratic regime, that country was considered to have undergone reform, with the reform dummy being set to zero during the years of reversal.[25] Otherwise, the country was deemed autocratic throughout the entire period.[26]

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[23] When control variables are added, β_1 is interpreted as the ceteris paribus effect of the reforms on corruption levels.

[24] Countries that democratized, only to revert back to autocracy, either briefly or until the end of the period, include Albania, Congo Republic, Haiti, Niger, Pakistan, Peru, Sierra Leone, Uganda, and Zimbabwe.

[25] Givazzi and Tabellini (2004) defines their treatment group as either countries that underwent permanent reform (a reform that is uninterrupted and which is not reversed in the sample up to 2000); or countries that underwent at least a temporary reform that lasted for at least 4 years. To test the robustness of my results to the definition of reform, I

3.2. Implementation

Because reforms took place under different environments, various reform dummies reflecting the various groupings shown in Table 1 are created to identify their impact upon the level of corruption in a particular country. Firstly, "treated countries" include those that only liberalized (OPENONLY); those that only democratized (DEMONLY); and those that underwent both reforms, albeit in different order and at different speeds. In particular, DEM2LESS and DEMOPENLESS denotes countries that democratized first then liberalized within 5 years; OPEN2LESS and OPENLIBLESS refers to countries that liberalized first then democratized within 5 years; while DEM2MORE and DEMOPENMORE and OPEN2MORE and OPENDEMORE indicates countries that democratized first and liberalized second or liberalized first and democratized second, respectively, with the lag between those reforms lasting more than 5 years.

The next step is to separate countries that underwent only one reform into the different environments under which those reforms were undertaken. In particular, CLODEMONLY refers to countries that are closed during the period and undergo democratization; AUTOPENONLY denotes countries that were autocratic and liberalized; OPENDEMONLY equals 1 after reform for countries that were already open during the sample period and democratized; and DEMOPENONLY refers to countries that were already democracies at the start of the sample period, and then liberalized. Countries that underwent both reforms are defined as above.

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also experimented with excluding the countries that experienced reversal from the sample. The results, which are available from the author, are unchanged.

[26] The countries deemed autocratic were Sierra Leone, Uganda, and Zimbabwe.

3.3. Identification

With DID estimation, a crucial identifying assumption is that there is no unobserved variable affecting corruption that moves systematically over time in different ways between the groups of countries that underwent reform and those that did not (see Besley and Case, 2000). This means that the two groups of countries must be similar to each other, so that any omitted variable that varies across time, such as increased globalization, cannot affect the control and treated countries differently. In other words, we need to make sure that the only difference between the two groups of countries is the fact that one of them underwent reform and the other did not.

Another factor that could cause the identifying assumption to be violated is if how countries are assigned to the treatment or control group is endogenous, so that the decision to reform is dependent on the level of corruption. It is not clear, however, that this would be the case, since the level of corruption is more likely to be a result of a country's institutional environment, rather than a cause. Furthermore, the fact that the control group includes countries that are either always open and democratic or always closed and autocratic helps insure that the control and treatment countries are not much different on average.

To address these issues, the robustness of the results is examined in various ways. Firstly, I always perform the analysis on both the full sample and on a sample where high income countries are excluded. High income countries are those that are classified as such by the OECD. Table 2 compares characteristics that have been used to explain corruption levels in the literature across countries that underwent democratizations, liberalizations, or both reforms, using the reduced sample. Tests of means reveal little statistical difference between control and treated

countries. This means that removing high income countries from the sample does in fact make the two groups similar.[27]

Secondly, this paper follows Giavazzi and Tabellini (2004) by introducing a dummy for socialist legal origin interacted with the two reforms, so as to ensure that the estimated effect of the reforms do not reflect the circumstances of the transition in former socialist countries. As a robustness check, I also try including an interaction term between year fixed effects and time-invariant indices classifying a country according to its region (Asia, Africa, Latin America), and socialist legal origin. This would make the different groups of countries more similar.

Thirdly, as mentioned above, I experiment with changing the definition of treated countries by using the Freedom of the World index to create the democratization index. Furthermore, I add control variables that have been used in the literature to explain corruption levels. These variables are the size of the government, which is measured as the size of government, or total government expenditures as a fraction of GDP (IMF's *Financial Statistics*), and the log of population (*World Development Indicators*); and the literacy rate for adults ages 15 and above (*World Development Indicators*).[28] Ades and Wacziarg (1997) argue that large countries have smaller ratios of public service outlets per capita as a result of economies of scale in the provision of public services, so that individuals may resort to bribes in order to obtain service.[29] Knack and Ozfar (2000), on the other hand, find that this result that smaller countries are less corrupt is due to sample selection bias, as most of the available corruption perception indices include only small countries with good governance. When more countries are included in

[27] Another reason for removing high income countries from the sample is, as Graeff and Mehlkop (2003) find, and as was previously mentioned, improvements in economic freedom affects corruption differently depending on whether the country is rich or poor.
[28] I also tried adding the log of GDP, the log of GDP per capita, and the Gastill index of civil liberties, but they were insignificant, and hence do not affect the results.
[29] Graeff and Mehlkop (2003), however, find that bigger governments are less corrupt.

the sample, the relationship disappears. They also point out that due to the breadth of coverage, the ICRG index is less subject to this bias. As for the literacy rate, countries with high levels of illiteracy are predicted to be more corrupt, as people may not have much understanding of government process (see Rose-Ackerman, 1999).

A final consideration regards the possible presence of positive serial correlation, which is common in DID estimation (see Bertrand et al., 2004). Positive serial correlation would not bias the estimated treatment effect, but it could cause standard errors to be understated. This is of particular concern in this case, as the corruption measure moves slowly over time. To correct this problem, I follow Bertrand et al., 2004, and also estimate the regressions allowing residuals to be correlated within each country. Another possibility, though, is that there is spatial correlation across countries of the same region that could be similarly affected by local shocks. To cope with this possibility, I further estimate regressions where the standard errors are calculated through clustering on region-year combinations.

4. Results

4.1. POLITY2 to Denote Democratizations

Tables 3 and 4 display the results of the first set of regressions. In Table 3, reforming countries are distinguished between those that only democratized, those that only liberalized, and those that undertook both reforms (depending on order and number of years between each reform). Table 4 further distinguishes between closed and open countries that democratized, and democratic and autocratic countries that liberalized. In both tables, columns 1 through 6 include the full sample, whereas columns 7 through 8 exclude high income countries. In columns 1, 4, and 7, standard errors are heteroskedasticity-consistent; in columns 2, 5, and 8, standard errors

are clustered on countries; and in columns 3, 6, and 9, standard errors are clustered by region-year. Finally, only country-specific (time-invariant) and year-specific (country-invariant) fixed effects, as well as a socialist dummy interacted with each of the reforms is included in columns 1 through 3 and 7 through 8. In columns 4 through 6, I also add regional dummies.

In Table 3, undertaking both reforms in rapid succession decreases corruption while taking more than 5 years between one reform and the next seems to increase corruption. In particular, it is the second reform that has the most significant impact on corruption. Liberalizing less than five years after democratization further reduces corruption perception by about 0.4, for a total effect of about 0.6 reduction after both reforms. Countries that only undergo democratization also seem to have experienced a decrease in corruption of a lesser magnitude, though the effect is not significant if high income countries are excluded from the sample. In the meantime, democratizing no more than five years after liberalization decreases corruption by between 0.6 and 0.7. The effect of the first reform, however, is insignificant. Note that the effect of only liberalizing is also insignificant.

Similar results for the first reform are obtained when examining those that took more time between one reform and the next. In particular, countries that first democratize saw a decrease in corruption, while the effect of liberalizing first is insignificant. The effect of the second reform, however, is highly significant, but completely the opposite of countries that undertook both reforms in rapid succession. In particular, corruption seemed to have increased by about 0.6 following liberalization in countries that had democratized more than 5 years before, and increased by 1 point in countries that democratized more than 5 years after having liberalized. These results are consistent with the experience of both Brazil (democratization

followed 6 years later by liberalization) and Mexico (liberalization followed 8 years later by democratization), which were mentioned in the introduction.

Distinguishing how countries that only undertook one reform started out in Table 4 does not alter these conclusions. Undertaking a second reform more than 5 years after the first reform increases corruption, while reforms in rapid succession decrease corruption. A further result is that closed countries that democratize experience a decrease in corruption, while the effect of undertaking only one reform in all other cases is mostly insignificant.

In sum, then, it does not appear that rapid reforms increase corruption; in fact, it seems to be quite the opposite. Democratizing or liberalizing more than 5 years after the first reform may increase corruption, while undergoing both reforms within 5 years will decrease it.

4.2. Freedom House Status to Denote Democratizations

To further check the robustness of the results, I experimented on using a different criterion for determining whether a country underwent democratization or not. In particular, I used the Freedom House index, which denotes countries as being "Free," "Partially Free," or "Not Free." For the purposes of this exercise, democratization is defined as a movement from "Partly Free" or "Not Free" to "Free."

Tables 5 and 6, then, present the results of the same regressions as Tables 3 and 4, only this time using the Freedom House definition. Table 5, like Table 3, looks at countries that undertook one reform without distinguishing how those countries started out; while in Table 6 the distinction is made between closed and open countries that democratized, and democratic and autocratic countries that liberalized. As before, columns 1 through 6 in both cases include the full sample, whereas columns 7 through 8 exclude high income countries. In columns 1, 4, and 7,

standard errors are heteroskedasticity-consistent; in columns 2, 5, and 8, standard errors are clustered on countries; and in columns 3, 6, and 9, standard errors are clustered by region-year. Finally, only country-specific (time-invariant) and year-specific (country-invariant) fixed effects, as well as a socialist dummy interacted with each of the reforms is included in columns 1 through 3 and 7 through 8. In columns 4 through 6, I also add regional dummies.

Again, undergoing both reforms in rapid succession decrease corruption. In both cases, liberalizing less than 5 years after democratization further lowers corruption by about 0.1, for a total effect ranging from 0.2 to 0.4, though the effect of the first reform is insignificant when high income countries are excluded. Democratizing less than 5 years after liberalization further reduces corruption by about 0.3, for a total reduction of around 0.6, which is similar to what was found when using the POLITY2 index to create the democratization index. Undergoing only one reform, though, is now mostly insignificant.

As for reforms that are more than 5 years apart, liberalization followed by democratization is still found to increase corruption, only now the second reform only further raises corruption. In particular, the first reform increases corruption by 0.4-0.5, while the second one further increases it by 1, for a total effect of about 1.5. On the other hand, liberalizing more than 5 years after democratizing appears to now reduce corruption, though the effect is insignificant when regional dummies are added.

4.3. Adding Control Variables

Tables 7 through 10 add three control variables that have been previously used in the literature to explain corruption perception levels, namely, the size of government, the literacy rate, and the log of population. The effect of the size of government and the log of population are

predicted to be ambiguous, while countries with higher literacy rates are expected to exhibit lower corruption perception levels.

Each column is defined as before. In Tables 7 and 8, the POLITY2 index is used to generate the democratization dummies, while in Tables 9 and 10, the Freedom House index is employed. Tables 7 and 9 do not distinguish how countries that underwent only one reform started out, whereas that distinction is made in Tables 8 and 10.

Once again, the results in all cases indicate that countries that liberalize first and democratize more than 5 years later experienced an increase in corruption following the second reform, an effect that was larger in magnitude than the initial decrease in corruption following the first reform. The effect of the second reform is insignificant, however, in Table 10 when high income countries are excluded. On the other hand, in both Tables 9 and 10, where the Freedom House index is used to denote democratization, the effect of the first reform is also to raise corruption, so it can be concluded that the overall effect of democratizing more than 5 years after a liberalization is to increase the perception of corruption.

Democratizing first is again found to decrease corruption, both after the first and second reform, regardless of how far apart the two reforms are, although the effect of speedier reforms is not as robust throughout all specifications. Democratizing less than 5 years after liberalization also reduces corruption, though only following the second reform, as the coefficient on the liberalization dummy is insignificant across all specifications.

As for countries that underwent only one reform, democratizations reduce corruption, and in particular when the country is closed. For those countries, corruption is reduced by 0.4 to 0.6 points. Countries that only liberalize, however, seem to experience an increase in corruption,

regardless of whether they start out as democracies or autocracies, although the effect is not significant when the definition of democratization is based on the Freedom House Index.

Finally, the results indicate that bigger governments do in fact have less corruption, though it becomes insignificant when high income countries are excluded from the sample. Countries with higher literacy rates experience less corruption, as predicted, though it is not significant throughout all specifications. Furtherrnore, larger countries, as measured by the log of population, do appear to have more corruption, though again, the effect is not strongly significant.

Overall, these results confirm the previous findings that democratizations are corruption-reducing, while liberalizations can increase corruption, especially if liberalization is followed more than 5 years later by democratization.

5. Conclusion

Corruption scandals seem to abound in countries that have recently undergone reform. Despite the proliferation of stories in the news media, no one has examined whether reform—be it democratization or economic liberalization or both—actually causes an increase in corruption. Theory provides no guidance as to the direction of causality—on the one hand, reforms make politicians accountable to voters, as well as introduce more competition, which should decrease corruption. On the other hand, the need for politicians to now raise campaign funds, as well as the increased availability of rents that results from economic liberalization provides for an incentive for corruption. This paper uses the numerous cases of democratizations and economic liberalizations that occurred in the 80s and 90s as a natural experiment for examining this issue.

The ICRG corruption index is used as the measure of the perceived level of corruption to construct an unbalanced panel of 119 countries over the 1984-2001, which allows me to exploit both cross-country and time-series variation in the data. I find that while democratizations reduce corruption, liberalization may potentially increase it. Furthermore, undertaking both reforms in rapid succession actually leads to a decrease in corruption, while countries that democratized more than 5 years after liberalizing experienced an increase in corruption. These results are robust to correcting standard errors to account for possible serial correlation, reducing the sample to exclude high-income countries, using a different criterion for denoting democratizations, and to including additional control variables.

These findings, then, support the view that liberalizations may increase the incentives to abuse power, and in particular, that democratizing only many years after a liberalization can increase corruption. In other words, how far apart the two reforms are can have different effects on corruption. Many authors have argued that autocratic regimes are better able to introduce trade liberalization, since they will not be voted out of office because the reform is not benefiting the majority of the electorate at first. Giavazzi and Tabellini (2004), for instance, find that countries that liberalize first have better economic performance than those that reform in the reverse order. On the other hand, de Haan and Sturm (2003), using a sample of developing countries, find that democracy does not adversely affect liberalization. These studies, however, have not considered whether how far apart the two reforms are matter. This paper suggests that democratization is an integral part of reform, so that if a country waits too long to become democratic, it may end up with higher levels of corruption, which in turn could undermine its efforts to develop.

6. References

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Table 1: Countries and Years of Economic and/or Political Liberalization

Group 1: Closed countries that Democratized		Group 2: Open Countries that Democratized	
Country	Year of Reform	Country	Year of Reform
Iran	1997 (never)	Chile	1989 (1990)
Malawi	1994 (1993)	Korea	1987
Pakistan	1988* (never)	Thailand	1984* (1991)
		Taiwan	1992 (1996)

Group 3: Autocratic countries that Liberalized		Group 4: Democratic Countries that Liberalized	
Country	Year of Reform	Country	Year of Reform
Burkina Faso	1998	Argentina	1991
Cote d'Ivoire	1994	Bolivia	1985
Cameroon	1993	Colombia	1986
Egypt	1995	Costa Rica	1986
Guinea	1986	Dominican Republic	1992
Kenya	1993	Ecuador	1991
Tanzania	1989	El Salvador	1989
Tunisia	1995	Honduras	1991
Uganda	1988	Israel	1985
		Jamaica	1989
		New Zealand	1986
		South Africa	1991
		Sri Lanka	1991
		Trinidad	1992
		Turkey	1989
		Venezuela	1996

Group 5: Democratized First, Liberalized Second

Country	Year 1st Reform	Year 2nd Reform
Albania	1990* (never)	1992
Bangladesh	1991 (never)	1996
Bulgaria	1990 (1991)	1991
Brazil	1985	1991
Ethiopia	1993 (never)	1996
Guatemala	1986 (never)	1988
Hungary	1989 (1990)	1990
Madagascar	1991 (never)	1996
Mozambique	1994 (never)	1995
Niger	1991* (never)	1994
Nicaragua	1990 (never)	1991
Panama	1989 (1994)	1996
Philippines	1986 (1987)	1988
Poland	1989 (1990)	1990
Romania	1990 (1996)	1992
Uruguay	1985	1990
Zambia	1991 (never)	1993

Group 6: Liberalized First, Democratized Second

Country	Year 1st Reform	Year 2nd Reform
Ghana	1985	1996 (2000)
Guinea-Bissau	1987	1991 (1989)
Guyana	1988	1992 (1993)
Mexico	1986	1994 (2000)
Mali	1988	1992 (1992)
Peru	1991	1993* (1984)

Group 7: Countries that were Always Open and Democratic or Always Closed and Autocratic

Algeria	Gambia	Norway
Angola	Germany	Papua New Guinea
Armenia	Greece	Paraguay
Australia	Haiti	Portugal
Austria	India	Russia
Azerbaijan	Indonesia	Senegal
Belarus	Iraq	Sierra Leone
Belgium	Ireland	Singapore
Botswana	Italy	Slovak Republic
Canada	Japan	Slovenia
China	Jordan	Somalia
Congo Dem. Rep.	Kazakhstan	Spain
Congo Rep.	Latvia	Sweden
Croatia	Liberia	Switzerland
Cyprus	Lithuania	Syria
Czech Republic	Malaysia	Togo
Denmark	Moldova	Ukraine
Estonia	Morocco	United Kingdom
Finland	Myanmar	United States
France	Netherlands	Yemen
Gabon	Nigeria	Zimbabwe

Note: Table lists years of trade liberalization and democratization only if reforms fell during period under consideration (1984-2001). Dates in parenthesis indicate date in which country was considered Free under the Freedom House index, if the year is different from the Polity II index. * denotes whether reform was reversed. According to the Polity II definition, democratization was reversed in Albania, Peru, and Thailand for one year, and in Niger and Pakistan for 3 years.

Table 2: Characteristics of Control and Treatment Countries

	Liberalization only			Democratization only			Both reforms		
	Control	Treatment	Difference	Control	Treatment	Difference	Control	Treatment	Difference
Corruption	3.379	3.056	0.322	3.246	3.115	0.131	3.233	3.107	0.126
	(1.093)	(1.055)	(0.028)	(1.050)	(1.134)	(0.059)	(1.040)	(1.180)	(0.065)
Obs.	653	843		940	556		1066	430	
Real GDP	3.898	3.793	0.104	3.834	3.835	-0.0001	3.935	3.605	0.329
Per Capita	(3.172)	(2.678)	(0.170)	(2.744)	(3.083)	(0.169)	(2.931)	(2.754)	(0.170)
Obs.	506	781		781	506		896	391	
Literacy	66.921	72.531	-5.610	71.460	68.768	2.692	70.629	69.919	0.710
	(21.525)	(23.412)	(1.335)	(20.109)	(26.588)	(1.449)	(20.597)	(27.474)	(1.624)
Obs.	446	737		724	459		828	355	
Size of	0.238	0.247	-0.009	0.236	0.254	-0.018	0.231	0.273	-0.042
Government	(0.087)	(0.122)	(0.007)	(0.088)	(0.134)	(0.008)	(0.085)	(0.147)	(0.009)
Obs.	380	560		559	381		655	285	
Political	4.809	3.707	1.102	4.366	3.883	0.483	4.353	3.774	0.579
Rights	(1.879)	(1.870)	(0.098)	(2.023)	(1.785)	(0.100)	(1.992)	(1.784)	(0.105)
Obs.	649	843		936	556		1062	430	
Civil Liberties	4.847	3.919	0.928	4.461	4.090	0.372	4.453	4.002	0.451
	(1.524)	(1.414)	(0.077)	(1.547)	(1.482)	(0.081)	(1.550)	(1.444)	(0.084)
Obs.	649	843		936	556		1062	430	
Fuel Exports	20.992	12.826	8.166	22.071	5.186	16.885	20.287	4.933	15.354
	(32.195)	(19.851)	(1.857)	(29.006)	(11.921)	(1.324)	(28.637)	(7.900)	(1.182)
Obs.	370	607		621	356		699	278	

Note: Control and Treatment columns present the mean of each variable for the reforms indicated (for instance, in the case of Liberalization Only, the control countries are those that did not liberalize, whereas the treatment sample includes countries that did). The column labeled Difference presents the differences of means. Standard deviations are in parenthesis. Corruption is the ICRG corruption perception index, which varies from 0 (least corrupt) to 6 (most corrupt). Real GDP per capita is expressed in 1000s, and is taken from the Summers and Heston Penn World Tables. Literacy is the literacy rate for adults (ages 15 and above), from the World Development Indicators. The Size of Government is general government final consumption expenditure as a percentage of GDP, taken from the IMF's Financial Statistics. The political rights index ranks countries each year in seven categories, such as the existence of fair electoral laws, equal campaigning opportunities, and whether there is a significant opposition vote. The civil rights index ranks countries on various categories including freedom of expression, assembly, association, education, and religion. The index varies from 1 (free) to 7 (not free). Fuel exports is the share of fuel exports in merchandise exports, from the World Development Indicators.

Table 3: Effects of Rapid Economic and Political Liberalizations on Corruption

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
OPENONLY	-0.065	-0.065	-0.065	-0.065	-0.065	-0.065	0.010	0.010	0.010
	(0.072)	(0.156)	(0.097)	(0.072)	(0.156)	(0.097)	(0.078)	(0.173)	(0.104)
DEMONLY	-0.250**	-0.250	-0.250**	-0.250**	-0.250	-0.250**	-0.083	-0.083	-0.083
	(0.119)	(0.266)	(0.104)	(0.119)	(0.266)	(0.104)	(0.114)	(0.275)	(0.088)
DEM2LESS	-0.210**	-0.210	-0.210**	-0.210**	-0.210	-0.210**	-0.277***	-0.277	-0.277***
	(0.101)	(0.194)	(0.089)	(0.101)	(0.194)	(0.089)	(0.093)	(0.185)	(0.080)
OPEN2LESS	-0.031	-0.031	-0.031	-0.031	-0.031	-0.031	-0.059	-0.059	-0.059
	(0.137)	(0.212)	(0.116)	(0.137)	(0.212)	(0.116)	(0.136)	(0.214)	(0.118)
DEMOPENLESS	-0.433***	-0.433*	-0.433***	-0.433***	-0.433*	-0.433***	-0.373***	-0.373*	-0.373***
	(0.116)	(0.254)	(0.126)	(0.116)	(0.254)	(0.126)	(0.101)	(0.215)	(0.111)
OPENDEMLESS	-0.684***	-0.684**	-0.684***	-0.684***	-0.684**	-0.684***	-0.603***	-0.603*	-0.603***
	(0.133)	(0.343)	(0.125)	(0.133)	(0.343)	(0.125)	(0.133)	(0.347)	(0.127)
DEM2MORE	-0.402*	-0.402	-0.402*	-0.402*	-0.402	-0.402*	-0.437*	-0.437	-0.437*
	(0.210)	(0.271)	(0.228)	(0.210)	(0.271)	(0.228)	(0.223)	(0.281)	(0.235)
OPEN2MORE	-0.006	-0.006	-0.006	-0.006	-0.006	-0.006	-0.058	-0.058	-0.058
	(0.211)	(0.294)	(0.191)	(0.211)	(0.294)	(0.191)	(0.205)	(0.281)	(0.188)
DEMOPENMORE	0.603***	0.603*	0.603***	0.603***	0.603*	0.603***	0.573***	0.573*	0.573***
	(0.140)	(0.308)	(0.162)	(0.140)	(0.308)	(0.162)	(0.140)	(0.310)	(0.165)
OPENDEMORE	1.052***	1.052**	1.052***	1.052***	1.052**	1.052***	1.002***	1.002**	1.002***
	(0.226)	(0.410)	(0.215)	(0.226)	(0.410)	(0.215)	(0.220)	(0.401)	(0.211)
Sample	All	All	All	All	All	All	No High Inc	No High Inc	No High Inc
Regional Dummies?	No	No	No	Yes	Yes	Yes	No	No	No
Observations	1944	1944	1944	1944	1944	1944	1496	1496	1496
Adj. R-Squared	0.7845	0.7845	0.7845	0.7845	0.7845	0.7845	0.6333	0.6333	0.6333

Note: Heteroskedastic-consistent standard errors are in parenthesis. In columns 2, 5 and 8, standard errors are also clustered by country; in columns 3, 6 and 9, standard errors are clustered by region-year. * significant at 10%; ** significant at 5%; *** significant at 1%. All regressions include country and time fixed effects, as well as a socialist origin dummy interacted with each of the reforms (openness and democratization). Regional dummies refer to the interaction between the year fixed effects and dummy variables for Asia, Africa, Latin America, and socialist legal origin. No High Inc refers to sample excluding high income countries (per OECD definition). Reform dummies are defined as follows: DEMONLY (OPENONLY)=1 after democratization (liberalization) for countries that only democratized (liberalized); DEM2LESS (OPEN2LESS)=1 after democratization (liberalization) for countries that democratized (liberalized) first and liberalized (democratized) second and within 5 years; DEMOPENLESS (OPENDEMLESS)=1 after liberalization (democratization) for countries that democratized (liberalized) first and liberalized (democratized) second and within 5 years; DEM2MORE (OPEN2MORE)=1 after democratization (liberalization) for countries that democratized (liberalized) first and liberalized (democratized) second and within more than 5 years; DEMOPENMORE (OPENDEMORE)=1 after liberalization (democratization) for countries that democratized (liberalized) first and liberalized (democratized) second and within more than 5 years.

Table 4: Effects of Rapid Economic and Political Liberalizations on Corruption, Distinguishing How Country Starts Out

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
CLODEMONLY	-0.402**	-0.402	-0.402***	-0.402**	-0.402	-0.402***	-0.332**	-0.332	-0.332**
	(0.166)	(0.390)	(0.149)	(0.166)	(0.390)	(0.149)	(0.160)	(0.388)	(0.138)
AUTOPENONLY	0.047	0.047	0.047	0.047	0.047	0.047	0.147	0.147	0.147
	(0.113)	(0.212)	(0.187)	(0.113)	(0.212)	(0.187)	(0.118)	(0.227)	(0.200)
OPENDEMONLY	-0.082	-0.082	-0.082	-0.082	-0.082	-0.082	0.250*	0.250	0.250*
	(0.164)	(0.327)	(0.159)	(0.164)	(0.327)	(0.159)	(0.130)	(0.271)	(0.131)
DEMOPENONLY	-0.134	-0.134	-0.134	-0.134	-0.134	-0.134	-0.075	-0.075	-0.075
	(0.083)	(0.195)	(0.088)	(0.083)	(0.195)	(0.088)	(0.088)	(0.213)	(0.078)
DEM2LESS	-0.211**	-0.211	-0.211**	-0.211**	-0.211	-0.211**	-0.278***	-0.278	-0.278***
	(0.101)	(0.195)	(0.090)	(0.101)	(0.195)	(0.090)	(0.093)	(0.185)	(0.080)
OPEN2LESS	-0.032	-0.032	-0.032	-0.032	-0.032	-0.032	-0.060	-0.060	-0.060
	(0.137)	(0.213)	(0.115)	(0.137)	(0.213)	(0.115)	(0.136)	(0.214)	(0.116)
DEMOPENLESS	-0.431***	-0.431*	-0.431***	-0.431***	-0.431*	-0.431***	-0.368***	-0.368*	-0.368***
	(0.116)	(0.254)	(0.126)	(0.116)	(0.254)	(0.126)	(0.101)	(0.216)	(0.110)
OPENDEMLESS	-0.682***	-0.682**	-0.682***	-0.682***	-0.682**	-0.682***	-0.598***	-0.598*	-0.598***
	(0.133)	(0.343)	(0.125)	(0.133)	(0.343)	(0.125)	(0.133)	(0.347)	(0.126)
DEM2MORE	-0.402*	-0.402	-0.402*	-0.402*	-0.402	-0.402*	-0.437*	-0.437	-0.437*
	(0.210)	(0.271)	(0.228)	(0.210)	(0.271)	(0.228)	(0.223)	(0.281)	(0.235)
OPEN2MORE	-0.007	-0.007	-0.007	-0.007	-0.007	-0.007	-0.061	-0.061	-0.061
	(0.211)	(0.294)	(0.191)	(0.211)	(0.294)	(0.191)	(0.205)	(0.281)	(0.187)
DEMOPENMORE	0.602***	0.602*	0.602***	0.602***	0.602*	0.602***	0.571***	0.571*	0.571***
	(0.140)	(0.308)	(0.162)	(0.140)	(0.308)	(0.162)	(0.140)	(0.311)	(0.165)
OPENDEMORE	1.051***	1.051**	1.051***	1.051***	1.051**	1.051***	1.002***	1.002**	1.002***
	(0.226)	(0.409)	(0.215)	(0.226)	(0.409)	(0.215)	(0.220)	(0.400)	(0.210)
Sample	All	All	All	All	All	All	No High Inc	No High Inc	No High Inc
Regional dummies?	No	No	No	Yes	Yes	Yes	No	No	No
Observations	1944	1944	1944	1944	1944	1944	1496	1496	1496
Adj. R-Squared	0.7847	0.7847	0.7847	0.7847	0.7847	0.7847	0.6349	0.6349	0.6349

Note: Heteroskedastic-consistent standard errors are in parenthesis. In columns 2, 5 and 8, standard errors are also clustered by country; in columns 3, 6 and 9, standard errors are clustered by region-year. * significant at 10%; ** significant at 5%; *** significant at 1%. All regressions include country and time fixed effects, as well as a socialist origin dummy interacted with each of the reforms (openness and democratization). Regional dummies refer to the interaction between the year fixed effects and dummy variables for Asia, Africa, Latin America, and socialist legal origin. No High Inc refers to sample excluding high income countries (per OECD definition). Reform dummies are defined as follows: OPENDEMONLY (CLODEMONLY)=1 after democratization for open (closed) countries that democratized; DEMOPENONLY (AUTOPENONLY)=1 after liberalization for democratic (autocratic) countries that only liberalized; DEM2LESS (OPEN2LESS)=1 after democratization (liberalization) for countries that democratized (liberalized) first and liberalized (democratized) second and within 5 years; DEMOPENLESS (OPENDEMLESS)=1 after liberalization (democratization) for countries that democratized (liberalized) first and liberalized (democratized) second and within 5 years; DEM2MORE (OPEN2MORE)=1 after democratization (liberalization) for countries that democratized (liberalized) first and liberalized (democratized) second and within more than 5 years; DEMOPENMORE (OPENDEMORE)=1 after liberalization (democratization) for countries that democratized (liberalized) first and liberalized (democratized) second and within more than 5 years.

Table 5: Effects of Rapid Economic and Political Liberalizations on Corruption, Using Freedom House Index to Construct Democratization Dummies

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
OPENONLY	0.122	0.122	0.122	0.107	0.107	0.107	0.207**	0.207	0.207*
	(0.086)	(0.186)	(0.115)	(0.090)	(0.185)	(0.124)	(0.090)	(0.193)	(0.122)
DEMONLY	-0.066	-0.066	-0.066	-0.091	-0.091	-0.091	0.182*	0.182	0.182*
	(0.117)	(0.247)	(0.118)	(0.120)	(0.278)	(0.127)	(0.101)	(0.214)	(0.100)
DEM2LESS	-0.177**	-0.177	-0.177**	-0.344***	-0.344*	-0.344***	-0.119	-0.119	-0.119
	(0.080)	(0.163)	(0.083)	(0.087)	(0.182)	(0.091)	(0.082)	(0.155)	(0.080)
OPEN2LESS	-0.281*	-0.281	-0.281*	-0.335**	-0.335	-0.335**	-0.283*	-0.283	-0.283*
	(0.168)	(0.311)	(0.165)	(0.149)	(0.259)	(0.136)	(0.168)	(0.312)	(0.159)
DEMOPENLESS	-0.142**	-0.142	-0.142*	-0.092	-0.092	-0.092	-0.133*	-0.133	-0.133
	(0.071)	(0.134)	(0.078)	(0.088)	(0.193)	(0.083)	(0.074)	(0.148)	(0.081)
OPENDEMLESS	-0.860***	-0.860	-0.860***	-0.748***	-0.748	-0.748***	-0.759***	-0.759	-0.759***
	(0.205)	(0.577)	(0.205)	(0.187)	(0.506)	(0.184)	(0.206)	(0.582)	(0.198)
DEM2MORE	-0.211*	-0.211	-0.211*	-0.471***	-0.471*	-0.471***	-0.245*	-0.245	-0.245**
	(0.126)	(0.211)	(0.115)	(0.141)	(0.242)	(0.145)	(0.129)	(0.217)	(0.117)
OPEN2MORE	0.435**	0.435	0.435**	0.355**	0.355	0.355***	0.470**	0.470	0.470**
	(0.221)	(0.322)	(0.193)	(0.143)	(0.258)	(0.124)	(0.219)	(0.323)	(0.183)
DEMOPENMORE	-0.476***	-0.476**	-0.476***	-0.137	-0.137	-0.137	-0.408***	-0.408**	-0.408***
	(0.090)	(0.187)	(0.100)	(0.107)	(0.267)	(0.117)	(0.088)	(0.180)	(0.097)
OPENDEMORE	1.027***	1.027*	1.027***	0.960***	0.960	0.960***	0.964***	0.964	0.964***
	(0.318)	(0.619)	(0.305)	(0.308)	(0.622)	(0.295)	(0.311)	(0.608)	(0.295)
Sample	All	All	All	All	All	All	No High Inc	No High Inc	No High Inc
Regional Dummies?	No	No	No	Yes	Yes	Yes	No	No	No
Observations	1992	1992	1992	1992	1992	1992	1492	1492	1492
Adj. R-Squared	0.7982	0.7982	0.7982	0.8126	0.8126	0.8126	0.6401	0.6401	0.6401

Note: Heteroskedastic-consistent standard errors are in parenthesis. In columns 2, 5 and 8, standard errors are also clustered by country; in columns 3, 6 and 9, standard errors are clustered by region-year. * significant at 10%; ** significant at 5%; *** significant at 1%. All regressions include country and time fixed effects, as well as a socialist origin dummy interacted with each of the reforms (openness and democratization). Regional dummies refer to the interaction between the year fixed effects and dummy variables for Asia, Africa, Latin America, and socialist legal origin. No High Inc refers to sample excluding high income countries (per OECD definition). Reform dummies are defined as follows: DEMONLY (OPENONLY)=1 after democratization (liberalization) for countries that only democratized (liberalized); DEM2LESS (OPEN2LESS)=1 after democratization (liberalization) for countries that democratized (liberalized) first and liberalized (democratized) second and within 5 years; DEMOPENLESS (OPENDEMLESS)=1 after liberalization (democratization) for countries that democratized (liberalized) first and liberalized (democratized) second and within 5 years; DEM2MORE (OPEN2MORE)=1 after democratization (liberalization) for countries that democratized (liberalized) first and liberalized (democratized) second and within more than 5 years; DEMOPENMORE (OPENDEMORE)=1 after liberalization (democratization) for countries that democratized (liberalized) first and liberalized (democratized) second and within more than 5 years.

Table 6: Effects of Rapid Economic and Political Liberalizations on Corruption, Distinguishing How Country Starts Out, and Using Freedom House Index to Construct Democratization Dummies

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
CLODEMONLY	0.006	0.006	0.006	-0.255*	-0.255	-0.255*	0.079	0.079	0.079
	(0.139)	(0.248)	(0.142)	(0.146)	(0.315)	(0.142)	(0.137)	(0.275)	(0.142)
AUTOPENONLY	0.121	0.121	0.121	0.108	0.108	0.108	0.210**	0.210	0.210*
	(0.086)	(0.186)	(0.116)	(0.090)	(0.186)	(0.124)	(0.090)	(0.193)	(0.123)
OPENDEMONLY	-0.122	-0.122	-0.122	0.036	0.036	0.036	0.273*	0.273	0.273*
	(0.178)	(0.394)	(0.173)	(0.178)	(0.403)	(0.175)	(0.149)	(0.315)	(0.155)
DEMOPENONLY	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
DEM2LESS	-0.178**	-0.178	-0.178**	-0.345***	-0.345*	-0.345***	-0.119	-0.119	-0.119
	(0.080)	(0.163)	(0.083)	(0.087)	(0.182)	(0.091)	(0.082)	(0.155)	(0.080)
OPEN2LESS	-0.280*	-0.280	-0.280*	-0.337**	-0.337	-0.337**	-0.284*	-0.284	-0.284*
	(0.168)	(0.311)	(0.164)	(0.149)	(0.261)	(0.137)	(0.169)	(0.313)	(0.160)
DEMOPENLESS	-0.144**	-0.144	-0.144*	-0.086	-0.086	-0.086	-0.129*	-0.129	-0.129
	(0.071)	(0.135)	(0.079)	(0.088)	(0.195)	(0.085)	(0.074)	(0.149)	(0.081)
OPENDEMLESS	-0.863***	-0.863	-0.863***	-0.742***	-0.742	-0.742***	-0.754***	-0.754	-0.754***
	(0.205)	(0.578)	(0.205)	(0.187)	(0.506)	(0.184)	(0.207)	(0.583)	(0.199)
DEM2MORE	-0.211*	-0.211	-0.211*	-0.475***	-0.475*	-0.475***	-0.246*	-0.246	-0.246**
	(0.126)	(0.211)	(0.115)	(0.141)	(0.243)	(0.145)	(0.129)	(0.217)	(0.117)
OPEN2MORE	0.434**	0.434	0.434**	0.356**	0.356	0.356***	0.471**	0.471	0.471**
	(0.221)	(0.322)	(0.193)	(0.143)	(0.258)	(0.123)	(0.219)	(0.323)	(0.182)
DEMOPENMORE	-0.477***	-0.477**	-0.477***	-0.133	-0.133	-0.133	-0.407***	-0.407**	-0.407***
	(0.090)	(0.187)	(0.100)	(0.107)	(0.268)	(0.117)	(0.088)	(0.181)	(0.097)
OPENDEMORE	1.026***	1.026	1.026***	0.958***	0.958	0.958***	0.965***	0.965	0.965***
	(0.318)	(0.619)	(0.306)	(0.308)	(0.624)	(0.295)	(0.311)	(0.609)	(0.295)
Sample	All	All	All	All	All	All	No High Inc	No High Inc	No High Inc
Regional dummies?	No	No	No	Yes	Yes	Yes	No	No	No
Observations	1992	1992	1992	1992	1992	1992	1492	1492	1492
Adj. R-Squared	0.7982	0.7982	0.7982	0.8127	0.8127	0.8127	0.6400	0.6400	0.6400

Note: Heteroskedastic-consistent standard errors are in parenthesis. In columns 2, 5 and 8, standard errors are also clustered by country; in columns 3, 6 and 9, standard errors are clustered by region-year. * significant at 10%; ** significant at 5%; *** significant at 1%. All regressions include country and time fixed effects, as well as a socialist origin dummy interacted with each of the reforms (openness and democratization). Regional dummies refer to the interaction between the year fixed effects and dummy variables for Asia, Africa, Latin America, and socialist legal origin. No High Inc refers to sample excluding high income countries (per OECD definition). Reform dummies are defined as follows: OPENDEMONLY (CLODEMONLY)=1 after democratization for open (closed) countries that democratized; DEMOPENONLY (AUTOPENONLY)=1 after liberalization for democratic (autocratic) countries that only liberalized; DEM2LESS (OPEN2LESS)=1 after democratization (liberalization) for countries that democratized (liberalized) first and liberalized (democratized) second and within 5 years; DEMOPENLESS (OPENDEMLESS)=1 after liberalization (democratization) for countries that democratized (liberalized) first and liberalized (democratized) second and within 5 years; DEM2MORE (OPEN2MORE)=1 after democratization (liberalization) for countries that democratized (liberalized) first and liberalized (democratized) second and within more than 5 years; DEMOPENMORE (OPENDEMORE)=1 after liberalization (democratization) for countries that democratized (liberalized) first and liberalized (democratized) second and within more than 5 years.

Table 7: Effects of Rapid Economic and Political Liberalizations on Corruption, Using Other Controls

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
SIZE OF GOVERNMENT	-2.016***	-2.016**	-2.016***	-1.433**	-1.433	-1.433**	-0.146	-0.146	-0.146
	(0.573)	(0.875)	(0.612)	(0.600)	(0.935)	(0.647)	(0.625)	(0.948)	(0.707)
LITERACY	-0.017	-0.017	-0.017	-0.067***	-0.067*	-0.067***	-0.041**	-0.041	-0.041**
	(0.015)	(0.033)	(0.013)	(0.017)	(0.037)	(0.015)	(0.017)	(0.037)	(0.016)
LOG OF POPULATION	0.031	0.031	0.031	1.332*	1.332	1.332**	-0.494	-0.494	-0.494
	(0.645)	(1.467)	(0.560)	(0.734)	(1.798)	(0.534)	(0.727)	(1.551)	(0.548)
OPENONLY	0.194*	0.194	0.194*	0.147	0.147	0.147	0.190**	0.190	0.190*
	(0.099)	(0.222)	(0.100)	(0.095)	(0.186)	(0.096)	(0.095)	(0.189)	(0.100)
DEMONLY	-0.280**	-0.280	-0.280**	-0.120	-0.120	-0.120	-0.055	-0.055	-0.055
	(0.131)	(0.300)	(0.128)	(0.130)	(0.312)	(0.128)	(0.133)	(0.306)	(0.133)
DEM2LESS	0.080	0.080	0.080	-0.161	-0.161	-0.161	-0.223	-0.223	-0.223
	(0.139)	(0.247)	(0.141)	(0.164)	(0.244)	(0.167)	(0.166)	(0.260)	(0.154)
OPEN2LESS	-0.179	-0.179	-0.179	-0.179	-0.179	-0.179	-0.218	-0.218	-0.218
	(0.154)	(0.220)	(0.177)	(0.194)	(0.153)	(0.230)	(0.190)	(0.150)	(0.228)
DEMOPENLESS	-0.354**	-0.354	-0.354**	-0.353**	-0.353	-0.353*	-0.251	-0.251	-0.251
	(0.153)	(0.328)	(0.171)	(0.175)	(0.382)	(0.203)	(0.164)	(0.342)	(0.188)
OPENDEMLESS	-0.317**	-0.317	-0.317*	-0.301*	-0.301	-0.301	-0.210	-0.210	-0.210
	(0.147)	(0.384)	(0.174)	(0.179)	(0.584)	(0.235)	(0.173)	(0.564)	(0.233)
DEM2MORE	-0.399**	-0.399	-0.399*	-0.614***	-0.614**	-0.614***	-0.585***	-0.585**	-0.585***
	(0.192)	(0.253)	(0.204)	(0.206)	(0.268)	(0.223)	(0.185)	(0.243)	(0.196)
OPEN2MORE	-0.430	-0.430	-0.430	-0.444*	-0.444	-0.444*	-0.448*	-0.448	-0.448*
	(0.272)	(0.278)	(0.262)	(0.261)	(0.269)	(0.249)	(0.270)	(0.276)	(0.255)
DEMOPENMORE	-0.042	-0.042	-0.042	0.180	0.180	0.180	-0.105	-0.105	-0.105
	(0.155)	(0.192)	(0.191)	(0.184)	(0.242)	(0.236)	(0.195)	(0.253)	(0.253)
OPENDEMORE	0.954***	0.954*	0.954***	0.770**	0.770	0.770**	0.732**	0.732	0.732*
	(0.248)	(0.514)	(0.284)	(0.340)	(0.686)	(0.365)	(0.342)	(0.679)	(0.370)
Sample	All	All	All	All	All	All	No High Inc	No High Inc	No High Inc
Regional Dummies?	No	No	No	Yes	Yes	Yes	No	No	No
Observations	945	945	945	945	945	945	821	821	821
Adj. R-Squared	0.7043	0.7043	0.7043	0.7372	0.7372	0.7372	0.7261	0.7261	0.7261

Note: Heteroskedastic-consistent standard errors are in parenthesis. In columns 2, 5 and 8, standard errors are also clustered by country; in columns 3, 6 and 9, standard errors are clustered by region-year. * significant at 10%; ** significant at 5%; *** significant at 1%. All regressions include country and time fixed effects, as well as a socialist origin dummy interacted with each of the reforms (openness and democratization). Regional dummies refer to the interaction between the year fixed effects and dummy variables for Asia, Africa, Latin America, and socialist legal origin. No High Inc refers to sample excluding high income countries (per OECD definition). Reform dummies are defined as follows: DEMONLY (OPENONLY)=1 after democratization (liberalization) for countries that only democratized (liberalized); DEM2LESS (OPEN2LESS)=1 after democratization (liberalization) for countries that democratized (liberalized) first and liberalized (democratized) second and within 5 years; DEMOPENLESS (OPENDEMLESS)=1 after liberalization (democratization) for countries that democratized (liberalized) first and liberalized (democratized) second and within 5 years; DEM2MORE (OPEN2MORE)=1 after democratization (liberalization) for countries that democratized (liberalized) first and liberalized (democratized) second and within more than 5 years; DEMOPENMORE (OPENDEMORE)=1 after liberalization (democratization) for countries that democratized (liberalized) first and liberalized (democratized) second and within more than 5 years. Size of Government is general government final consumption expenditure as a percentage of GDP, taken from the IMF's *Financial Statistics*. Literacy is the literacy rate for adults (ages 15 and above), from the *World Development Indicators*. Log of Population is from the *World Development Indicators*.

Table 8: Effects of Rapid Economic and Political Liberalizations on Corruption, Using Other Controls and Distinguishing How Country Starts Out

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
SIZE OF GOVERNMENT	-1.982***	-1.982**	-1.982***	-1.406**	-1.406	-1.406**	-0.203	-0.203	-0.203
	(0.574)	(0.873)	(0.620)	(0.605)	(0.947)	(0.650)	(0.634)	(0.896)	(0.654)
LITERACY	-0.013	-0.013	-0.013	-0.056***	-0.056	-0.056***	0.011	0.011	0.011
	(0.017)	(0.037)	(0.015)	(0.018)	(0.039)	(0.017)	(0.015)	(0.031)	(0.015)
LOG OF POPULATION	0.009	0.009	0.009	1.451**	1.451	1.451***	0.276	0.276	0.276
	(0.658)	(1.486)	(0.568)	(0.731)	(1.818)	(0.538)	(0.680)	(1.498)	(0.563)
CLODEMONLY	-0.631***	-0.631**	-0.631***	-0.429**	-0.429	-0.429**	-0.540***	-0.540**	-0.540***
	(0.187)	(0.287)	(0.185)	(0.173)	(0.272)	(0.174)	(0.182)	(0.264)	(0.183)
AUTOPENONLY	0.313*	0.313	0.313	0.116	0.116	0.116	0.383**	0.383	0.383**
	(0.166)	(0.332)	(0.190)	(0.161)	(0.326)	(0.178)	(0.169)	(0.352)	(0.189)
OPENDEMONLY	0.202	0.202	0.202	0.314**	0.314	0.314*	0.509***	0.509*	0.509***
	(0.142)	(0.323)	(0.127)	(0.160)	(0.427)	(0.172)	(0.150)	(0.293)	(0.162)
DEMOPENONLY	0.119	0.119	0.119	0.187	0.187	0.187*	0.320***	0.320	0.320**
	(0.118)	(0.262)	(0.116)	(0.114)	(0.225)	(0.111)	(0.122)	(0.251)	(0.123)
DEM2LESS	0.083	0.083	0.083	-0.160	-0.160	-0.160	0.096	0.096	0.096
	(0.139)	(0.248)	(0.141)	(0.165)	(0.247)	(0.169)	(0.149)	(0.282)	(0.145)
OPEN2LESS	-0.175	-0.175	-0.175	-0.175	-0.175	-0.175	-0.197	-0.197	-0.197
	(0.154)	(0.221)	(0.176)	(0.193)	(0.154)	(0.231)	(0.164)	(0.243)	(0.193)
DEMOPENLESS	-0.342**	-0.342	-0.342**	-0.312*	-0.312	-0.312	-0.190	-0.190	-0.190
	(0.153)	(0.328)	(0.169)	(0.178)	(0.385)	(0.199)	(0.164)	(0.335)	(0.171)
OPENDEMLESS	-0.309**	-0.309	-0.309*	-0.274	-0.274	-0.274	-0.075	-0.075	-0.075
	(0.148)	(0.384)	(0.171)	(0.178)	(0.580)	(0.233)	(0.152)	(0.395)	(0.192)
DEM2MORE	-0.396**	-0.396	-0.396*	-0.603***	-0.603**	-0.603**	-0.367*	-0.367	-0.367*
	(0.192)	(0.254)	(0.204)	(0.212)	(0.277)	(0.229)	(0.198)	(0.273)	(0.210)
OPEN2MORE	-0.426	-0.426	-0.426	-0.436*	-0.436	-0.436*	-0.462	-0.462*	-0.462*
	(0.274)	(0.278)	(0.261)	(0.264)	(0.276)	(0.251)	(0.292)	(0.272)	(0.276)
DEMOPENMORE	-0.049	-0.049	-0.049	0.170	0.170	0.170	0.093	0.093	0.093
	(0.155)	(0.190)	(0.191)	(0.184)	(0.240)	(0.237)	(0.170)	(0.218)	(0.212)
OPENDEMORE	0.955***	0.955*	0.955***	0.757**	0.757	0.757**	0.841***	0.841	0.841***
	(0.248)	(0.514)	(0.284)	(0.340)	(0.685)	(0.367)	(0.247)	(0.522)	(0.290)
Sample	All	All	All	All	All	All	No High Inc	No High Inc	No High Inc
Regional Dummies?	No	No	No	Yes	Yes	Yes	No	No	No
Observations	945	945	945	945	945	945	821	821	821
Adj. R-Squared	0.7069	0.7069	0.7069	0.7387	0.7387	0.7387	0.6965	0.6965	0.6965

Note: Heteroskedastic-consistent standard errors are in parenthesis. In columns 2, 5 and 8, standard errors are also clustered by country; in columns 3, 6 and 9, standard errors are clustered by region-year. * significant at 10%; ** significant at 5%; *** significant at 1%. All regressions include country and time fixed effects, as well as a socialist origin dummy interacted with each of the reforms (openness and democratization). Regional dummies refer to the interaction between the year fixed effects and dummy variables for Asia, Africa, Latin America, and socialist legal origin. No High Inc refers to sample excluding high income countries (per OECD definition). Reform dummies are defined as follows: OPENDEMONLY (CLODEMONLY)=1 after democratization for open (closed) countries that democratized; DEMOPENONLY (AUTOPENONLY)=1 after liberalization for democratic (autocratic) countries that only liberalized; DEM2LESS (OPEN2LESS)=1 after democratization (liberalization) for countries that democratized (liberalized) first and liberalized (democratized) second and within 5 years; DEMOPENLESS (OPENDEMLESS)=1 after liberalization (democratization) for countries that democratized (liberalized) first and liberalized (democratized) second and within 5 years; DEM2MORE (OPEN2MORE)=1 after democratization (liberalization) for countries that democratized (liberalized) first and liberalized (democratized) second and within more than 5 years; DEMOPENMORE (OPENDEMORE)=1 after liberalization (democratization) for countries that democratized (liberalized) first and liberalized (democratized) second and within more than 5 years. Size of Government is general government final consumption expenditure as a percentage of GDP, taken from the IMF's *Financial Statistics*. Literacy is the literacy rate for adults (ages 15 and above), from the *World Development Indicators*. Log of Population is from the *World Development Indicators*.

Table 9: Effects of Rapid Economic and Political Liberalizations on Corruption, Using Other Controls and Freedom House

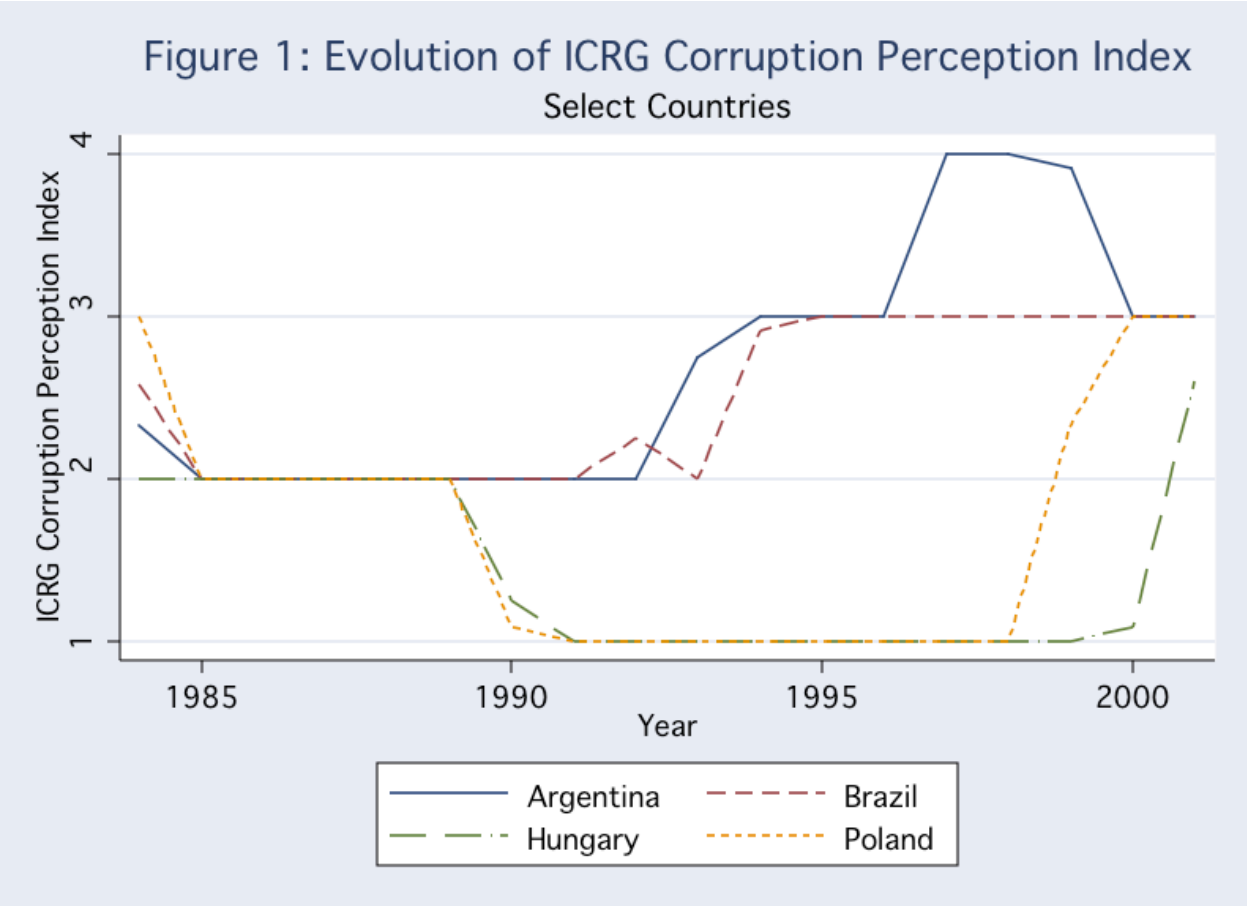
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
SIZE OF GOVERNMENT	-1.816***	-1.816*	-1.816***	-1.466**	-1.466	-1.466**	-0.217	-0.217	-0.217
	(0.580)	(0.917)	(0.647)	(0.621)	(1.017)	(0.705)	(0.645)	(1.046)	(0.769)
LITERACY	-0.010	-0.010	-0.010	-0.071***	-0.071*	-0.071***	-0.048***	-0.048	-0.048**
	(0.016)	(0.037)	(0.015)	(0.018)	(0.037)	(0.018)	(0.018)	(0.037)	(0.019)
LOG OF POPULATON	0.520	0.520	0.520	1.120	1.120	1.120**	-0.428	-0.428	-0.428
	(0.655)	(1.552)	(0.532)	(0.692)	(1.679)	(0.515)	(0.674)	(1.490)	(0.530)
OPENONLY	0.057	0.057	0.057	-0.058	-0.058	-0.058	-0.042	-0.042	-0.042
	(0.123)	(0.238)	(0.134)	(0.121)	(0.210)	(0.133)	(0.120)	(0.210)	(0.135)
DEMONLY	-0.140	-0.140	-0.140	-0.264**	-0.264	-0.264**	-0.204	-0.204	-0.204
	(0.129)	(0.210)	(0.111)	(0.132)	(0.221)	(0.128)	(0.151)	(0.271)	(0.153)
DEM2LESS	-0.168*	-0.168	-0.168*	-0.236**	-0.236	-0.236**	-0.263**	-0.263	-0.263**
	(0.099)	(0.199)	(0.096)	(0.113)	(0.223)	(0.113)	(0.114)	(0.191)	(0.122)
OPEN2LESS	-0.115	-0.115	-0.115	-0.081	-0.081	-0.081	-0.089	-0.089	-0.089
	(0.201)	(0.318)	(0.152)	(0.186)	(0.228)	(0.133)	(0.184)	(0.229)	(0.135)
DEMOPENLESS	0.052	0.052	0.052	-0.110	-0.110	-0.110	0.016	0.016	0.016
	(0.104)	(0.141)	(0.114)	(0.116)	(0.188)	(0.133)	(0.110)	(0.155)	(0.112)
OPENDEMLESS	-0.166	-0.166	-0.166	-0.623***	-0.623	-0.623***	-0.535***	-0.535	-0.535***
	(0.260)	(0.723)	(0.216)	(0.194)	(0.506)	(0.176)	(0.198)	(0.518)	(0.194)
DEM2MORE	-0.429***	-0.429**	-0.429***	-0.462***	-0.462*	-0.462***	-0.541***	-0.541**	-0.541***
	(0.120)	(0.196)	(0.097)	(0.141)	(0.237)	(0.158)	(0.145)	(0.238)	(0.159)
OPEN2MORE	0.539**	0.539	0.539***	0.416***	0.416	0.416***	0.463***	0.463*	0.463***
	(0.210)	(0.385)	(0.168)	(0.155)	(0.251)	(0.123)	(0.156)	(0.260)	(0.129)
DEMOPENMORE	-0.343***	-0.343*	-0.343***	-0.049	-0.049	-0.049	-0.285*	-0.285	-0.285
	(0.121)	(0.203)	(0.120)	(0.148)	(0.301)	(0.167)	(0.153)	(0.273)	(0.180)
OPENDEMORE	0.563*	0.563	0.563*	0.881**	0.881	0.881***	0.882**	0.882	0.882***
	(0.340)	(0.811)	(0.292)	(0.362)	(0.725)	(0.326)	(0.353)	(0.753)	(0.326)
Sample	All	All	All	All	All	All	No High Inc	No High Inc	No High Inc
Regional Dummies?	No	No	No	Yes	Yes	Yes	No	No	No
Observations	954	954	954	954	954	954	817	817	817
Adj. R-Squared	0.7045	0.7045	0.7045	0.7414	0.7414	0.7414	0.7322	0.7322	0.7322

Note: Heteroskedastic-consistent standard errors are in parenthesis. In columns 2, 5 and 8, standard errors are also clustered by country; in columns 3, 6 and 9, standard errors are clustered by region-year. * significant at 10%; ** significant at 5%; *** significant at 1%. All regressions include country and time fixed effects, as well as a socialist origin dummy interacted with each of the reforms (openness and democratization). Regional dummies refer to the interaction between the year fixed effects and dummy variables for Asia, Africa, Latin America, and socialist legal origin. No High Inc refers to sample excluding high income countries (per OECD definition). Reform dummies are defined as follows: DEMONLY (OPENONLY)=1 after democratization (liberalization) for countries that only democratized (liberalized); DEM2LESS (OPEN2LESS)=1 after democratization (liberalization) for countries that democratized (liberalized) first and liberalized (democratized) second and within 5 years; DEMOPENLESS (OPENDEMLESS)=1 after liberalization (democratization) for countries that democratized (liberalized) first and liberalized (democratized) second and within 5 years; DEM2MORE (OPEN2MORE)=1 after democratization (liberalization) for countries that democratized (liberalized) first and liberalized (democratized) second and within more than 5 years; DEMOPENMORE (OPENDEMORE)=1 after liberalization (democratization) for countries that democratized (liberalized) first and liberalized (democratized) second and within more than 5 years. Size of Government is general government final consumption expenditure as a percentage of GDP, taken from the IMF's *Financial Statistics*. Literacy is the literacy rate for adults (ages 15 and above), from the *World Development Indicators*. Log of Population is from the *World Development Indicators*.

Table 10: Effects of Rapid Economic and Political Liberalizations on Corruption, Using Other Controls and Freedom House, and Distinguishing How Country Starts Out

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
SIZE OF GOVERNMENT	-1.775***	-1.775*	-1.775***	-1.431**	-1.431	-1.431**	-0.199	-0.199	-0.199
	(0.581)	(0.921)	(0.655)	(0.621)	(1.019)	(0.711)	(0.638)	(0.966)	(0.703)
LITERACY	-0.008	-0.008	-0.008	-0.069***	-0.069*	-0.069***	0.012	0.012	0.012
	(0.016)	(0.037)	(0.015)	(0.018)	(0.037)	(0.018)	(0.015)	(0.034)	(0.015)
LOG OF POPULATION	0.504	0.504	0.504	1.219*	1.219	1.219**	0.521	0.521	0.521
	(0.656)	(1.558)	(0.530)	(0.690)	(1.681)	(0.515)	(0.667)	(1.578)	(0.578)
CLODEMONLY	-0.468***	-0.468***	-0.468***	-0.589***	-0.589***	-0.589***	-0.556***	-0.556***	-0.556***
	(0.171)	(0.081)	(0.163)	(0.165)	(0.206)	(0.154)	(0.197)	(0.111)	(0.189)
AUTOPENONLY	0.063	0.063	0.063	-0.047	-0.047	-0.047	0.163	0.163	0.163
	(0.123)	(0.238)	(0.134)	(0.121)	(0.210)	(0.134)	(0.126)	(0.242)	(0.142)
OPENDEMONLY	0.100	0.100	0.100	-0.028	-0.028	-0.028	0.317*	0.317*	0.317
	(0.169)	(0.218)	(0.158)	(0.179)	(0.177)	(0.187)	(0.186)	(0.166)	(0.200)
DEM2LESS	-0.172*	-0.172	-0.172*	-0.243**	-0.243	-0.243**	0.059	0.059	0.059
	(0.099)	(0.200)	(0.097)	(0.113)	(0.224)	(0.114)	(0.101)	(0.194)	(0.098)
OPEN2LESS	-0.107	-0.107	-0.107	-0.071	-0.071	-0.071	-0.077	-0.077	-0.077
	(0.201)	(0.319)	(0.152)	(0.187)	(0.230)	(0.133)	(0.202)	(0.344)	(0.155)
DEMOPENLESS	0.063	0.063	0.063	-0.092	-0.092	-0.092	0.110	0.110	0.110
	(0.104)	(0.143)	(0.114)	(0.117)	(0.191)	(0.134)	(0.111)	(0.168)	(0.122)
OPENDEMLESS	-0.154	-0.154	-0.154	-0.604***	-0.604	-0.604***	-0.018	-0.018	-0.018
	(0.260)	(0.724)	(0.217)	(0.195)	(0.508)	(0.178)	(0.271)	(0.748)	(0.247)
DEM2MORE	-0.439***	-0.439**	-0.439***	-0.477***	-0.477*	-0.477***	-0.343**	-0.343	-0.343***
	(0.120)	(0.198)	(0.099)	(0.142)	(0.240)	(0.160)	(0.137)	(0.252)	(0.116)
OPEN2MORE	0.545***	0.545	0.545***	0.425***	0.425*	0.425***	0.598***	0.598	0.598***
	(0.211)	(0.387)	(0.168)	(0.156)	(0.251)	(0.123)	(0.215)	(0.404)	(0.181)
DEMOPENMORE	-0.344***	-0.344*	-0.344***	-0.049	-0.049	-0.049	-0.076	-0.076	-0.076
	(0.121)	(0.203)	(0.120)	(0.148)	(0.303)	(0.168)	(0.137)	(0.273)	(0.143)
OPENDEMORE	0.555	0.555	0.555*	0.866**	0.866	0.866***	0.512	0.512	0.512
	(0.341)	(0.812)	(0.293)	(0.362)	(0.726)	(0.327)	(0.352)	(0.841)	(0.313)
Sample	All	All	All	All	All	All	No High Inc	No High Inc	No High Inc
Regional Dummies?	No	No	No	Yes	Yes	Yes	No	No	No
Observations	954	954	954	954	954	954	817	817	817
Adj. R-Squared	0.7051	0.7051	0.7051	0.7420	0.7420	0.7420	0.6873	0.6873	0.6873

Note: Heteroskedastic-consistent standard errors are in parenthesis. In columns 2, 5 and 8, standard errors are also clustered by country; in columns 3, 6 and 9, standard errors are clustered by region-year. * significant at 10%; ** significant at 5%; *** significant at 1%. All regressions include country and time fixed effects, as well as a socialist origin dummy interacted with each of the reforms (openness and democratization). Regional dummies refer to the interaction between the year fixed effects and dummy variables for Asia, Africa, Latin America, and socialist legal origin. No High Inc refers to sample excluding high income countries (per OECD definition). Reform dummies are defined as follows: OPENDEMONLY (CLODEMONLY)=1 after democratization for open (closed) countries that democratized; DEMOPENONLY (AUTOPENONLY)=1 after liberalization for democratic (autocratic) countries that only liberalized; DEM2LESS (OPEN2LESS)=1 after democratization (liberalization) for countries that democratized (liberalized) first and liberalized (democratized) second and within 5 years; DEMOPENLESS (OPENDEMLESS)=1 after liberalization (democratization) for countries that democratized (liberalized) first and liberalized (democratized) second and within 5 years; DEM2MORE (OPEN2MORE)=1 after democratization (liberalization) for countries that democratized (liberalized) first and liberalized (democratized) second and within more than 5 years; DEMOPENMORE (OPENDEMORE)=1 after liberalization (democratization) for countries that democratized (liberalized) first and liberalized (democratized) second and within more than 5 years. Size of Government is general government final consumption expenditure as a percentage of GDP, taken from the IMF's *Financial Statistics*. Literacy is the literacy rate for adults (ages 15 and above), from the *World Development Indicators*. Log of Population is from the *World Development Indicators*.



Notes: A lower corruption index means lower perceived corruption. Dates of political liberalization are as follows: Argentina (1983), Brazil (1985), Hungary (1989), Poland (1989). Dates of economic liberalization are: Argentina (1991), Brazil (1991), Hungary (1990), Poland (1990)