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THE INTERNATIONAL MONETARY FUND AND
THE GLOBAL SPREAD OF PRIVATIZATION

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1. Introduction

The sale of state-owned assets – privatization – has been a defining characteristic of the global economy in the last two decades of the twentieth century. More than 8,000 acts of privatization were completed around the world between 1985 and 1999 (Brune 2003).[1] These sales were valued at more than $1.1 trillion (in constant 1985 US dollars). After an initial large spike in 1987 (when almost $120 billion in state-owned assets were sold in only 77 transactions, mostly by OECD countries), privatization swept the globe in the 1990s (see Figure 1). From an average of roughly $50 billion per year (on approximately 500-1000 transactions) in the early 1990s, revenues from global privatizations grew to $87 billion on over 1700 transactions by 1995, peaking in 1998 at $171 billion of assets sold in 2,500 transactions. Although almost two thirds of the privatization activity in terms of revenues took place in high-income countries, the bulk of privatization transactions occurred in low- and middle-income countries (see Table 1).

Figure 1 and Table 1 about here

Appendix 1 presents country level data for the 1985-1999 period. Privatization revenues exceeded $100 billion (in 1985 dollars) in Italy, Japan and the United Kingdom, and over $50 billion in Australia, Brazil and France. Relative to their GDPs, the five largest privatizers were Bolivia, Guyana, Hungary, Panama and Portugal, each of which had sold by 1999 state-owned assets worth more than 30% of their 1985 GDPs. Privatization revenues exceeded 25% of 1985 GDP in another four countries – Australia, Chile, Malaysia and New Zealand. By 1999, total revenues from privatization exceeded 5% of 1985 GDP in 60 countries.

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[1] These numbers do not include, nor do we analyze, the disposition of assets by mass/voucher privatization in the former socialist countries. Our analysis of privatization transactions counts separately different tranches of a firm's assets where it was not completely sold in one transaction.

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What explains the spread of privatization around the world? In most economic theories, privatization increases productivity, efficiency and output. Even though the empirical evidence is somewhat mixed, most economists continue to support privatization. But if it is efficient to sell off state owned assets, why have we observed dramatic variations among countries in the extent and pace of privatization? Were countries more likely to privatize if they had large state-owned sectors initially, or if they confronted economic crises, or for other reasons?

We concentrate in this paper on the impact of lending by the international financial institutions, both the IMF and World Bank, on privatization around the world. We demonstrate that countries that borrowed from the IMF subsequently privatized more assets (in terms of market valuations at the time of sale), controlling for the effects of the initial size of the state-owned sector, fiscal imbalances, per capita income, the depth of capital markets and the quality of government. Indeed we estimate that for every dollar a country owed the IMF it subsequently privatized assets worth approximately 50 cents. In contrast, World Bank loans were not significantly associated with increased privatizations revenues, though there was no evidence that countries with loans from the World Bank privatized less.

Two interpretations are consistent with these results. On the one hand, IMF conditionality (which is generally considered to be more constraining than that imposed by the World Bank) could have forced recipient governments to privatize more state-owned assets (in terms of volume). On the other hand, global capital markets could have valued more highly the sale of (a given volume of) state assets in countries that received assistance from the IMF – as a result of the increased credibility of commitments to market-promoting policies in these countries. We cannot easily distinguish between the conditionality and credibility interpretations because it is extremely difficult to isolate the volume of privatized assets independently from their valuation. Our results show that IMF conditionality was associated both with higher privatization revenues and with more privatization transactions, but the revenues effects were

stronger and very robust. Thus, we subscribe to the credibility interpretation of our IMF effect over a simpler conditionality one: the imposition of IMF conditions in a country won the approval of global capital markets for its privatization program (in a similar argument to that proposed by Perotti and Oijen (2001)).

The remainder of the paper is divided into four sections. In Section 2, we discuss different theoretical perspectives on privatization, and sketch the potential role of international financial institutions in this process. Section 3 describes the data. Section 4 presents the results of our multivariate analyses of privatization around the world, derived from both cross-sectional and time-series (panel) regressions in which we also test for dynamic and selection effects. We offer some concluding remarks in Section 5.

2. Privatization: Efficiency or Commitment?

Privatization is an economic policy whose cross-national spread has a familiar logistic S-shape. After the initial wave of sales of state-owned assets in Britain in the early 1980s (and earlier still in Chile), privatization programs began to emerge in other countries, at first in other OECD nations but then in developing and transition economies as well.[2]

Why did privatization spread in this fashion? There is some prima facie evidence that countries with larger state-owned sectors were also in economic difficulty in the early 1980s, particularly with respect to fiscal imbalances. It is thus plausible that they privatized in response to these problems. But the connection between economic distress and privatization presupposes that countries were confident that privatization would help their economies.

The evidence on this critical point, however, is mixed – particularly from studies completed before the mid 1990s. Research on early privatizations in the United Kingdom suggested that firm and

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sector performance only improved when privatization was coupled with the creation of truly competitive markets (Vickers and Yarrow 1988). Some cross-national studies subsequently found that privatization improved performance at the firm level (Megginson et. al. 1994, 2001; Ramamurti 1996, 1997; Galal 1993, 1994), but other studies disputed this conclusion (Black, Kraakman, Tarassova 2000; Bevan et al., 2001). In an important recent article, Dewenter and Malatesta (2001) found that firms that were subsequently privatized performed better in the three years before they were sold off (as governments prepared them for sale), but that the performance of these firms once privatized was no better than that of other firms. But even if one were to accept Megginson and Netter's (2001) conclusion that privatization, on balance, has been good for firms and economies, it would still be important to note that the empirical evidence was not available to the governments that chose to privatize in the latter 1980s and early 1990s. The lateness of empirical support for the benefits of privatization coupled with its relative weakness should caution against a rapid endorsement of a simple efficiency explanation for the spread of privatization in the past couple of decades.

In this paper, we explore another potential causal path that does not require the assumption that privatization directly improves firm or sector performance. Governments in countries with economic problems – as well as high levels of state-ownership – face a credibility problem. Even good firms will not attract sufficient funding due to political uncertainty. Perotti and Oijen (2001) argue that privatization provides the appropriate commitment technology to attract investors in the case of distressed economies. They present evidence that national credit ratings subsequently improved in countries that privatized significant state-owned assets.

If this line of argument is correct, privatization could still be beneficial to economies by attracting investment, even if it does not improve the efficiency either of privatized firms or the product markets in which they compete. There is, however, a chicken and egg problem in this privatization-

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2 Bangladesh, Germany, Mali, and South Africa also privatized tiny shares of their state-owned assets in the early 1980s.

credibility dynamic. Governments without strong credit ratings, particularly in emerging economies, are likely to be forced to privatize initially at discounted prices to attract investors – given the time needed for investors to gain confidence that governments are indeed credibly committed to pro-market reforms.

It is at this point that the international financial institutions may play a pivotal role. Both the IMF and the World Bank provide loans (and in the latter case, some grants as well) to developing countries, but they stipulate conditions for disbursement.[3] Since governments in developing countries often need IFI financing to stabilize their economies and/or to fund their development programs, conditionality may generate credible commitments to the IFIs' agendas – at least to the extent that the IMF and the World Bank themselves are internationally credible market reformers. In turn, this credibility could increase investors' confidence in the future income stream from buying shares in firms privatized in countries that owe money to the IMF or the World Bank.

IMF conditionality is generally considered to be much more binding than is the case for the World Bank. The Fund plays a strong role in monitoring and enforcing compliance and failure to meet any specified condition often means that the next tranche of loans is not released. In contrast, World Bank performance criteria for loans are often not stated as quantitative targets and punishment for failure to perform is rare (Polak, 1997: 487). It should also be noted that the Fund and World Bank do not stipulate cross-conditionality, whereby failure to meet a condition on one institution's load constitutes suspension of the other institutions' loans to that country.

Since 1997, the IMF has made publicly available information on its conditionality requirements. Recent agreements ("letters of intent") confirm what was previously conjecture – namely that for more than a decade, the IMF has included privatization as a standard condition of its structural adjustment lending (Davis et al, 2000). Insiders often attribute the birth of the idea of privatization conditionality to

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3 Though the Bretton Woods era charters of the two organizations differ significantly, over time they have evolved into institutions with overlapping jurisdictions regarding structural adjustment lending.

a speech by Secretary of State James Baker at the Seoul meetings of the IMF and World Bank in 1985 (Kapur, Lewis, Webb, 1997: 356). The idea quickly gained other adherents inside the beltway, so much so that John Williamson (1993) included privatization among the policies in the "Washington consensus" between the US Treasury and the IFIs in the late 1980s and early 1990s.[4]

It is not clear whether the IFIs' efforts to condition financing on privatization and other reforms has improved macroeconomic performance. Prezworski and Vreeland (Przeworski and Vreeland 2000, Vreeland 2003) recently found that participation in IMF loan programs actually reduced national economic growth, even after selection bias among slow growth countries was taken into account. Using a similar methodology, Abouharb (2001) argued that World Bank loans have had no discernible impact on growth rates in recipient countries.

But as we have suggested, the case for privatization need not rest upon direct efficiency gains. The value of an acquisition or share purchase is influenced by expectations about the future, with respect both to economic performance (at the firm, sector and national levels) and to government policy (regulation, taxes, nationalization, etc.). Participation in IFI programs may signal that a country is credibly committed to economic reforms from which asset holders will benefit. If a country privatizes when it is subject to an IFI program, investors may be more likely to buy shares in state assets that are sold and to pay a higher price for them – in the expectation that government policy will be more "market friendly." Early empirical work casts doubt on whether IMF lending has a catalytic effect on capital flows in general (Bird and Rowlands forthcoming, Mody 2003). In this paper, we explore whether there is a more focused effect of IMF (and World Bank) lending on privatization.

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4 Williamson originally formulated the term Washington Agenda, or the Washington Consensus, in a background paper "What Washington Means by Policy Reform" for a conference held by the Institute for International Economics in November 1989, which was published as the opening chapter in the conference volume The Progress of Policy Reform in Latin America in 1990.

3. The Data

3.1 Data Sources

The privatization data used in this paper are derived from Global Privatization Database (GPD) (Brune 2003). About half of the privatization transactions in GPD were originally reported in the *World Bank Privatization Database* (2000) on developing countries.[5] Three other published sources were used to compile GPD: the *World Bank Private Participation in Infrastructure Database* (2000) for developing countries; the *World Bank African Privatization Database* (2002); and, the Thomson Financial IFR Platinum *Privatization International* Database (1999) focusing on high and upper middle-income countries. GPD also includes almost 6,000 transactions derived from a variety of other sources, including government documents, international organizations, academic journals, newspapers, industry and consulting reports, and other previously published volumes on privatization.[6]

We analyze annual observations on privatizations over the period 1985 to 1999 in 96 countries for which all relevant data are available (see Appendix 2). Of these (both developing and developed) economies, 91 privatized assets during the period of analysis.[7] We also include another five countries that did not privatize but for which all the other data are available (Bahamas, Botswana, Cyprus, Suriname and Syria.). Our analysis draws on a much larger sample of countries than those used in other cross-national studies of privatization, such as Megginson et al. (1994) and Siniscalco and Bortolotti (1998, 2001).

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5 For all World Bank privatization information, see www.privatizationlink.org.

6 In the compilation of GPD, data that overlapped but were discordant were reconciled based on the following rank order of data quality (in descending order): PPID, WBPD, WBAPD, and PID. Data and information gathered from the search of additional primary and secondary materials helped supplement and correct missing information on individual privatization transactions.

7 The regional distributions among these countries were as follows: East Asia and the Pacific – 11 countries; Eastern Europe and Central Asia – 3; Latin America and the Caribbean – 22; Middle East and North Africa – 10; North America and Western Europe – 20; South Asia – 4; Sub-Saharan Africa – 21.

The generic version of our estimated equations regressed privatization revenues (as a % of GDP) on the following variables: (the log of) per capita income; the size of the state owned sector in 1980; the national budgetary balance; an index of the quality of government institutions; the presence of a functioning stock market; our variables measuring IFI obligations; and, region and time dummies. We also use privatization transactions as a dependent variable in an effort to distinguish the market's valuation of a privatized asset (i.e. revenues derived from privatization) from the amount of assets privatized (transactions). But since the transactions measure counts equally, for example, the wholesale selling off of a national telecoms monopoly with the bit-by-bit sale (in tranches) of a small company, we concentrate on privatization revenues.

The initial extent of government ownership of the economy placed an upper limit on the amount of privatization a country could subsequently have undertaken. Hence we expect a positive coefficient on this parameter. Theoretically, the most desirable measure of the size of the state-owned sector is the share of GDP derived from state-owned enterprises. But these data are only available for only a relatively small set of countries beginning in the late 1980s, and it is not clear precisely how these estimates were calculated. Instead, we relied upon a simpler ordinal indicator (0-10) of the size of the state-owned sector from *Economic Freedom of the World* that contains information on a large sample of developing and developed countries going back to the mid 1970s (Gwartney et. al. 1996).[8]

It is commonly assumed that governments tend to privatize when they need to generate revenues to balance the public fiscal balance sheet. To test this argument, we included the central government's budget balance as a portion of GDP. Since positive scores denote fiscal surpluses, we would expect the budget balance coefficients to be negative in the privatization regressions.

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8 In countries with a score of 10, more than 30% of the economy was derived from economic activity of the state-owned sector; in countries that scored a 0, less than 1% of economic output was derived from state-owned enterprises.

GDP per capita was included to control for the effects of a country's level of development on privatization revenues. Positive coefficients would imply that higher per capita incomes promoted privatization, perhaps because more developed countries were better equipped successfully to undertake privatization. Negative parameter estimates would suggest that less developed countries had greater need to privatize.

We explored arguments about development with some more fine-grained measures as well. It has been argued that countries with developed market-promoting institutions are more likely to privatize. To measure the overall quality of governance in a country, we used an index derived from a set of International Country Risk Guide indicators first employed by Knack and Kiefer (1995): the sum of scores for corruption, bureaucratic quality and the rule of law (all measured on a 0-10 scale, with higher scores reflecting better governance). We would thus expect estimated parameters for the government quality index to be positive.

Our analyses also controlled for whether a country had a functioning stock market (a 0-1 dummy variable). It is likely that privatized assets would be valued more highly in countries with well functioning domestic capital markets that reduce information asymmetries and emphasize corporate governance (Levine 1997, Holmstrom and Tirole 1993). Controlling for these governance and market effects, we would expect the residual impact of per capita income on privatization to be negative – because poorer countries have greater need to privatize.

The central hypothesis we wish to test, however, is that countries that enter into binding relationships with international financial institutions (for whatever reason) subsequently privatize more state-owned assets. We use the outstanding level of financial obligations (relative to national GDP) to measure the strength of a country's relationships with the IFIs, and hence the potential magnitude of the market credibility boost.

The IMF variable comprises repurchase obligations to the IMF for all uses of IMF resources (excluding those resulting from drawings on the reserve tranche), including credit tranches, enlarged access resources, and all special facilities (the buffer stock, compensatory financing, extended fund, and oil facilities), trust fund loans, and operations under the structural adjustment and enhanced structural adjustment facilities. The World Bank variable comprises all IBRD loans (at market rates) and International Development Association credits (at concessional rates).

We have hypothesized that that the impact of the IFIs on privatization is increasing in the size of a country's obligations to them – especially for the IMF. Hence the coefficients on both IFI variables would be positive if the effect of conditionality has been to increase the sale of state-owned assets and market valuations of these sales.

3.2 Descriptive Statistics

Table 2 presents aggregate data on the financial impact of the IMF and World Bank on the developing (low- and middle-income, based on 1980 GDP per capita incomes) countries in this study over the period 1980-1999. High-income countries are not eligible for World Bank assistance, and none of the high-income countries in this study owed the IMF money in the 1980s and 1990s.

Table 2 about here

The top panel of Table 2 demonstrates the large role played by the IFIs in the developing world. Over the 1980s and 1990s, low-income countries had outstanding obligations to the IMF and the World Bank that averaged each year 5.1% and 16.1% of GDP respectively. The numbers were smaller for middle-income countries, but combined annual IMF and World Bank obligations constituted about one-eighth of GDP. In the developing world as a whole, outstanding loans from the World Bank were about

three times as large in dollar terms as those from the IMF. However, since IMF conditionality was more constraining than the World Bank variant, it could still be the case that the impact on privatization of IMF obligations was greater than that for World Bank loans.

The middle panel of the table represents the ten countries with the largest outstanding obligations to the IMF in the last two decades. Zambia and Guyana each had outstanding IMF debt that averaged annually more than one-quarter of their GDP, whereas the amounts ranged between 6% and 13% per year for the other eight countries most heavily indebted countries. At the same time, countries with large IMF obligations also invariably borrowed considerable sums from the World Bank as well. In the cases of Guyana and Zambia, IFI obligations constituted almost 60% of GDP each year during the 1980s and 1990s. Outstanding World Bank credit annually constituted fully one-half of Malawi's GDP in the same period. The other top ten IMF debtors owed the World Bank between 13% and 29% of their GDPs. Not surprisingly, eight of the countries in this top ten list were in Sub-Saharan Africa.

The bottom panel reports a similarly constructed bottom ten among the developing countries that were least dependent on the IFIs in the 1980s and 1990s. With the exception of residual unpaid debts from IMF programs in the 1970s in Botswana, Oman and Syria, these countries owed the IFIs no money in the 1980s and 1990s. Some of the countries on this list were not surprising. After all, by the end of the 1980s Ireland, Greece and Singapore were all high-income countries. The other seven nations were all already classified as middle-income countries by 1980, and hence were less likely to receive less IFI assistance than their low-income colleagues. In contrast to the biggest IMF and World Bank debtors, the bottom ten countries were geographically dispersed across several continents.

In aggregate, there was a strong positive correlation (0.58) between outstanding obligations to the two IFIs among all the developing countries in our dataset. Countries that owed the IMF more money were likely also to have larger lines of credit at the World Bank. This correlation, however, was

far from perfect. Given the differences in the types of conditionality agreements written by the IMF and World Bank, it is important to analyze separately their effects on privatization.

3.3 Comparative Cases

Before moving to the multivariate statistics, it is useful to consider a paired comparison of the experiences of two countries to illustrate the plausibility of the broader relationship we proposes between privatization and IFI lending. Ghana and Nigeria are low-income, non-democratic countries with functioning stock markets situated in West Africa. However, whereas Ghana was heavily dependent on IMF (and World Bank) lending -particularly in the late 1980s and early 1990s, Nigeria was much less so. Ghana was a successful and large privatizer in the latter 1990s; Nigeria was not (see Table 3).

Table 3 about here

In 1993, Ghana passed a privatization law and established the Divestiture Implementation Committee to oversee the sale of its state-owned assets. The country subsequently privatized food-manufacturing enterprises (related to cocoa, one of its primary exports), breweries, state owned banks and a minority stake in its state owned telecommunications operator, Ghana Telecom. The lion's share of their privatization revenues resulted from the sale of the Ashanti Goldfields company (in the mining sector). The total revenues received from privatization during the 1990s were valued at 21.6% of Ghana's 1985 GDP. In 1990, Ghana's outstanding IMF obligations totaling 12.7% of GDP. By 1999, Ghana had reduced those obligations to 4.0% as a share GDP, reflecting at least in part the successes of its privatization program.

Nigeria, Ghana's neighbor to the east, had much less success with its privatization program. Under the direction of the National Council on Privatization, the sale of state-owned assets got off to a quick start in Nigeria in the early 1990s. By 1993, it had divested a number of enterprises in the financial (banking and insurance), agriculture, food manufacturing, tourism, and transport (railroads) sectors – as well as a share of the Nigerian National Petroleum Company. But due to lack of investor interest, Nigeria's privatization program then abruptly stalled. The national government has subsequently been unable to sell off several firms it considers "crown jewels". For example, the sale of the state owned telecommunications operator, NITEL, has been repeatedly postponed. In 1999, the government attempted to reinvigorate its failing privatization program by creating the Bureau of Public Enterprises to oversee the NCP. But this new initiative is yet to kick-start the sale of the large set of assets that remain in the hands of the Nigerian state. During the 1990s as a whole, Nigeria privatized assets worth 4.2% of its 1985 GDP, but almost all of these were sold before 1993.

Nigeria was among the Sub-Saharan African countries least reliant on the IFIs in the 1990s. The country had no outstanding obligations to the IMF during the decade, and World Bank assistance was less than a third as large (relative to GDP) as was the case for neighboring Ghana. Interestingly, Nigeria withdrew from participation in all IMF programs in 1994 – the same year that its privatization program came grinding to a halt – because of disagreements about the terms of policy conditionality attached to IMF loans.[9] It was not the case that Nigeria did not need external financing. Far from it, by 1991 Nigeria owed an estimated US$34 billion dollars to members of the Paris Club and foreign commercial banks. According to the Nigerian Federal Ministry of Finance, the total external debt outstanding at the end of 1999 was US$28.0 billion. Of the total outstanding debt, the Paris Club constituted the highest source with a share of 73.2 percent in 1999.[10]

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9 As late as 2001, Nigeria has failed to reach agreed policy targets with the IMF.
10 Source: Central Bank of Nigeria. http://www.cenbank.org/extern_debt/htm.

This Ghana-Nigeria comparison is consistent with our argument that there may be an indirect benefit of accepting IFI loans, and the conditions attached to them, in terms of generating investor confidence in national privatization programs. Ghana seems a real success story with respect to privatization, with the IMF playing a leading role in economic policy formulation during the 1990s. Nigeria was much more independent from the IFIs, and the IMF in particular – precisely because it was unwilling to accept the policy conditions attached to IMF loans. But after a promising start its privatization program collapsed due to lack of investor interest, which we surmise was because of a lack of confidence that the Nigerian government, acting independently, would pursue the kinds of market reforms required to make its privatized firms good investments. We now demonstrate that this lesson of the Ghana-Nigeria comparison holds for the rest of the developing world as well.

4. Results

This section reports our statistical analyses of the determinants of privatization, focusing on the effects of outstanding obligations to international financial institutions. We begin with an aggregated cross sectional analysis of privatization over the 1985-1999 period, regressed on variables for the first half of the 1980s. To look at year-to-year relationships, we then estimate panel regressions. Finally, we check the robustness of our results by analyzing privatization dynamics and selection bias in privatization outcomes. In each set of analyses, there was a consistent and strong relationship between IMF lending and privatization – privatization was greater in countries with larger outstanding obligations to the IMF.

1985-1999 Cross-Section

Table 4 reports the cross-sectional results for equations that regressed privatization proceeds 1985-1999 (as a proportion of 1985 GDP) on a series of variables measured over the period 1980-1984

(to mitigate potential problems with reverse causality). In our baseline model presented in column 4.1, countries with larger state-owned sectors and larger budget deficits in the early 1980s subsequently privatized more of their economies. The parameter estimate for GDP per capita was positive and close to statistical significance, implying that more developed countries privatized more. Privatization revenues were greater in the countries of East Asia and the Pacific than in the excluded reference regions of North America and Western Europe.

Table 4 about here

Most importantly, the variable measuring outstanding obligations to the IMF was positive, substantively large and statistically significant, whereas the estimated parameter for World Bank debt was negative and insignificant. For every dollar of outstanding debt to the IMF in the 1980-1984 period, a recipient country privatized assets worth almost 50 cents over the next 15 years.

The remainder of our empirical analysis tested the robustness of this IMF-privatization association. Towards that end, we excluded all high-income countries to ascertain whether the IMF effect was affected by the inclusion of 26 countries with no outstanding obligations to the IFIs in the early 1980s. Column 4.2 shows that this was not the case, though the IMF coefficient was somewhat smaller on the developing countries only sample. In column 4.3, we re-estimated the baseline equation using Tobit because our privatization data are left-censored at 0. The IMF coefficient was larger using the Tobit estimator than was the case in the OLS equation, whereas the other estimated parameters were similar to those reported in column 4.2.

In column 4.4, we excluded the largest outliers from the baseline regression that arguably were unduly influential on the results reported. We calculated DFITs statistics of influence for each observation and then dropped from our sample the three countries (Bolivia, Hungary and Portugal) that

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were excessively influential on conventional interpretations of DFITs (DFITS $> 2* \sqrt{(k/n)}$) (Bollen and Jackman 1985). Not surprisingly, the overall fit of our regression equation increased substantially when we removed these outliers. More importantly, the IMF coefficient also increased to a value indicating an increment of 60 cents on the dollar impact on subsequent privatization revenues.

Finally, we changed the dependent variable in column 4.5 from the value of privatized assets (relative to GDP) to the number of privatization transactions, using a negative-binomial estimator to take into account the left-hand censoring of the transactions variable at 0. Whereas the total revenues measure combines both the volume of assets privatized and the market's valuation of them, the transactions variable is only a volume measure. The number of privatizations measured by transactions varied enormously. In the sample of countries we use, the mean number of transactions completed over the period was 68 with a standard deviation of 152. Countries like Luxembourg and Papua New Guinea privatized only 1 enterprise, whereas Romania sold 1180.

With the transaction variable as the dependent variable, the IMF effect was marginally positive – for every percentage point of GDP owed to the IMF in the 1980-1984 period, a country subsequently engaged in 0.07 privatization transactions. Thus, while we cannot wholly reject the argument that IMF loans caused countries to privatize more assets – a direct effect of conditionality – it is clear that this effect was magnified many times in terms of the markets' valuations of privatized assets. We estimate that a dollar owed to the IMF in the early 1980s subsequently resulted in the privatization of assets worth between 40 and 60 cents more. This suggests a very powerful credibility effect associated with IMF lending.

There are, however, limitations to the inferences that can be drawn from Table 4. In particular, we should be cautious about drawing causal connections between a country's relationship with the IMF

in the early 1980s and its privatization program through the end of the 1990s. We now re-consider this relationship using annual data.

Panel Analysis

The first column of Table 5 replicated column 4.1, but using rectangular annual panel data for 95 countries over the period 1985-1999.[11] In this equation, all the regressors (except initial size of the state-owned sector) were lagged one year and we included (but did not report in the table) dummy variables for each year as well as for each region. Not surprisingly the coefficients in Table 5.1 are much smaller than those in Table 4.1 because they measured annual effects, rather than those aggregated over 15 years. The positive effect on privatization revenues of the presence of a functioning stock market was more pronounced in the time series, whereas the effects of budget deficits and larger initial state-owned sector were weaker. As was the case in our cross section analysis, the parameter estimate for outstanding financial obligations to the World Bank was again insignificant (though stronger than in the cross-section).

Table 5 about here

The most important coefficient in Table 5.1, however, was the positive – but insignificant – impact of last year's outstanding IMF credit on this year's privatization revenues. The positive and significant finding from Table 4 combined with the insignificant effect in this equation suggest that they IMF-privatization revenues relationship may have changed over time. Indeed, we would expect that the relationship should have grown increasingly strong over time – because the IMF's commitment to privatization, and to conditioning loans on the execution of national privatization programs, increased

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[11] Niger had to be excluded from the panel data analysis due to missing data on some independent variables in the late 1980s and early 1990s.

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significantly during the 1990s. We tested this hypothesis in column 5.2 by interacting our IFI variables with a dummy variable for the years of the 1990s.

As expected, column 5.2 shows that whereas outstanding IMF obligations had a small negative impact on privatization revenues in the next year, this estimate was reversed in sign and doubled in size for the 1990s; the yearly impact during the 1990s is estimated to be .043 (i.e. –0.024 + 0.067 = +0.043). That is, for every dollar a country owed the IMF in the previous year during the 1990s it privatized assets worth 4 cents more in the current year. Over the whole decade, this effect would have been 40 cents – quite similar to the aggregate effect estimated in the cross-section regression in Table 4.1. In contrast with this over time change in the IMF-privatization relationship, outstanding obligations to the World Bank did not significantly positively affect privatization revenues in the 1980s, and this effect lessened to near zero in the 1990s. These results are quite consistent with general views about differences in the lending practices and policy views of the two institutions.[12]

We assessed the sensitivity of our IMF result in column 5.3 to the effects of other mediating variables common in work on international development. We considered the effects on privatization revenues of democracy, international economic openness (measured by levels of trade and foreign direct investment) and differences in legal systems (legal heritage). Though some of these variables were significant (notably differences in legal heritage), the IMF coefficient for the 1990s was unaffected by their inclusion. In sum, Table 5 reinforces our central finding from Table 4, with the modification that the positive effect of IMF obligations on privatization revenues was a 1990s phenomenon.

Additional Robustness Checks: Selection and Dynamics

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12 Because panel estimates are biased with fixed effects and lags, we also used the Arellano-Bond specification of GMM. With a single lag on the privatization variable, the IMF effect remained significant at the .01% level (coefficient of .075); the World Bank variable was not significant.

We conducted two final robustness checks in Table 6 for our central IMF-privatization result. First, we corrected for selection bias in the extent of national privatization programs, using the procedure advocated by Heckman. Second, we took into account the fact that countries' privatization programs tended to last for several years (i.e. creating dynamic connections between last year's and this year's privatization revenues). The results of these analyses are reported in Table 6.

Table 6 about here

The selection-corrected estimates are presented in column 6.1. The model specification is full maximum likelihood, which permitted the calculation of the inverse Mills Ratio of the probability density over the cumulative density function. This ratio was then used in the estimating equation, along with the other regressors. We used three variables to estimate the selection equation: a country's budget balance, domestic fixed investment, and foreign exchange reserves (all lagged one year). The results of the likelihood test indicate that the selection model and the estimating model were very highly correlated and that the bias (downwards) significant. But once these selection effects were taken into account it was still the case that the more money a country owed the IMF in a given year, the more privatization revenues were generated in the following year.

Column 6.2 included a country's lagged privatization revenues as a regressor to take into account the fact that national privatization programs typically last several years. We would expect that once a country began privatizing it would continue to do so, and hence that the lagged dependent variable would have a positive and significant impact on this year's privatization revenues. Table 6.2 demonstrates that this dynamic was strongly evident in our privatization data. Nonetheless, even when we controlled for past privatization, a country's outstanding obligations to the IMF were still positively

associated with its subsequent privatization revenues. Given that we controlled for the propensity for privatization programs to persist over time, this annual – incremental – IMF effect is striking.

In summary, Table 6 confirms that IMF lending had a positive impact on privatization revenues. This positive impact persisted even after correcting for the propensity for countries already committed to market reform also to participate in IMF programs and after taking into account that once a country began to privatize state-owned assets, it was likely to continue privatizing for several years.

5. Conclusion

We analyzed the relationships between the IFIs and privatization in three steps. First, we used cross section regressions for the 1985-1999 period to ascertain whether outstanding IFI obligations had an impact on the scale of a country's overall privatization programs. The central result of this analysis was that the more countries owed the IMF before 1985 the greater were their subsequent revenues raised from the sale of state-owned assets. Second, we then analyzed panel data to see whether this aggregated effect was evident in year-to-year data: did how much a country owed the IMF last year increase its privatization revenues this year? Our analysis answered this question affirmatively, but with an important qualification. The impact of IMF lending on privatization revenues was a 1990s phenomenon – when IMF conditionality with respect to privatization hardened. Finally, we controlled for significant selection effects and for over time persistence in national privatization programs. Doing so did not weaken our central IMF-privatization result.

What do these results mean? They have little to say about the efficiency of privatization, per se. But they do point to a critical role played by the IMF in altering market perceptions of country risk. It has long been a theoretical defense of IMF bailouts that they are required not only to provide short-term liquidity, but also to stave off disastrous self-fulfilling fears in the market place. Consistent with this line of argument and with recent studies questioning the direct impact of the IMF on economic

growth, our results suggest that the primary value of the IMF may be "financial market enhancement" rather than the provision of capital.

Recent evidence has failed to find a strong "catalytic" role for IMF programs with respect to overall capital flows into developing countries. Our results indicate, however, that IMF programs have been successful in attracting capital for the specific purpose of purchasing formerly state-owned assets. In the longer run, of course, this program success could have important implications for broader processes of economic development through attracting more capital investments at more favorable discount rates. Even if the efficiency-enhancing effects of privatization do not seem as powerful in practice as they are in theory, and even if IMF lending does not have direct effects on economic growth, privatization is more attractive to investors in cases where the privatizing government owes the IMF money and is subject to the policy conditionality.

This conclusion points to an important development tool available to countries and the Fund. Of course, the implication should not be that privatization should be recommended to all countries at all times. If enhancing credibility is a primary contribution of the IMF, it is important to consider other policy measures that might deliver this outcome more efficiently and at less cost in social and economic terms. Critics of international financial organizations have long noted the recognition that the IMF is an economic institution influencing the political economy of investment. Our findings confirm that financial markets perceive the IMF as playing an important role in enhancing credibility of governments in raising foreign capital and in increasing the revenues from the massive privatization of the past two decades. The increased revenues represent large numbers of capital flows to poor countries that should not be underestimated in importance.

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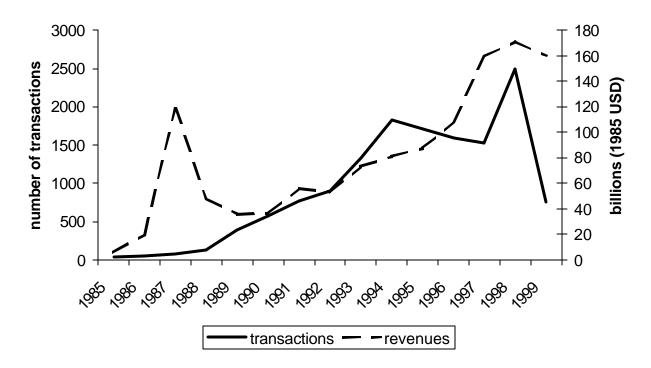
Figure 1. Privatization over time

Table 1. Privatization by region and per capita income, 1985-1999

	Revenues (billions 1985USD)	Average Revenues (% 1985 GDP, unweighted)	Transactions	Average Revenues per transaction (millions 1985USD)
By region:				
Eastern Europe and Central Asia	23.3	14.0	2453	9.5
East Asia and the Pacific	318.0	13.3	831	382.7
Latin America & the Caribbean	197.3	13.9	1601	123.2
Middle East and North Africa	19.9	6.9	419	47.5
North America & Western Europe	522.2	8.9	871	599.5
Southeast Asia	11.4	5.2	335	34.1
Sub-Saharan Africa	9.5	5.4	1662	5.7
By per capita income[b]:				
Low income	62.0	8.4	2782	22.3
Middle income	265.9	10.2	4269	62.3
High income	773.7	9.9	1121	690.2
Total	1101.6	9.6	8172	134.8

a.   Code for SOE: 2 low; 4 low-medium, 6 medium, 8 medium-high, 10 high.

Based on per capita GDP (atlas method) in 1980.

Table 2. Developing Countries and the IFIs, 1980-1999

We present aggregate data on the financial impact of the IMF and World Bank on the developing (low- and middle-income) countries in this study over the period 1980-1999. The top panel demonstrates the large role played by the IFIs in the developing world. On average, over the 1980s and 1990s, a low-income country had outstanding obligations to the IMF and the World Bank that amounted each year to 5.1% and 16.1% of GDP respectively. The middle panel represents the ten countries with the largest outstanding obligations to the IMF in the last two decades. The bottom panel reports a similarly constructed bottom ten among the developing countries least dependent on the IMF. In aggregate, there was a strong positive correlation (0.58) between outstanding obligations to the two IFIs among all the developing countries in our dataset.

	Outstanding IMF obligations (%GDP each year)	Outstanding WB obligations (%GDP each year)
Low-income countries	5.1	16.5
Middle-income countries	1.5	3.5
All developing countries	3.1	9.2
Top 10		
Zambia	29.1	28.4
Guyana	26.1	30.6
Jamaica	12.7	13.5
Gambia, The	11.0	28.7
Ghana	9.7	22.4
Uganda	8.5	20.5
Malawi	7.5	50.4
Congo, Dem. Rep.	7.1	12.8
Senegal	7.0	17.0
Togo	6.2	27.3
Bottom 10		
Botswana	0.0	5.3
Syrian Arab Republic	0.0	2.9
Oman	0.0	0.4
Iran, Islamic Rep.	0.0	0.3
Malta	0.0	0.0
Bahamas, The	0.0	0.0
Greece	0.0	0.0
Ireland	0.0	0.0
Singapore	0.0	0.0
Suriname	0.0	0.0
IMF-WB correlation for all developing countries		0.58

Table 3. Ghana and Nigeria

	Average IMF obligations (1990-1999) as % of GDP	Privatization Revenues (1990-1999) as % of 1985 GDP	Size of State owned Sector (1980) [a]	Deficit [b]	GDP PC [c]
Ghana	**9.3**	**21.6**	**10**	**-1.5**	**379**
Partial List of Major Privatized Enterprises: Food Manufacturing Enterprises (cocoa), Breweries (Achimota Brewery), Ashanti Goldfields Company, Banking (Ghana Commercial Bank), Telecommunications (Ghana Telecom -30%)					
Nigeria	**0.0**	**4.2**	**10**	**-5.1**	**257**
Partial List of Major Privatized Enterprises: Tourism (hotels), Nigerian National Petroleum Corporation (NNPC), Banking (First Bank of Nigeria, United Bank), Cement (Ashaka, Benue), Food Manufacturing and Production					

NOTE: Both countries are low-income, non-democratic and have functioning stock markets.

a. Code for SOE: 2 low; 4 low-medium, 6 medium, 8 medium-high, 10 high.
b. Budget Balance as share of GDP (1990-1999 average)
c. GDP per capita (constant 1995 US$) (1990-1999 average)

Table 4. Total Privatizations, 1985-1999

We report the cross-sectional results for equations that regressed privatization proceeds 1985-1999 (as a proportion of 1985 GDP) on a series of variables measured over the period 1980-1984. Column 4.1 presents our baseline model. In column 4.2, we excluded all high-income countries to ascertain whether the IMF effect is affected by the inclusion of 26 countries with no outstanding obligations to the IFIs in the early 1980s. In column 4.3, we re-estimated the baseline equation using Tobit because our privatization data are left-censored at 0. In column 4.4, the dependent variable was changed from the value of privatized assets (relative to GDP) to the number of privatization transactions, with the equation estimated using a negative-binomial estimator to take into account the left-hand censoring of the transactions variable at 0. In Column 4.5, we re-estimated the baseline model excluding outliers. Standard errors in parentheses. *** p < .01; ** p < .05; * p < .10

	4.1 Baseline	4.2 Developing countries only	4.3 Tobit	4.4 Excluding Outliers*	4.5 Transactions as Dep.Var
GDP per capita (log)	1.631	1.591	1.514	1.20	-0.390**
	(1.299)	(1.561)	(1.258)	(1.19)	(0.159)
Size of the state-owned sector in 1980	1.124**	0.94	1.070**	0.598	0.152**
	(0.499)	(0.669)	(0.485)	(0.379)	(0.061)
Budget balance (%GDP)	-0.299**	-0.397**	-0.292*	-0.308**	-0.012
	(0.134)	(0.192)	(0.147)	(0.137)	(0.023)
Functioning stock market	1.381	1.681	2.199	2.54	1.236***
	(2.059)	(2.466)	(2.096)	(1.83)	(0.276)
Government Quality	-0.048	0.09	0.001	-0.029	0.052
	(0.285)	(0.400)	(0.301)	(0.265)	(0.040)
World Bank outstanding obligations (%GDP)	-0.07	-0.034	-0.018	-0.266	-0.026
	(0.394)	(0.421)	(0.368)	(0.253)	(0.050)
IMF outstanding obligations (%GDP)	0.493**	0.434*	0.532*	0.601***	0.068*
	(0.234)	(0.262)	(0.299)	(0.187)	(0.041)
East Asia & the Pacific	6.720*	-0.929	6.886**	7.88**	0.088
	(3.696)	(6.685)	(3.297)	(3.62)	(0.430)
Eastern Europe & Central Asia	4.779	0.111	5.864	0.868	3.060***
	(8.315)	(9.428)	(5.734)	(3.92)	(0.751)
Latin America & the Caribbean	4.164	-0.989	4.395	5.11	0.104
	(3.620)	(6.067)	(3.185)	(3.36)	(0.419)
Middle East & North Africa	-3.61	-10.801*	-3.195	-0.635	-0.820*
	(3.981)	(6.268)	(3.758)	(3.33)	(0.497)
South Asia	-4.203	-9.244	-4.043	-1.71	-0.76
	(4.361)	(6.709)	(5.567)	(3.82)	(0.703)
Sub-Saharan Africa	-3.255	-8.38	-3.304	0.042	-0.218
	(4.305)	(6.483)	(4.130)	(3.63)	(0.551)
Constant	-14.497	-9.074	-14.793	-10.3	4.705***
	(10.957)	(14.428)	(11.308)	(10.1)	(1.471)
Observations	96	70	96	93	96
R-squared	0.33	0.38	0.0558	0.37	0.0687
log likelihood			-316.45		-477.34
chibar2(01) =					3978.85
Prob>=chibar2					0.000

Table 5. Annual Privatizations, 1985-1999

The first column of Table 5 replicates Table 41, but uses *annual* panel data for 95 countries over the period 1985-1999. All regressors were lagged one year and we included region and time dummies. In column 5.2, we interacted our IFI variables with a dummy variable for the years of the 1990s. In column 5.3, we assessed the sensitivity of our IMF result to the effects of other mediating variables common in work on international development.

	5.1	5.2	5.3
	Baseline	Before and after 1990	Additional variables
GDP per capita (log)	0.072	0.063	0.135
	(0.082)	(0.084)	(0.115)
Size of the state-owned sector in 1980	0.053*	0.048	0.041
	(0.030)	(0.030)	(0.031)
Budget balance (%GDP)	-0.006	-0.008	-0.009
	(0.009)	(0.009)	(0.009)
Functioning stock market	0.275**	0.263**	0.230*
	(0.126)	(0.127)	(0.138)
Government Quality	0.014	0.011	0.015
	(0.022)	(0.022)	(0.025)
World Bank outstanding obligations (%GDP)	0.011	0.011	0.014
	(0.007)	(0.009)	(0.010)
WB* 1990s		-0.009	-0.009
		(0.008)	(0.008)
IMF outstanding obligations (%GDP)	0.007	-0.024*	-0.024*
	(0.012)	(0.013)	(0.013)
IMF * 1990s		0.067***	0.068***
		(0.022)	(0.021)
Democracy			-0.132
			(0.163)
Trade (%GDP)			-0.001
			(0.001)
FDI inflows (%GDP)			0.001
			(0.037)
British legal heritage			0.316**
			(0.130)
French legal heritage			0.314**
			(0.140)
Socialist legal heritage			0.654*
			(0.359)
Constant	-1.237*	-1.045	-1.736*
	(0.747)	(0.754)	(1.007)
Observations	1236	1230	1170
Number of countries	95	94	91
R-squared	.0609	.0714	.0770
Joint Hypothesis Test (IMF and IMF * 1990)		$F(1, 1208) = 10.04$ $Prob > F = 0.0016$	

Table 6. Selection Effects and Dynamics

We conducted two final robustness checks on our central IMF-privatization result. First in column 6.1, we used the Heckman model to correct for selection effects. Second in column 6.2, we included a country's lagged privatization revenues as a regressor to take into account the fact that privatization programs typically last several years.

	6.1 Selection	6.2 Dynamics
Privatization (%GDP), lagged		0.223***
		(0.066)
GDP per capita (log)	0.090*	0.065
	(0.052)	(0.041)
Size of the state-owned sector in 1980	0.056***	0.041***
	(0.019)	(0.016)
Budget balance (%GDP)	-0.003	-0.004
	(0.005)	(0.004)
Functioning stock market	0.178**	0.150**
	(0.090)	(0.075)
Government Quality	0.002	0.001
	(0.015)	(0.012)
World Bank outstanding obligations (%GDP)	0.007	0.004
	(0.005)	(0.004)
IMF outstanding obligations (%GDP)	.017**	0.012**
	(0.007)	(0.005)
Constant	-1.44***	-1.06***
	(0.415)	(0.323)
Selection equation		
Budget balance (%GDP)	0.031***	0.031***
	(0.006)	(0.006)
Domestic investment (%GDP)	0.019**	0.019**
	(0.008)	(0.008)
Foreign exchange reserves (%GDP)	-0.019***	-0.019***
	(0.002)	(0.002)
Constant	3.36***	3.36***
	(0.372)	(0.374)
athrho	-0.050	-0.046
	(0.034)	(0.030)
lnsigma	0.051	0.028
	(0.116)	(0.125)
Lambda (Mills ratio)	-0.052	-0.047
	(0.036)	(0.031)
Observations	1265	1265
Number of countries	96	96
log likelihood	-1864.15	-1835.11
Wald chi2	193.17	393.57
Prob > chi2	0.0000	0.0000
Wald test of independent equations chi2(1) =	2.14	2.35
Prob > chi2	.1438	.1256

Appendix 1. Country Level Privatizations, 1985-1999

	Revenues (Billions 1985USD)	Average Revenues (% 1985 GDP, unweighted)	Transactions	Size of the State-Owned Sector in 1980[a]
East Asia & The Pacific				
Australia	68.91	25.2	118	medium-low
China	22.22	8.1	281	high
Indonesia	6.26	6.4	50	medium-high
Japan	164.39	4.3	12	low
Korea, Rep.	15.37	7.2	30	medium-low
Malaysia	11.45	28.2	91	medium
New Zealand	13.63	27.0	66	medium
Papua New Guinea	0.24	8.2	1	medium
Philippines	5.32	10.1	118	medium-low
Singapore	4.80	13.3	25	medium-low
Thailand	5.44	8.0	39	medium
Eastern Europe & Central Asia				
Hungary	15.52	31.6	1037	high
Romania	2.32	5.6	1180	high
Turkey	5.49	4.9	236	medium-high
L. America & The Caribbean				
Argentina	42.68	22.1	230	medium
Bolivia	1.84	37.6	98	medium-high
Brazil	73.12	13.4	215	medium-high
Chile	7.87	25.3	89	medium
Colombia	9.09	15.3	65	medium-high
Costa Rica	0.06	0.8	8	medium
Dominican Republic	0.43	5.1	6	medium
Ecuador	0.13	1.0	16	medium-high
El Salvador	1.14	18.0	23	medium-low
Guatemala	1.32	12.8	8	low
Guyana	0.18	36.5	32	high
Haiti	0.02	0.8	3	medium-low
Honduras	0.11	3.8	41	medium-low
Jamaica	0.70	20.7	47	medium-high
Mexico	40.36	16.5	317	medium-high
Nicaragua	0.14	6.6	78	high
Panama	1.92	30.7	21	medium

Paraguay	0.02	0.4	5	low
Peru	8.80	19.5	196	medium
Trinidad and Tobago	0.46	8.2	22	medium-high
Uruguay	0.02	0.2	12	medium
Venezuela, RB	6.88	12.0	69	medium-high
Middle East & N. Africa				
Bahrain	0.30	8.1	4	medium
Egypt, Arab Rep.	5.31	12.8	165	medium-high
Iran, Islamic Rep.	0.02	0.0	3	medium-high
Israel	7.26	14.0	50	medium-high
Jordan	0.06	1.2	6	high
Kuwait	2.19	12.4	21	medium-high
Morocco	3.91	15.4	84	medium-high
Oman	0.06	0.8	8	medium-high
Tunisia	0.58	4.5	76	high
United Arab Emirates	0.19	0.6	2	medium-low
N. America & W. Europe				
Austria	11.05	6.0	51	medium-high
Belgium	8.68	3.9	13	medium-low
Canada	23.90	5.2	77	low
Denmark	9.33	6.1	13	medium-low
Finland	10.74	9.4	46	medium-low
France	89.28	7.1	58	medium
Greece	9.86	10.0	46	medium-high
Iceland	0.33	5.7	27	low
Ireland	5.97	14.2	17	medium-low
Italy	102.20	11.4	89	medium
Luxembourg	1.07	10.4	1	medium-low
Malta	0.28	15.0	2	medium
Netherlands	17.22	5.4	52	low
Norway	2.65	2.3	14	medium
Portugal	24.65	32.7	92	medium-high
Spain	49.67	11.3	90	medium
Sweden	12.86	6.2	21	medium
Switzerland	4.60	1.7	3	low
United Kingdom	130.09	14.7	139	medium
United States	7.75	0.1	20	low
South Asia				
Bangladesh	0.06	0.3	32	medium-high
India	8.29	4.1	96	high
Pakistan	2.22	6.1	109	high

Sri Lanka	0.84	10.2	98	medium-high
Sub-Saharan Africa				
Burkina Faso	0.02	0.9	35	medium-high
Cameroon	0.09	0.9	31	medium
Congo, Dem. Rep.	0.00	0.0	23	high
Congo, Rep.	0.04	1.6	67	high
Cote d'Ivoire	0.68	7.8	96	high
Ethiopia	0.35	8.9	162	medium-high
Gabon	0.03	0.8	8	medium-high
Gambia, The	0.01	4.1	32	medium-high
Ghana	0.90	21.6	227	high
Guinea-Bissau	0.01	2.8	21	medium-high
Kenya	0.23	3.7	190	high
Malawi	0.06	5.5	73	high
Mali	0.07	3.2	68	medium
Niger*	0.00	0.3	29	medium
Nigeria	0.85	4.4	95	high
Senegal	0.23	6.3	54	medium
South Africa	4.53	3.4	33	medium-high
Togo	0.06	5.4	55	high
Uganda	0.17	5.4	101	medium-high
Zambia	0.38	11.2	253	high
Zimbabwe	0.78	14.6	9	medium-high

a. Gwartney et al. 1996

* Not included in panel analyses because of data limitations

Appendix 2. Description of the Variables

Variable	Definition	Source
Privatization	Lagged value of privatization revenues as % of GDP	Brune. 2003. Global Privatization Database
SOE80	Size of state owned sector in 1980; (0-10 score, with 10=extensive state ownership)	Gwartney et al, Economic Freedom of the World, 1996; Supplemented using imputation analysis and other sources.
GDP PC (log)	Gross Domestic Product Per Capita (constant US$), logged	World Bank Development Indicators 2002 CD-ROM
Budget Balance	Overall budget balance as Share of GDP	IMF IFS CD-ROM 2002 & World Development Indicators 2002
IMF	IMF financing as a share (%) of GDP	World Bank Development Indicators 2002 CD-ROM
World Bank	EBRD and IBRD loans as a share (%) of GDP	World Bank Development Indicators 2002 CD-ROM
Stock Market	Dummy Variable =1 if country has stock market	Brune (2002)
Trade	Exports plus Imports as Share of GDP	World Bank Development Indicators 2002 CD-ROM
FDI Inflows	foreign direct investment, net inflows as share of GDP	World Bank Development Indicators 2002 CD-ROM
Democracy	Dummy =1 if country has democratic regime	Alvarez, Cheibub, Limongi, Przeworkski 2001
Quality of Government	Sum of corruption, rule of law and bureaucratic quality scores (0-18, with 18 == high quality of government)	La Porta, Lopez de Silanes, Shleifer & Vishny (1999); Easterly and Yu (1999)
British Legal Heritage	Dummy=1 if Country has British (common law) legal heritage	La Porta, Lopez de Silanes, Shleifer & Vishny (1999); Easterly and Yu (1999)
French Legal Heritage	Dummy=1 if Country has French (civil law) legal heritage	La Porta, Lopez de Silanes, Shleifer & Vishny (1999); Easterly and Yu (1999)
Socialist Heritage	Dummy=1 if country has socialist legal heritage	La Porta, Lopez de Silanes, Shleifer & Vishny (1999); Easterly and Yu (1999)