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Domestic Interests, International Bargaining, and IMF Lending

Michael Breen

DCU

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Michael Breen, Dublin City University

The International Monetary Fund (IMF) treats its members very differently; some of the countries that borrow from the Fund receive huge loans while others in similar circumstances receive smaller loans. In this article, I argue that the difference in treatment is determined largely by domestic political conflict in the IMF's most powerful member-states. My contention is that the IMF offers governments bigger loans when interest groups in the G-5 (the United States, United Kingdom, France, Germany, and Japan) pressure their governments into achieving this outcome. While domestic political processes in the G-5 drive government policy towards the IMF, governments must also bargain with one another on the international stage if they are to influence IMF policy. With few exceptions, most previous research has tended to 'black box' the intergovernmental aspect of this process. In this article, I set out and test a novel explanation of how governments arrive at collective decisions through a system of logrolling. By illustrating the sources of variation in IMF lending, this article contributes to our understanding of power and decision-making in international organizations. Moreover, it also provides an insight into the causes of the recent surge in the IMF's lending activity since the onset of the global financial crisis.

For many years, leading scholars in international relations have been calling for more detailed empirical research on international organizations (IOs). The consensus is that empirical research has not kept pace with the development of more sophisticated theories of international cooperation (Martin and Frieden 2003; Milner 2005; Goldstein et al. 2007; Hafner-Burton et al. 2008). IMF lending to developing and emerging markets is a case in point. Although the Fund's lending activity is the subject of intense scrutiny and debate, important questions remain as to how the states that govern the IMF reach collective decisions over policies. A look back at some recent cases reveals a lot of variation. For example, Brazil (27 billion SDRs in 2002) and Turkey (12 billion SDRs in 2002) received generous loans only a few years ago, while others like Russia (4 billion SDRs in 1995) and Mexico (3 billion SDRs in 1999) received much smaller loans.

Why is it that countries like Brazil and Turkey received huge loans while others in seemingly similar circumstances received smaller loans? The conventional explanation is that IMF decisions are responsive to both political and economic pressures. More specifically, many scholars stress that IMF policies consistently reflect U.S. interests and are not merely technocratic decisions (Kahler 1990; Thacker 1999; Stone 2002; Oatley and Yackee 2004; Andersen et al. 2006; Woods 2006; Dreher and Jensen 2007; Stone 2008). By contrast, other scholars emphasize the independent role of the IMF's bureaucracy (Vaubel 1996; Dreher and Vaubel 2004; Willett 2000; Barnett and Finnemore 2004; Chwieroth 2008). While most studies have converged on one of these two positions, few look to the role of the other powerful states that govern the organization.[1] This is puzzling considering the United States has only one representative, holding 16.7% of the votes, on the organization's 24-member Executive Board. But what do governments want out of the IMF's lending policy? And how do they bargain and cooperate to get what they want? With few exceptions, most previous research has tended to 'black box' the negotiation and bargaining process that occurs among governments and the IMF's professional staff. This is not surprising; voting rarely occurs in individual lending cases. Our knowledge is also hindered somewhat by the secretive nature of the decision-making process but this is not unusual in international negotiations where the stakes are high.[2]

In this paper, I argue that variation in IMF lending can be best explained by domestic political conflict in a group of the IMF's most powerful member-states. My contention is that the IMF offers governments bigger loans when interest groups in the G-5 (the United States, United Kingdom, France, Germany, and Japan) pressure their governments into achieving this outcome. While domestic political processes in the G-5 drive government policy towards the IMF, governments must also bargain with one another on the international stage if they are to influence policy. In this paper, I set out an explanation of how governments arrive at collective decisions through a system of logrolling.

In what follows, I set out a theoretical framework that illustrates the domestic sources of governments' foreign economic policies towards the

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[1] For two recent reviews of the literature see (Vreeland 2007) and (Steinwand and Stone 2007). Also a notable exception to this trend is (Copelovitch 2010) who also examines G-5 interests and IMF policies.

[2] The same can also be said of other international organizations. According to Martin and Simmons, the majority of empirical studies on IO decision-making tend to focus on observable voting behaviour, leaving a gap in our knowledge of decision-making in IO's that rarely vote (Martin and Simmons 1998).

IMF and then examines how governments respond to the domestic actors that demand IO policy change. I then proceed to examine the inner-workings of the IMF and how these shape international bargaining and decision-making. After setting out a general theory of IMF decision-making, I then test the observable implications of this theory in a quantitative analysis of IMF lending to 159 countries from 1983-2006.

The domestic political economy of IMF lending

One of the most important developments over the last few decades is the rapid increase in international economic exchange. The explosion of cross border transactions has already had a profound effect on domestic politics within countries. Increasingly, in the words of Milner and Keohane, 'we can no longer understand politics within countries – what we still conventionally call "domestic politics" – without comprehending the nature of the linkages between national economies' (Milner and Keohane 1996:3). In this section, I set out an explanation of how changing economic linkages drive societal groups in the IMF's most powerful member states to seek IMF financing for developing and emerging markets. My explanation starts with an economic shock in a developing or emerging market that triggers societal groups in other countries to take action to limit their actual or potential losses. One of the many strategies a societal group should consider is to lobby for IMF finance in the expectation that some of it will be diverted back to them. In order to employ this strategy, however, a societal group must be able to wield influence in domestic politics. Although many groups potentially fit this criterion, I argue that the only groups strong enough to influence government preferences over IMF loans are banks and exporters.

The other societal groups that might benefit from IMF financing will find it difficult to access to the 'IMF strategy'. Individual investors, for example, face many difficulties recouping their losses from sovereign defaults. Being too numerous and diverse, they face severe collective action problems that limit their ability to lobby governments. Individual investors are also shorter lived and less visible in international politics than banks or firms.[3] One visible outcome of their failure to act collectively is that they possess few formal institutions through which they can coordinate their actions as a group or engage in negotiations with debtors. One only needs to consider the history of bond financing, which is littered with failed attempts to form institutions to recoup losses, to see that this class of actor has achieved little success in mobilising for political action (Sturzenegger and Zettelmeyer 2007:ch1). Much of the same can also be said for taxpayers. Each taxpayer stands to gain in a very small way from additional IMF financing but will find organizing for collective action even more challenging than an investor.

At the firm level, the story is different. Banks are in a better position to seize the opportunity provided by IMF financing because they are fewer in number than individual investors. Their smaller numbers make it easier for them to exercise political influence.[4] Banks benefit from IMF financing when a recipient government re-directs it to them. For example, the terms of Ghana's 1983 IMF program stipulated that Ghana's loan would be deposited in the Bank of England from where it would be directly transferred to Standard Chartered Bank to repay a short-term loan (Gould 2006b:156).

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[3] There is also little empirical evidence that IMF financing has ever gone towards bailing out bondholders (Roubini and Setser 2004:13)

[4] See (Tomz 2007:197) for why banks can punish more effectively than bondholders. Although in this paper, punishment is not the outcome of interest.

Exporters are the other relevant interest group that should prefer more IMF financing to offset their losses. Economic shocks hurt exporters by reducing the demand for foreign imports in an afflicted country, and sometimes when they increase the competitiveness of an afflicted country's exports. A generous IMF program can help to take some of the pain associated with an economic shock. In particular, an IMF program can support the public sector in a developing or emerging market, many of which import a lot of foreign goods and services. Therefore, exporters that supply governments will be the first to benefit from additional IMF financing because it allows governments to continue to purchase, and reduces the likelihood of governments defaulting on payments for goods and services already supplied. That exporters lobby their governments to offset losses is already well established in the political economy of trade (Dür 2010). It is also reasonable to expect that exporters should seek IMF financing where they face both a loss of their market share, and a loss of profits due to a reduced demand for goods and services and/or government default on the payment for goods or services already supplied.

Apart from IMF financing, the other options available to both banks and exporters include reducing their exposure to a troubled country and bilateral or multilateral negotiations to recover outstanding debt. Indeed, reducing exposure is a popular strategy; capital flight and financial crises are highly correlated. The same is also true of trade which predictably collapses in the years following a Paris Club agreement to reschedule or restructure sovereign debt (Rose 2005). While reducing exposure is a popular strategy, negotiation with the debtor is much less desirable. This is because private cooperation to reschedule debt is complicated by the number of actors involved, the diversity of financial assets, and the variation in exposure of the actors involved (Lipson 1985:203). Although collective action to recover debt is difficult, bilateral or multilateral talks with the debtor are possible if a country has unmanageable debt that it must restructure. Private creditors (whether banks or exporters) can offer to postpone principal payments, inject new capital to keep interest payments current, or offer to reschedule debt. Although rarely successful, private creditors can also use the threat of commercial sanctions (particularly trade sanctions) to limit their losses (Tomz 2007:195).

Private cooperation is even more difficult when governments enter the formal debt restructuring process through the Paris Club and Heavily Indebted Poor Countries Initiative. In a formal restructuring arrangement, private actors are at the bottom of the creditor hierarchy in terms of their ability to recover debt.[5] Their lack of seniority means they can become crowded-out in the process. By contrast, the IMF and other multilateral development banks are at the top of the creditor hierarchy. International institutions like these are almost risk-free lenders that borrowers must repay. Next in line are bilateral lending agencies - mostly export credit agencies financing by their governments - whose debts are easier to recover because they are publically guaranteed by debtor governments.[6] After the public creditors represented by the Paris Club seize the opportunity to recover

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[5] The formal process is coordinated via the Paris Club. While it sets out rules and norms for restructuring sovereign debt, negotiations are on an ad hoc basis (Rieffel 2003). More advanced attempts at cooperation through international institutions, such as the IMF's recent SDRM initiative have failed (Krueger 2002).

[6] For a more detailed discussion of debt restructuring and the seniority of sovereign debts see (Roubini and Setser 2004:249-288) and (Rieffel 2003)

their debts, the commercial banks represented by the London Club[7] or Bank Advisory Committee are the next in line to receive treatment. Finally, bond investors and suppliers are the last to receive treatment in the process. Suppliers, including exporters, are the least likely to receive anything from a default or restructuring but sometimes their goods and services are insured against sovereign default through export credits.

In summary, banks, bondholders, and exporters are all lower in the creditor hierarchy and must negotiate through different mechanisms to recover debt. Debt recovery is a difficult process taking years and often yielding nothing. International cooperation among debtors and creditors is difficult to achieve and the formal debt restructuring is not ideal for banks or bondholders, as they are not priority creditors. With the odds stacked against them, this leaves interest groups in the G-5 that have lost, or expect to loose from an economic shock, with little other option but to look towards their own government for assistance. By lobbying, they can pressure their government into extending additional IMF finance to a troubled country, some of which can then be diverted back to them.

Government preferences and IMF lending

So far I have outlined how a deteriorating economy in a foreign country can hurt domestic interest groups, encouraging them to lobby to limit their actual or potential losses. My argument is that interest groups organise primarily at the firm level to lobby governments over IMF programs, and should use their resources to shape government preferences inline with their aggregate exposure in a foreign country. But will the exposure of domestic interests ultimately lead to government action?

At the international level, governments have few other venues to turn to but the IMF. The other possible strategy involves the use of taxpayers' money. In some situations governments will subsidise banks and exporters directly. In others, government will orchestrate a bilateral or multilateral loan to 'bailout' a country on the verge of default, or experiencing some form of economic crisis. From the vantage point of a government, however, these options are less desirable. IMF financing involves no direct transfer of money from taxpayers, making it the most attractive option for governments that possess the means and motivation to align the organisation's policy with their preferences. Many scholars see this as an inherent flaw in the international financial architecture. For example, former First Deputy Managing Director of the IMF, Anne Krueger, commented that:

'We lack incentives to help countries with unsustainable debts resolve them promptly and in an orderly way. At present the only available mechanism requires the international community to bail out the private creditors.' (Krueger 2001)

Although many scholars understand the nature of this problem and have suggested possible solutions, there are few systematic explanations of the political consequences that follow from its existence.[8] My argument is that interest groups are aware of this gap in the international financial architecture and will use their resources in order to exploit it. To gain access to the 'IMF strategy', interest groups can employ different types of resources to influence government policy including money, legitimacy, political support, knowledge, expertise, and information (Dür 2008:1214).

[7] This organisation is similar to the Paris Club but it is even more informal as it dissolves after every meeting (Rieffel 2003:2-3)
[8] See (Eichengreen 2003; Krueger 2002) on how to reform debt

Governments will often respond favourably to lobbying because banks and exporters have structural importance, constraining the extent to which governments and politicians can act against their interests. The structural importance argument is based on the insight that the state is structurally dependent on capital; governments tend to dislike policies that hurt business interests because they are dependent on the private sector to provide revenue for the state (Wallerstein and Przeworski 1988).

To influence government policy towards the IMF, interest groups must evaluate the utility of pursuing different strategies. Adopting any strategy to recover debt will entail costs – expenditure on information, knowledge, lobbying, and more. Private financial institutions and some firms have advanced models of risk management and should be rational actors in this regard, selecting the most efficient method of recovering debt, reducing exposure, and lobbying governments and international organisations. As a group, they already cooperate to limit their financial losses through debt securitisation and insurance.

Governments too must evaluate the utility of the different strategies at their disposal. As a group, they collectively benefit from good IMF policies that stabilise economies, prevent the disruption of trade and capital flows, and reduce the risk of 'contagion' where a financial crisis in one country spreads to others. In return for the provision of international public goods, governments contribute to the IMF's pool of currency. The primary cost that arises for governments is the 'opportunity cost' of membership: to continue as a member a government must not withdraw its IMF quota and divert it to some other use. Added to the opportunity cost of membership, is the possibility that the organisation will not always deliver the goods; capture by powerful countries or special interests may well prevent the organisation from delivering. Politicians that represent citizens who benefit disproportionately from international economic integration should accept these potential costs in return for the potential benefits.

Considering both the costs and benefits associated with the IMF, does it follow that governments will always support socially optimal IMF programs? Unfortunately, governments often lack the incentive to do so because a socially optimal program might only marginally benefit its constituents. Because voters are uninformed or apathetic about international financial rescues, they do not always hold governments accountable for their success or failure to support good IMF policies. Information asymmetries also make it difficult for governments to be informed about every international financial rescue. This is one of the reasons why the task was delegated to the IMF's staff in the first place. In contrast, governments will often support a policy that is sub-optimal at the global level in order to cater to a narrow segment of society because it benefits disproportionately from IMF financing. Governments will support banks and exporters when the cost of not doing so exceeds the gains from their investment in the IMF, both in terms of their holding of SDRs in the common pool of resources, and in terms of the gains from the international public goods that the institution provides.

Nevertheless, there are still limits to how far a government can influence Fund policy even when it is clearly in their interest to do so. If the organisation was to lend too freely without concern for the risks involved it would damage its reputation, increase moral hazard, and deplete its limited resources. To avoid this, the IMF's member governments must strike a balance between the provision of liquidity and the prevention of moral hazard (Copelovitch 2010:53). Providing liquidity allows debtors to continue to service their loans. Keeping debtors liquid also has a pacifying effect on the international financial system by preventing the spread of a financial

crisis to other countries. If the IMF lends more than is necessary, however, it creates 'moral hazard' where both private investors and recipient governments might act recklessly without sufficient concern for risk. IMF insurance alters their expectations, as they do not have to suffer all of the consequences of their actions, leading to the possibility that IMF financing could increase the likelihood of a financial crisis occurring in the first place. Therefore, subject to all of these constraints, governments must make the trade-off between marginally increasing the income of the global citizen (through the provision of international public goods and protection of their investment in these goods) and significantly improving the income of interest groups. The balance will often tip towards policies that fail to deliver socially optimal IMF programs when the costs of doing so outweigh the benefits.

International bargaining: exercising influence at the IMF

The final step in my theory is to describe the IMF's internal decision-making process whereby governments bargain and cooperate with one another on the international stage to influence the organisation's output. Governments do so officially through the IMF's Executive Board, which sits in a continuous session, overseeing and influencing the direction of Fund policy. Although it is clear that governments wield influence over IMF policy, how governments reach collective decisions in each specific case is still widely debated.[9] At first glance it appears that governments are not in control of this process: the IMF's Executive Board rarely rejects a proposal from the staff, giving the impression that the staff are firmly in control of policy-making. This is unlikely, however, as the repeated nature of their interaction means that voting is not necessary for governments to wield influence. Instead, it is more likely that governments and their officials exercise influence through informal channels. By threatening to reject a policy or taking punitive action in another policy area, governments can limit staff autonomy. The relationship between governments and staff, therefore, is a classic principal-agent problem. Several authors have analysed this relationship with reference to the IMF, and all reach the same basic conclusion: both staff and membership exercise some influence over the policy process with variation in the level of influence across different policies (Copelovitch 2010; Martin 2006; Stone 2008; Gould 2006a).

Throughout the paper, I have argued that only the G-5 governments are capable of systematically influencing IMF lending policy.[10] Although there are many reasons underlying the G-5's commanding position at the IMF's Executive Board, I do not provide a thorough explanation of the origins of their power and influence in this paper.[11] Rather, I posit an explanation that sees the G-5 cooperate through a system of logrolling to influence high-level

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[9] Some scholars have attempted to explain this through voting power indices; however, these do not take a position on the preferences or strategic behaviour of the various actors in the decision-making process (Alonso-Meijide and Bowles 2005; Dreyer and Schotter 1980; Lane and Berg 1999; Lane and Maeland 2006; Leech 2002; Leech 2005; Reynaud and Vauday 2007)

[10] While the G-5 is in a commanding position when it comes to high-level policies like program approval, lending, and conditionality, it is likely that the staff and other members have influence over other IMF policies.

[11] The view that the G-5 and G-7 control IMF policies is supported by a number of other authors (Rieffel 2003; Fratianni and Pattison 2004; Copelovitch 2008)

decisions. This explanation is based on the group's voting power[12] and the IMF's constitution and institutional design, which are clearly biased in their favour.

Logrolling in this context means that a member of the G-5 will support a generous IMF loan for a country where their domestic interests are exposed to risk and loss. To gain support for their position, they will also support generous loans for other members of the G-5. In this way, a member of the group with little economic exposure will still support a large loan for another member in the expectation that the favour will be returned. In the long run, this favour-trading process should skew IMF lending and program approval decisions to the benefit of the G-5. As the exposure of the most exposed member of the group increases, so should loan size, and the likelihood of program approval. By cooperating in this way, the group can avoid conflict over every case that presents itself before the IMF's Executive Board and ensure that the benefits accruing from IMF lending are oversupplied in the cases where a member of the group's economic exposure is greater.

Logrolling processes like the one I describe frequently occur in domestic politics. As far back as the 1950s, scholars recognised that they are more or less likely depending on the strategic and institutional setting that legislators inhabit (Tullock 1959). Despite many advances in the study of legislative behaviour since then, there are still large gaps in our knowledge of how these sorts of processes play out in international settings like the IMF's Executive Board. A reasonable assumption is that international legislators should act similarly to their domestic counterparts when they are subject to the same constraints and incentives. But when applying this logic to the IMF's Executive Board, what specific aspects of its constitution and institutional design support logrolling among the G-5? According to Carrubba and Volden, it is easier to maintain cooperative coalitions for logrolls where: '*the number of legislators is small, the bills are much more beneficial than costly, the future is highly valued, the probability of re-election is high, coalitions can be formed quickly and easily, and voting rules are less inclusive*' (Carrubba and Volden 2000:265). All of these points fit the constitution and institutional design of the IMF very closely. There are only 24 Executive Directors. Bills (or IMF programs in this context) are much more beneficial than costly. Besides the considerable potential benefits that I have already outlined, there are few risks, as repayment is virtually guaranteed, making IMF loans much more secure than typical bank loans. The future is also highly valued: no G-5 government can know the time, location, or magnitude of the next financial crisis or the extent to which their domestic constituents could benefit from a more generous IMF loan. Re-election is also guaranteed: only G-5 representatives are appointed without election. Added to this, the voting rules are not inclusive; 161 of the IMF's 185 members delegate their voting power to an official from another member state. All else being equal, the bargaining dynamic in this environment clearly tends towards logrolling: members of the G-5 allow loans that are more generous where a G-5 government has a strong interest in a particular case. In return, other G-5 governments can expect the same treatment if they have a strong interest in the future.

To summarize, I have outlined the domestic political processes that lead G-5 governments to respond to the economic exposure of domestic interest groups. I have also outlined how these governments cooperate through a

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[12] As a bloc, they control 38.37% of the votes in the organisation, giving them the ability to veto most decisions.

system of logrolling to distribute the benefits of IMF financing. Taking both into consideration leads to the following testable hypotheses, which should hold even after controlling for alternative explanations:

The higher the economic exposure of the most exposed G-5 member:

a) The more likely that the IMF will approve a program
b) The higher the IMF loan

Data and operationalization

To test the hypotheses I have collected data on 159 developing and emerging economies between 1983 and 2006, resulting in a dataset of 3816 country-years, 535 of which led to an IMF program. The data are the most comprehensive on IMF lending and program approval to date, covering more countries, years, and program types than previous studies.

IMF programs come in two varieties: concessional and non-concessional. Transition economies and emerging markets generally enter non-concessional programs such as the Stand-By Arrangement (SBA) and Extended Fund Facility (EFF). In the 1980s, the IMF introduced the first concessional arrangement – the Structural Adjustment Facility (SAF) and later the Extended SAF (ESAF) which was renamed the Poverty Reduction and Growth Facility (PRGF) in 1999. Concessional loans come with lower interest rates and repayments are rescheduled over a longer time. Currently, 78 low-income countries are eligible for PRGF assistance based on a cut-off point of $1095 (per capita income, 2007).

With few exceptions, previous quantitative studies have focused on only one type of program. According to my argument, however, truncating the sample in this way is unnecessary. Even when the IMF lends at a concession, members of the G-5 can still benefit because all loans have distributional consequences. Furthermore, all IMF programs are subject to the same decision-making process – there is no separate process at the IMF's Executive Board for approving concessional programs – and therefore no reason why the same political actors should behave differently.

Model specification

IMF lending is best theorised as a two-stage process where the initial decision to approve a program dominates the subsequent decision over the size of a loan. In other words, the size of an IMF loan, which is the outcome of interest in this study, is not an independent decision. Fitting a statistical model to this reality calls for a two-stage model that takes account of the dominance of the first stage. The Heckman selection model best fits this problem because it models a two-stage process starting with selection and continuing with a subsequent decision over a continuous outcome. In addition, it will allow me to test both hypotheses set out in the paper while also controlling for selection on observed and unobserved variables.

Heckman's procedure starts with an equation that describes a linear relationship:

IMF loan $= \beta 0 + \beta 1$ etc… $+ u1$

The dependent variable, *IMF loan*, is only observed according to a selection equation, where the dependent variable is a binary variable taking the value of '1' when an IMF program is approved and '0' otherwise.

$\gamma0 + \gamma1$ etc… $+ u2 > 0$

Where $\qquad u1 \sim N (0, \sigma)$
$\qquad\qquad u2 \sim N (0, 1)$
$\qquad\qquad corr (u1, u2) = \varrho$

The error terms, u1 and u2, have correlation ϱ. The value for ϱ is a measure of the selection effect, and is reported as *rho*. *Rho* is the correlation coefficient between the unobserved factors that determine selection into an IMF program and the unobserved factors that determine the size of the IMF loan. The intuition here is straightforward: if the unobserved factors that influence IMF program approval are correlated with the unobserved factors that influence loan size, selection bias is likely to be a problem.

Although the two-stage logic of the Heckman selection model is appropriate here, the model performs poorly without an exclusion restriction. An exclusion restriction is a variable that enters the selection equation but does not enter the outcome equation. Scholars in international relations are often confronted with this problem when theory dictates that identical variables should enter both the selection and outcome equation. In the majority of cases where this issue has arisen, scholars have either dropped an explanatory variable from the outcome equation or included an additional variable in the selection equation. However, this course of action has been widely debated in social science, and the consensus is that it is best avoided (Sartori 2003; Simmons and Hopkins 2005; Madden 2008). Without an exclusion restriction, the results are based only upon distributional assumptions about the residuals and not upon variation in the independent variables (Sartori 2003).

In the statistical analysis, my exclusion restriction is a variable that measures a *systemic transition* in the international system. This variable controls for the transition from communism, where a large group of states moved from planned economies operating in a relative autonomy to market based economies. The inclusion of this variable is justified on theoretical grounds, and unlike many other applications of the Heckman selection model, is not merely a practical measure to improve model fit. A systemic transition of this nature should have an impact on program approval without having an impact on loan size.

Following the collapse of the Soviet Union, the IMF's Systemic Transformation Facility was created to relax the higher program approval requirements that would have prevented the post-communist countries from entering stand-by programs under normal circumstances (Stone 2002). Without the collapse of the Soviet Union, I assume that this group of states would have continued to have little access to IMF lending. Therefore, a systemic change of this nature should influence program approval without influencing loan size, making the transition a naturally occurring process that can serve as a valid exclusion restriction. Controlling for this transition is also important at an empirical level. Without controlling for the transition, it would appear that the IMF had much more relaxed program approval standards. It would also appear that many countries with similar economic systems all entered IMF programs within a very short period, inflating the importance of some variables. In the selection equations, *systemic transition* is a binary variable taking the value of '1' where a state is transitioning from communism during the years 1991-1993 only.[13]

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[13] Both before and after the transition, program approval should be subject to the same political pressures that I outlined in my theory. For example, Boughton confirms that Yugoslavia had significant commercial bank

The models that I estimate also employ the maximum likelihood estimator as opposed to the twostep estimator because it is generally considered to perform better (Puhani 2002). Moreover, to control for potential heteroscedasticity, I use robust standard errors and clustering at the country level so that observations are independent across countries but not within countries. Finally, all independent variables were lagged by one year to avoid simultaneity and better reflect the time lag in the IMF's decision-making process whereby IMF decisions are influenced by previous, rather than current macroeconomic and other data.

Dependent variables

The first dependent variable is the size of a country's IMF loan in SDRs (Special Drawing Rights) as a share of its IMF quota.[14] Weighting the dependent variable by a borrowing country's quota takes account of the constraints that the quota system sets on IMF lending. In the early years of the IMF, there were strict limits on a country borrowing above its quota but these have since been removed (Bird and Rowlands:158). There are now no formal limits on borrowing but in the data collected for this paper there were only 15 instances from a total of 535 where a country's loan exceeded three times its quota. In addition to its use as a benchmark, the quota system also determines voting rights and general SDR allocations. Therefore, measuring a loan in proportion to a borrowing country's quota takes account of the constraints on IMF resources and the ability of the borrowing country to use influence (in the form of votes) to gain access to finance. Any alternative measure of IMF lending will not account for these important political economy dimensions. Furthermore, at an operational level, the organization and its officials benchmark and compare loans in this way (IMF 2009). When actors go to bargain over loan size, it is easier for them to do so using this measure than a more complicated one. Apart from these compelling reasons to favour this measure over others, it was also employed in a recent study (Copelovitch 2010). In summary, if loan size is the key variable of interest in a cross-national analysis, taking the ratio of the loan to a country's quota is the measure that best closes the gap between concept and indicator.

The second dependent variable – IMF program approval – is a binary variable taking a value of '1' in the year of program approval and '0' otherwise. This measure is preferable because it takes account program approval, rather than continuation or participation in general. For the purposes of this paper, a focus on program approval alone seems appropriate and is best understood as a discrete choice that calls for a binary variable.

Independent variables

G-5 economic exposure

Trade and finance are the principal channels through which domestic interests in the G-5 are impacted by economic shocks in developing and emerging markets. For each of these channels, I compile separate indices of exposure taking only the highest level of exposure from amongst the G-5.

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exposure and required IMF assistance at several points when it found it difficult to meet its obligations (Boughton 2001).

[14] SDRs are an international reserve asset best described as potential claims on the currencies of the IMF members. Their value is based on a basket of major currencies reviewed by the IMF's Executive Board every five years. http://www.imf.org/external/np/exr/facts/sdr.htm [Accessed 30 August 2009]

For example, in 1983 Afghanistan showed no claims from banks in France, the UK, and Japan, 1 million dollars of German claims, and 4 million dollars of US claims. In this example, 4 million would enter the index, as it is the highest value. By treating the data in this way, the empirical analysis is grounded in my theory, which posits that the G-5 engage in logrolling at the IMF.

Data on bank exposure are drawn from the Bank for International Settlements. The BIS data represent the consolidated foreign claims of reporting banks in millions of US dollars. Absolute values are weighted by a G-5 member's total bank lending before entering the index to normalize exposure across countries.

To measure trade exposure I have collected data on exports to developing and emerging economies from the IMF's Direction of Trade Statistics. The trade exposure index was compiled in the same manner by taking the highest value (as a portion of total exports) from among the G-5.

In order to test the alternative argument that IMF financing is not brokered through logrolling, I include dummy variables that take the value of '1' in cases where a member of the G-5 is the most exposed and '0' otherwise. Evidence that countries were treated differently would suggest that the way in which power and influence are channelled through the IMF is not adequately explained in my theory. Therefore, these are good variables for testing the explanatory power and robustness of my argument. If my argument holds, it should not matter which member of the G-5 is the most exposed. Rather, what should matter is the exposure of the most exposed member of the group.

Control variables

In accordance with previous research on the political economy of IMF lending I have included several sets of variables to control for alternative explanations. First, I include the following macroeconomic variables to control for domestic economic conditions in borrowing countries: *international reserves measured in months of imports, current account balance as a percent of GDP, external debt as a percent of GDP, debt service as a percent of GDP, the log of GDP per capita, and the GDP growth rate*. I also include an additional control variable - *Financial crisis* - to take account of instances where the IMF is acting in its traditional role as lender of last resort. This choice of control variable is motivated by the literature on financial crises, which shows that even countries with strong underlying fundamentals are sometimes vulnerable to speculative attacks (Leblang and Satyanath 2006:247). Therefore, loan size and program approval may well be crisis-driven and not necessarily reflected in the macroeconomic indicators that I outlined above. This variable is coded '1' if a country experienced any combination of currency, banking, or debt crisis in the year of IMF program approval and '0' otherwise.

Second, I include *U.S. military aid in millions of dollars* in the models to capture strategic ties with the United States. This controls for the argument that the United States uses its power and influence to favour its allies. I use this measure as opposed to US-UN voting affinity, which is popular in the literature. My reasoning here is that US-UN voting alignment may be either a reward for previous voting or an incentive for future voting. U.S. military aid, in contrast, is a more stable and long-term measure of a strategic alliances.

To control for some of the potential bureaucratic influences on IMF loans I include a binary variable – *IMF quota review* - for years where the IMF's membership reviewed the organization's budget. According to the bureaucratic politics' explanation, in quota review years the IMF's staff

should 'hurry-up lending'. By depleting its resources in the year of a quota review, the Fund can demonstrate to the membership that they should increase its budget. This is standard practice in bureaucracies with budget cycles – spending and lending should increase at the end of the cycle.

Finally, to control for the changing relationship between the IMF's professional staff and their political masters, I include an index measuring the delegation of authority from governments to the IMF's bureaucracy. Several authors have argued that where the IMF's staff have more autonomy, decisions will more frequently reflect technocratic and bureaucratic interests (Copelovitch 2010; Gould 2003). The delegation index captures several features of the IMF's bureaucracy that vary over time: the range of services supplied; autonomy in the filling of staff posts; financial autonomy; management autonomy; size of budget; and size of staffing. This is the most comprehensive measure of the organizational independence compiled to date.

Findings

The results from the Heckman selection models are reported in Table 1 along with measures of model suitability and selection bias. The first column of Table 1 presents the base model including only domestic economic conditions and the exclusion restriction. The second column introduces one of the main quantities of interest in this paper: the G-5 index of bank exposure. The third column builds on this by adding several variables to control for financial crises, IMF quota reviews, delegation of authority to the IMF, and U.S. military spending. Column 4 presents the results from the full model, including control variables for the most exposed lender from among the G-5. These were not statistically significant and were dropped from the table in order to improve the presentation of the results. Models 5, 6, and 7 replicate models 2, 3, and 4 but substitute the G-5 index of bank exposure with trade exposure, and in the place of the variables to control for bank exposure among the G-5 it substitutes variables to control for trade exposure. Once again, the trade exposure variables were not statistically significant and were dropped from the table to improve presentation.

The findings from the analysis are consistent with the hypothesis that IMF loans and program approval are responsive to an increase in the economic exposure of the most exposed member of the G-5. All of the coefficients run in the expected direction and the explanatory variables of importance for my theory are statistically significant in all of the models. The greater the economic exposure of the most exposed member of the G-5, the more likely is program approval and a larger loan.

The variables that control for alternative explanations about the impact of individual G-5 members on IMF lending and program approval are not statistically significant in any of the specifications, lending little support to the argument that it is the identity of the most exposed member of the G-5 that matters, rather than the actual extent of their economic exposure. In other words, it makes no difference to the size of an IMF loan whether the most exposed country is the US, UK, Germany, Japan, or France.

Of the principal macroeconomic variables, GDP growth and the presence of a financial crisis are consistent across the specifications. A financial crisis in the potential recipient of IMF financing is highly correlated with the likelihood of program approval. While this is an intuitive finding that speaks to the role of the IMF as an international lender of last resort, that loan size is also responsive to financial crises speaks to the political as well as the economic pressures on Fund resources. In times of crisis, political pressure to lend may well intensify as the potential for losses among G-5 increases, and lobbying by domestic interests becomes more urgent.

Of the other macroeconomic variables, GDP growth is negatively correlated with both program approval and loan size. As economies grow faster, the likelihood of program approval diminishes as do the size of loans. An increase in international reserves is statistically significant and negatively correlated with program approval and loan size in 5 of the 7 models. This is also an intuitive finding and supported elsewhere in the literature. Clearly, domestic economic conditions matter to some extent, but the evidence for the impact of the other macroeconomic variables appears mixed at best.

It is surprising that the current account balance is statistically significant in only one of the models. It is also surprising that neither debt service nor external debt consistently predict program approval or loan size. The latter is only significant in models 5, 6, and 7 on the size of IMF loans.

U.S. military aid is statistically significant in the program approval equation of model 4 and the loan size equation of model 6. That it is significant and negatively correlated with program approval in model 4 runs in contrary to much of the existing literature. Similarly, the level of delegation from member states to the IMF staff has little systematic impact on loan size and program approval. The evidence on the impact of an IMF quota review is also sparse, although, a quota review is correlated with an increase in the likelihood of program approval in models 6 and 7. As expected Systemic transition is positively and significantly correlated with program approval in all but model 4, reflecting the impact that the movement of a large group of states from planned to market economies had on the likelihood of program approval.

Although the results from this statistical analysis lend strong support to the theory and hypotheses set out in this paper, it is not possible to reject some of the alternative explanations of IMF behaviour. Some of these findings do confirm what others studies have found: countries are more likely to enter into IMF arrangements when they face an economic crisis. More severe crises generally lead to bigger loans, holding other variables constant. In this way, the results support the view that the IMF does not completely disregard its intended purpose by acting only in the interests of its most powerful members. But the economic determinants of IMF agreements tell only part of the story, as the results clearly indicate.

Finally, the results strongly support the use of the Heckman selection model and the presence of selection effects in IMF lending. Firstly, the Wald test is reported for each model at the bottom of Tables 1. Based on the p-values from the tests, it is possible to reject the null hypothesis that the parameters of interest in the models are equal to zero, confirming the suitability of the model with these data. Secondly, Wald chi-squared tests of the independence of the selection and outcome equations are also reported for each model. These tests confirm that the errors in the first and second stage are correlated, indicating that Heckman's procedure is appropriate here. Failing this, the results would be no different than those from separate probit and linear regression models. Finally, *rho* - the correlation coefficient between the unobserved factors that determine selection into an IMF program and the unobserved factors that determine the size of the IMF loan – is reported at the bottom of Table 1 for all models. The findings here also confirm the presence of selection effects as rho is significantly different from zero. It is difficult to interpret this value further, though, because the factors in the error should be impossible to measure and sensitive to model specification. In summary, these measures confirm the suitability of the Heckman selection model with these data and also confirm the presence of selection effects. This is an important finding because previous research on the factors that influence IMF loans find either little evidence of selection

effects (Copelovitch 2010) or do not correct for selection bias in the first place (Oatley and Yackee 2004).

Robustness checks

In the preceding section, I discussed the results from the Heckman selection models and demonstrated that G-5 economic exposure is a robust predictor of both loan size and program approval. In this section, I describe the various changes I made to the models and specifications in order to test if the results were robust to additional control variables and alternative measures of the key concepts and indicators.[15] For all of the changes I describe here, the results were roughly comparable to the ones presented in the previous section, and are available on request.

First, all of the specifications were replicated with an alternative dependent variable: IMF credit extended to country i at time t in millions of SDRs (logged). My selection of this variable was also motivated by its use in a previous study on IMF lending (Oatley and Yackee 2004).

Second, I substituted G-5 bank exposure (as a percent of total bank lending) with bank exposure as a percent of GDP. This variable captures the exposure of the banking industry in the potential or actual recipient of IMF finance relative to the rest of the economy (rather than the rest of the sector) in each member of the G-5.

Third, the models were replicated with UN-U.S. voting alignment in place of U.S. military aid. *U.N.-U.S. voting* is a dyadic measure of affinity between the U.S. and every other country computed using the S-score formula. Data are drawn from (Dreher and Sturm 2006; Voeten 2005). The logic underlying this choice of variable is that voting affinity should indicate whether a state is an ally of the United States. While U.S. military aid is a better measure of long-term strategic alliances, the former is widely used in the literature on IMF polices.

Fourth, the models were replicated with a time trend to account for developments that I have not modelled such as increasing openness in trade and finance. A variable to capture a borrowing country's previous relationship with the IMF was also included (number of programs in the previous 5 years).

Fifth, a number of variables were included to account for the possibility that G-5 governments are responsive to domestic politics in the recipient, and that the recipient governments themselves might have some influence over the IMF's lending process. The variables added to the base model, including G-5 bank exposure, were the number of veto players, a dummy for legislative and executive election years, and POLITY.

Finally, I considered the possibility that the economic exposure of a larger group of states – the G-10 - matters when it comes to explaining IMF policy outcomes like loan size and program approval. Many different specifications showed little in the way of a systematic relationship between G-10 bank exposure and the likelihood of program approval or the size of an IMF loan.

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[15] A number of standard tests reveal that the models do not suffer from multicollinearity or abnormally distributed residuals. I also used an alternative statistical method, employing OLS with panel-corrected standard errors to correct for panel heteroscedasticity and spatial correlation and a lagged dependent variable to account for temporal dependence and correct for serial correlation (Beck 2001). In addition, I controlled for selection bias by using propensity score matching. While these alternative models do not take account of the two-stage lending process, the results on loan size are in accord with those from the Heckman selection models.

The only exception was that German bank exposure was correlated with significantly higher loans on average. However, on the balance of evidence, G-5 exposure appears to be a much more robust predictor of loan size, as German trade and bank exposure among the G-5 is not statistically significant. The following variables were added to the base model with this possibility in mind:

>Binary variables taking the value of '1' where a member of the G-10 was the most exposed bank lender from amongst the group (the U.S., U.K., France, Germany, Japan, Canada, Italy, Belgium, and Switzerland)[16].

>Variables measuring the relative exposure (both individually taking the % of a country's exposure relative to the rest of the G-10 and as a group) of Canada, Italy, Belgium, Switzerland, and the Netherlands.

In summary, the empirical analysis is robust to additional control variables, alternative measures of existing control variables, and alternative measures of the main explanatory variable, lending much support to my argument on the determinants of IMF lending.

Conclusion

While previous scholarship on IMF decision-making has stressed the importance of the United States and the Fund's professional staff, the argument and findings presented here imply that the organization's decisions are responsive to the interests of a larger group of states. The results from the Heckman selection models confirm that the benefits that flow from IMF lending are oversupplied where a member of the G-5 has closer trade and banking links with a developing or emerging market.

The findings also have implications for our understanding of international cooperation. While conventional IR theory posits that states collaborate through IOs to share the gains from international cooperation (Keohane 1984), the findings from my analysis suggests that in the case of high-level IMF decisions these gains are unevenly distributed. Rather, some of the gains from cooperation are distributed only among a smaller group of powerful states. This is not to say that the other members of the organization do not gain from other policies, but that when it comes to lending decisions that have significant distributional implications, we should be mindful of the distribution of power in the international system and within the organization itself.

More generally, the findings have implications for our understanding of globalization and openness in the world economy. With the rapid increase in global transactions over the last number of years, many developing and emerging markets have increasingly integrated with other economies. This analysis suggests that the composition of their economic links matters for how they are treated by the international organizations that govern and regulate the world economy. According to my argument, countries can expect better treatment if they are more 'centrally' integrated with the world's great economic powers, over those that are more regionally or heterogeneously integrated with other countries.

Finally, the argument I have set out here also has consequences for how we view the IMF's role in light of the global financial crisis. Recently, the G-20 group of industrialized and emerging economies agreed to treble the IMF's resources to $750 billion at their summit in 2009. Since the onset of the global crisis, we have also witnessed a surge in lending activity. Loans far exceeding normal limits were recently agreed with Mexico (31 billion SDRs), Hungary (10 billion SDRs), Romania (11 billion SDRs), Ukraine (11 billion SDRs), Poland (13 billion SDRs), and Iceland (1.4 billion SDRs). According

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[16] The Netherlands was excluded as it was never the most exposed lender.

to my argument, this record-breaking surge in the IMF's lending activity is partially driven by the demands of interest groups in the G-5 and logrolling at the IMF's Executive Board. As governments (and policymakers) continue to disagree over how to respond to the global financial crisis, increasing the IMF's capacity to respond was one of the few points of consensus.

Table 1: Heckman selection models: loan size and program approval

LOAN / QUOTA	(1)	(2)	(3)	(4)	(5)	(6)	(7)
G-5 bank exposure (log)		0.18***	0.17***	0.17***			
		(0.04)	(0.05)	(0.04)			
G-5 trade exposure (log)					0.19***	0.15**	0.15**
					(0.06)	(0.06)	(0.06)
Reserves	-0.08***	-0.08***	-0.08**	0.01	-0.06*	-0.05	-0.04
	(0.03)	(0.03)	(0.04)	(0.03)	(0.03)	(0.04)	(0.04)
Current account	0.01	-0.02**	-0.02	-0.01	-0.00	-0.00	0.00
	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)
External debt	0.09	0.01	0.04	0.07	0.21*	0.25*	0.34**
	(0.09)	(0.12)	(0.14)	(0.13)	(0.11)	(0.14)	(0.14)
Debt service	0.03**	0.01	0.01	0.01	0.00	-0.01	-0.01
	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)
GDP growth	-0.04***	-0.03**	-0.03**	0.00	-0.05***	-0.05***	-0.05***
	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.02)	(0.01)
GDP per capita (log)	-0.01	-0.10	-0.09	-0.16**	-0.08	-0.06	-0.17
	(0.08)	(0.08)	(0.08)	(0.07)	(0.10)	(0.10)	(0.11)
Financial crisis			0.68***	0.34**		0.77***	0.73***
			(0.20)	(0.16)		(0.23)	(0.24)
IMF quota review			0.05	-0.09		0.16	0.19
			(0.15)	(0.11)		(0.14)	(0.14)
IMF delegation index			0.01	0.07		-0.01	-0.03
			(0.06)	(0.05)		(0.06)	(0.06)
US military aid			0.00	0.00		0.00*	0.00
			(0.00)	(0.00)		(0.00)	(0.00)

Robust standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Continued overleaf

PROGRAM APPROVAL	(1)	(2)	(3)	(4)	(5)	(6)	(7)
G-5 bank exposure (log)		0.07***	0.07**	0.07**			
		(0.02)	(0.03)	(0.03)			
G-5 trade exposure (log)					0.07**	0.08**	0.08**
					(0.03)	(0.03)	(0.03)
Reserves	-0.04**	-0.07***	-0.07***	-0.08***	-0.03	-0.04*	-0.03
	(0.02)	(0.02)	(0.03)	(0.03)	(0.02)	(0.02)	(0.02)
Current account	0.00	-0.01**	-0.01	-0.01	0.00	-0.00	0.00
	(0.00)	(0.01)	(0.01)	(0.01)	(0.00)	(0.01)	(0.01)
External debt	-0.02	-0.07	-0.02	-0.05	0.03	0.07	0.12*
	(0.06)	(0.09)	(0.10)	(0.11)	(0.07)	(0.07)	(0.07)
Debt service	0.02**	0.01	0.00	0.01	0.00	-0.00	-0.00
	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)
GDP growth	-0.03***	-0.03***	-0.03***	-0.03***	-0.03***	-0.03***	-0.03***
	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)
GDP per capita (log)	-0.05	-0.01	0.02	-0.03	-0.04	0.00	-0.08
	(0.05)	(0.06)	(0.07)	(0.07)	(0.06)	(0.06)	(0.07)
Financial crisis			0.51***	0.46***		0.54***	0.49***
			(0.14)	(0.14)		(0.14)	(0.15)
IMF quota review			0.11	0.13		0.18**	0.18*
			(0.10)	(0.11)		(0.09)	(0.09)
IMF delegation index			-0.03	-0.06		0.01	-0.02
			(0.04)	(0.04)		(0.03)	(0.03)
US military aid			-0.00	-0.00*		0.00	-0.00
			(0.00)	(0.00)		(0.00)	(0.00)
Systemic transition	0.60***	0.43***	0.38**	0.31	0.54***	0.41**	0.26*
	(0.15)	(0.12)	(0.17)	(0.29)	(0.16)	(0.16)	(0.14)
Observations	2181	1301	1069	1069	1694	1358	1358
Censored	1777	1026	826	826	1408	1118	1118
No. countries	118	105	101	101	118	117	117
p.log likelihood	-1459	-936	-796	-790	-1081	-876	-854
Rho	0.89	0.92	0.91	-0.081	0.90	0.94	0.94
Wald	33.2	51.6	70.3	56.9	33.5	61.1	85.0
Wald indep.	33.9	48.3	23.0	0.23	31.7	64.9	66.8

Table 2: Summary statistics

Variable	Mean	Std. Dv.	Min.	Max.	N
IMF loan (millions SDR)	579.15	2108.12	1.4	27375.1	535
IMF loan / quota	1	1.4	0.05	19.38	535
IMF program approval	0.14	0.35	0	1	3816
G-5 trade exposure (%)	0	0.01	0	0.12	2536
G-5 bank exposure (%)	0.01	0.03	0	0.28	2079
Reserves (mts imports)	3.5	2.99	-0.09	32.13	2768
Current account / GDP	-4.15	10.7	-240.5	53.23	2817
External debt / GDP	0.79	0.91	0	17.77	2545
Debt service / GDP	5.52	5.33	0	107.37	2524
GDP growth (%)	1.46	6.66	-50.49	90.07	3292
GDP per capita (log)	7.11	1.29	4.03	10.47	3289
IMF quota review	0.22	0.41	0	1	3657
IMF delegation index	24.77	1.55	22.65	27.47	3657
Financial crisis	0.07	0.26	0	1	3816
US military aid (mil. USD)	15.13	130.17	0	5753.90	3233
Systemic transition	0.02	0.13	0	1	3816

Table 3: Data Appendix

Variable	Source
IMF loan (millions SDR)	International Financial Statistics
IMF loan / quota	International Financial Statistics
IMF program approval	International Monetary Fund
G-5 trade exposure (%)	IMF's Direction of Trade Statistics
G-5 bank exposure (%)	Bank for International Settlements
Reserves (mts imports)	World Development Indicators
Current account / GDP	World Development Indicators
External debt / GDP	World Development Indicators
Debt service / GDP	World Development Indicators
GDP growth (%)	World Development Indicators
GDP per capita (log)	World Development Indicators
IMF quota review	International Monetary Fund
IMF delegation index	(Brown 2009)
Financial crisis	(Laeven and Valencia 2008)
US military aid (mil. USD)	U.S. Overseas Loans and Grants (Greenbook)
Systemic transition	Authors'

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