Explaining Institutional Change: Policy Areas, Outside Options, and the Bretton Woods Institutions

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October 25, 2010

[1] Assistant Professor, Department of Political Science, Stanford University. I would like to thank the following for helpful comments and feedback: Jim Alt, Bob Bates, Lisa Blaydes, Bear Braumoeller, Jorge Dominguez, Margarita Estevez-Abe, James Fearon, Martha Finnemore, Jeffry Frieden, Judith Goldstein, Bill Grimes, Steph Haggard, Michael Hiscox, Dan Hopkins, Miles Kahler, Rie Kijima, Yevgeniy Kirpichevsky, Andy Kydd, David Laitin, Karen Long-Jusko, Lisa Martin, Becky Nelson, Thomas Oatley, Dan Okimoto, Elizabeth Maggie Penn, Susan Pharr, Stephen Rosen, Frances Rosenbluth, Ken Schultz, Ken Shepsle, Beth Simmons, Strom Thacker, Michael Tomz, Erik Voeten, and participants of workshops at Harvard, George Washington, Stanford, USC, APSA, ISA, and MPSA. I would also like to thank current and former officials of the IMF, Japanese Ministry of Finance, Japanese Ministry of Foreign Affairs, United States Treasury, and World Bank who were exceedingly gracious with their time and resources. This research was made possible by the generous support of the Reischauer Institute of Japanese Studies, US-Japan Program, and Weatherhead Center for International Affairs at Harvard University.

Abstract

I propose and test a theoretical framework to explain how international institutions change. Like firms in markets, international institutions are affected by the underlying characteristics of their policy areas. By virtue of network effects and barriers to entry, some policy areas are prone to produce international institutions facing little competition. Since outside options for member states in such institutions are limited, dissatisfied states have limited bargaining leverage. This impedes redistributive change. In comparison, international institutions that face acute competition will quickly reflect changes in underlying state interests and power. I test my theory empirically by comparing two international organizations operating in different policy areas but with identical de jure rules governing change – the International Monetary Fund and World Bank. Statistical analysis of voting shares and case study evidence provide support for my predictions.

Once established, international institutions often persist for a long time. As member states are added and institutional functions shift, initial agreements governing the allocation of benefits and decision-making rights often come under criticism for being incongruous with new realities. The structure of the United Nations (UN) Security Council is often singled out by non-permanent members as poorly reflecting the new world order.[2] Similar criticisms have been leveled at major economic institutions. Voting shares in the International Monetary Fund (IMF) and World Bank, the subject of this paper, have also been a matter of considerable contention. Deputy Governor of the People's Bank of China Yi Gang asserts that, "The persistently misaligned quota shares and underrepresentation of emerging market and developing countries hamper Fund governance and even-handed surveillance. It undermines Fund legitimacy and effectiveness."[3] The recent debate has primarily focused on redistributing shares from developed countries, particularly European members, to developing countries. However, the IMF and World Bank have been repeatedly subject to redistributive conflict since inception.[4]

Countries expend considerable diplomatic resources attempting to modify the status quo in international institutions when they perceive misalignments with underlying geopolitical or economic realities. Among policymakers in states such as Brazil, China, Germany, India, and Japan, this issue is often considered a major foreign policy priority.[5] Managing change will likely remain a substantively significant issue as differential rates of

[2] e.g., Voeten, 2007
[3] International Monetary Fund, International Monetary and Financial Committee, "Statement of Dr. Yi Gang Deputy Governor of the People's Bank of China at the Twentieth Meeting of the IMFC in Istanbul," 10-4-2009.
[4] Among others, see Horsefield, 1969; Garritsen de Vries, 1985, 511-543; Rapkin et al, 1997; Boughton, 2001, 849-875; Blomberg and Broz, 2007.
[5] e.g., Personal Interview, Japanese Ministry of Foreign Affairs Official, 2008.

economic growth shift the balance of geopolitical and economic power away from Western states, which have traditionally dominated major international organizations.

Scholars of international relations have often debated whether or not international institutions are "sticky," or path dependent – do institutions adjust swiftly in response to shifts in underlying interests and capabilities, or do they have some independent staying power that extends the afterglow of preceding conditions? The debate has largely treated this question as dichotomous. On the one hand, neorealists have argued that institutions are epiphenomenal to state preferences and therefore malleable to underlying state-level changes.[6] Neoliberals and historical institutionalists have argued that institutions extend the afterglow of initial conditions through a process of lock-in.[7] This dichotomous debate has left the literature largely devoid of generalizable, rationalist theories about *variations* in institutional stability and change.[8]

This study seeks to explain variations in distributional change across institutional settings. The dependent variable is the propensity for decision-making shares and influence over outcomes to be redistributed among institutional members according to underlying shifts in interests and capabilities. For a given shift in underlying factors, a distributionally rigid institution is likely to exhibit comparatively little change compared to a distributionally flexible institution.

I posit that the tendency for an institution to exhibit distributional change is a function of formal institutional rules and external policy area variables. Formal institutional features can make an institution more or less prone to change. Ceteris paribus, an institution with a large number of veto players is less likely to change than an institution with only one. Similarly, majority voting rules will make change more feasible than unanimity rules. In this

[6] Mearsheimer, 1994/5; Glennon, 2003.
[7] Krasner, 1976; Gilpin, 1981; Keohane, 1984; Pierson, 1996.
[8] Powell, 1994; Martin, 1997.

paper, I will control for differences along this dimension by comparing the Bretton Woods institutions, which allows for institutional rules to be held constant.

The central argument of this article is that some variation in institutional change can be explained by examining policy area characteristics. Specifically, some policy areas are more effectively managed through the formation of monopolistic international institutions, while others can be managed more diffusely. In turn, policy areas differ in the attractiveness of available outside options for institutional member states. When outside options are attractive, dissatisfied states can utilize the threat of exit to push for distributional change in line with their actual capabilities. In policy areas where outside options are unavailable or unattractive, such leverage is difficult to bring to bear. Hence, attractiveness of outside options correlates with greater institutional flexibility. To put it differently, an institution occupying a policy area with attractive outside options will approximate the neorealist model – fluid distributive change commensurate with underlying capabilities. A monopolistic institution with unattractive outside options will approximate the neoliberal or historical institutionalist model – persistence of prior conditions despite power shifts.

This article will proceed as follows. In the following section, I will develop my theory and generate specific predictions regarding the Bretton Woods institutions. Balance of payments lending, the policy area of the IMF, is characterized by greater network effects and barriers to entry compared to development lending, the policy area of the World Bank. The World Bank therefore faces greater institutional competition and availability of outside options for member states. My theory predicts that the World Bank should exhibit comparatively less path dependence – the institution will more quickly and accurately reflect underlying shifts in economic power.

In order to illustrate the plausibility of the theoretical framework, I will present a case study of Japan's efforts to secure greater influence in the Bretton Woods institutions. Having been on the losing end of World War II, Japan was not present during the initial bargaining process that created the IMF and the World Bank. Japan also experienced dramatic economic growth during the post-war period, resulting in a significant disparity between its perceived clout in these institutions and its economic standing. Beginning in the early 1980s, Japanese policymakers responded to this mismatch by launching a campaign for greater leadership, influence, and representation. I show that Japan achieved greater, more rapid success in securing its policy objectives in the World Bank compared to the IMF. These outcomes reflect Japan's ability to leverage attractive outside options in development lending – its substantial bilateral foreign aid program and the Asian Development Bank – and its inability to do so in balance of payments lending, where credible bilateral and regional alternatives to the IMF remain elusive.

I will then provide more general quantitative evidence in support of the theory, focusing on the cross-national distribution of voting shares in the IMF and International Bank for Reconstruction and Development (IBRD) of the World Bank. As predicted, shares in the IMF, the less competitive institution, exhibit greater path dependence and autoregressive properties. The evidence indicates that World Bank voting shares are fairly closely related to contemporaneous levels and changes in shares of world GDP. In contrast, IMF voting shares are primarily related to share distributions in earlier time periods and exhibit very little change in response to shifts in the distribution of world GDP and other economic variables. I will conclude the paper with a discussion of potential extensions and broader implications.

Theory: The Effect of Policy Areas and Outside Options on International Institutions

Since the 19th century, economists going back to Cournot have examined how market characteristics impact firm behavior, leading to a fruitful literature on industrial organization. Oft cited characteristics are increasing returns, network externalities, product differentiation, barriers to entry, inter-firm principal-agent problems, market size, and rules of the game such as prohibitions against collusion or other forms of regulation. For example, scale economies tend to create natural monopolies[9] and holdup problems facilitate vertical integration.[10] The basic premise of my theory is that international institutions are analogously and generalizably affected by characteristics of their policy areas.

While sometimes phrased in different terms, existing scholarship has investigated various features of institutional policy areas and their impact on institutionalization. In formal models of interstate cooperation, the strategic setting is often assumed to affect the form of cooperation. Whereas collaboration problems (prisoner's dilemma payoffs) involve enforcement problems and therefore necessitate mechanisms to monitor and extend the shadow of the future, coordination problems (stag hunt payoffs) only require initial mechanisms for states to settle upon a mutually preferable equilibrium.[11] The rational design project[12] proposes conjectures about how states might rationally design institutions based on the following independent variables: 1. distribution problems, 2. enforcement problems, 3. number of actors and the asymmetries among them, 4. levels of uncertainty. All of these variables will be influenced by the particular policy area in which cooperation is taking place. Scholars have also explored the strategic conditions that influence membership and voting rules[13] as well as escape clauses.[14] Existing work also examines the prerequisites for formal international organizations, which are defined as having greater centralization and agency.[15] In particular, the presence of enforcement problems and uncertainty over behavior or the state of the world will tend to lead to the creation of formal international organizations

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[9] For an early survey, see Hicks, 1935.
[10] Among others, see Williamson, 1971.
[11] Martin, 1992; Oye, 1986.
[12] Koremenos et al, 2001.
[13] Roberts, 1999; Magee and Morelli, 2003.
[14] Milner and Rosendorff, 2001.
[15] Abbott and Snidal, 1998.

to provide monitoring and enforcement functions.[16] In turn, formal international organizations are characterized by bureaucratic autonomy that might lead to unintended consequences or mission expansion.[17]

However, existing analyses have less to say about generalizable processes of institutional change.[18] A major fault line of the neorealist-neoliberal debate derives from the question of whether or not institutions are "sticky." In the debate, the neorealist position is that institutions are epiphenomenal and therefore malleable to underlying shifts in state interests and power.[19] If so, it is puzzling why states often devote considerable resources towards securing institutional changes on issues such as decision-making rules, voting shares, and personnel representation. Neoliberals have argued that institutions can extend the afterglow of initial conditions through a process of lock-in.[20] This dichotomous debate has left the literature largely devoid of theorizing about how we might explain *variations* in how institutions reflect underlying states interests and capabilities.[21] Specifically, under what conditions can we expect institutions to be epiphenomenal? Under what conditions can we expect institutions to exert a strong, independent effect?

Historical institutionalism provides one theoretical framework to analyze how path dependence and lock-in can lead to the persistence of initial conditions over time in international institutions. The key insight concerns the existence of increasing returns

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[16] Martin, 1992; Abbott and Snidal, 1998; Koremenos et al, 2001.
[17] Barnett and Finnemore, 2004.
[18] There are some notable exceptions. Powerful states may engage in redistributive cooperation, pushing unfavorable institutional change upon weaker states by manipulating the status quo – Oatley and Nabors, 1998; Gruber, 2000. Shanks et al, 1996 provide analysis of institutional death, which is another aspect of institutional change. Debates over the nature of the European Union, although narrowly focused on regional institutions, can be thought of as concerning different theories of institutional evolution (e.g. Haas, 1958; Lindberg, 1963; Garrett and Weingast, 1993; Moravcsik, 1999). Kahler, 1999 discusses applications of evolutionary theory to institutional change in international relations. Ikenberry, 2000 considers variation in institutional orders across time periods, but change is assumed to originate primarily from critical junctures such as major wars. Also see Greif and Laitin, 2004.
[19] Mearsheimer, 1994/5; Glennon, 2003.
[20] Krasner, 1976; Gilpin, 1981; Keohane, 1984; Pierson, 1996.
[21] Powell, 1994; Martin, 1997.

processes that tend to push systems to extreme conditions. In neoclassical economics, decreasing returns are usually assumed as conditions conducive to the attainment of stable equilibria. Increasing returns can produce autocatalytic positive feedback loops under conditions such as network externalities or disproportionately large sunk costs.[22] In this pure theoretical form, the paradigm does not depart radically from the rational, utility maximizing micro-foundations of neoliberal institutionalism. However, in actual applications, historical institutionalists often focus on contextual variables such as unintended consequences and accidents arising from issue complexity and short time-horizons.[23] Such factors can be magnified in the presence of increasing returns processes. However, it is difficult to derive generalizable propositions from haphazard events.

Policy Area Effects on International Organizations

Both firms and international organizations are shaped by the spheres of activity they inhabit. However, international organizations are hardly profit maximizing producers of goods and services. Shareholders of the World Bank and shareholders of Citibank operate under vastly different rules and expectations. IO member states seek decision-making shares for the sake of influencing policy outcomes rather than returns on capital or residual claimancy. States usually cannot trade their claims on IOs with other entities.[24] A shareholder dissatisfied with corporate performance or policies in a private firm can easily reallocate capital to more attractive opportunities or attempt to obtain a controlling stake through the purchase of additional shares. A dissatisfied member state in an IO must rely on institutional rules or interstate bargaining.

[22] David, 1986, 1994; Arthur, 1994; Goldstone, 1998; Pierson, 2000.
[23] e.g., Pierson, 1996.
[24] An interesting exception to this was the Bank for International Settlements prior to 2001, which allowed shareholding by both national governments and private entities.

I propose that institutional rules and policy area features have generalizable implications for interstate bargaining over distributional outcomes in IOs. Bargaining outcomes will be affected by the specific internal rules governing distributional change. For example, if distributional change requires a vote, majority voting will be more conducive to frequent change than unanimity rule. Institutional rules calling for a periodic review of distributional shares based on specified criteria will tend to produce greater flexibility. One-country-one-vote rules are inherently less flexible than weighted voting systems. In this paper, I control for this factor by analyzing two institutions with identical de jure decision-making procedures.

That leaves external factors. I argue that some policy areas have a tendency to produce monopolistic international organizations that leave member states without attractive outside options. Two variables are particularly relevant. First, network externalities arise when the marginal utility of joining an activity increases with the total number of participating actors.[25] International policy areas exhibit varying degrees of network effects. On the lower end, military alliances do not necessarily benefit from the inclusion of ever more states due to problems such as free riding, force integration, and commonality of strategic interests.[26] On the higher end, the assignment of internet domain names benefits greatly from universal cooperation for the sake of standardization across national boundaries.[27] High network effects incentivize states to produce universalistic, monopolistic organizations.

Second, barriers to entry represent hindrances to alternative forms of cooperation.[28] Scholars of international relations have often cited the high initial costs of institution-

[25] e.g., Katz and Shapiro, 1985; Liebowitz and Margolis, 1995; Milner, 2006.
[26] e.g., see Sandler, 1993.
[27] Drezner, 2004.
[28] The economics and legal literature on barriers to entry generally infers that such barriers exist when firms achieve high levels of concentration or abnormally high and sustained returns on capital. e.g., Bain, 1956; Stigler, 1968; Demsetz, 1968; Demsetz, 1982; Carlton, 2004.

building.[29] However, some institutions are more costly to build than others. Institutions requiring highly specialized legal, scientific, or policy-specific expertise and bureaucratic formalization are more difficult to replicate than informal institutions or institutions requiring only administrative functions. By nature, some policy areas involve the sharing of sensitive strategic or economic information that may hinder the creation of alternative arrangements – e.g. intelligence, information related to nuclear programs, or information about sensitive economic data during a financial crisis. Some institutions may also involve scale economies in the traditional sense, although the salience of this factor for international institutions is mitigated by the lack of a profit motive – on the margin, high initial financial costs may deter states with limited economic resources or weak resolve.

Network effects operate at the level of individual states, creating incentives to pursue cooperation under a single cooperative arrangement. Barriers to entry affect the viability of alternative institutions. The presence of high network effects and high barriers to entry will be associated with monopolistic international institutions and low viability of alternative cooperative arrangements.[30]

When defining policy areas, some ambiguity is inevitable. This is a problem also associated with analysis of markets – firms often produce multiple products with a range of functions, making it difficult to precisely define market boundaries. For example, does Whole Foods compete in the natural foods market, in which case it might constitute a

[29] e.g., Keohane, 1984.

[30] Theoretically, a policy area with high network effects but low barriers to entry could be characterized by one universalistic institution but also frequent efforts to supplant the existing institution, as is the case in private sector competition over products such as computer operating systems, browsers, and search engines. A policy area with low network effects but high barriers will not necessarily produce universality, but the existing configuration of institutions, once established, will tend to be stable. The effect of these alternative configurations on the attractiveness of outside options is ambiguous, since alternatives have some prospect of viability. The *combination* of high network effects and high barriers to entry should be associated with stable, monopolistic institutions, which results in the minimization of outside options for member states.

monopoly, or the broader groceries market, in which it is a small player?[31] Does Microsoft possess a monopoly over operating systems because it controls over 90% of market share, or does the possibility of rapid disruption based on technological developments in areas such as browsers indicate healthy competition?[32] Similarly, international institutions often promote cooperation in multiple policy areas with varying degrees of substitutability. This is a practical difficulty rather than an insurmountable challenge – the comparable problem has not hindered theoretical development in industrial organization and the commonplace application of antitrust law.

Despite ambiguities, it is possible to make some clear empirical observations about competition among international institutions. As I will explain in the subsequent section, international development lending is relatively more competitive than international balance of payments lending. Barriers to entry were high when INTELSAT was originally created due to the high cost of producing communications satellites, resulting in monopolization.[33] However, this barrier eroded with time as technological diffusion allowed most states, and subsequently private firms, to launch their own satellites. The United Nations holds a near-monopoly on the legitimization of international military interventions through the Security Council, but faces considerable institutional competition in its development lending activities.

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[31] See related documents available at: United States District Court for the District of Columbia, "Federal Trade Commission, Plaintiff, v. Whole Foods Market, Inc., and Wild Oats Markets, Inc.," Civ. No. 07-cv-01021-PLF, FTC File No. 071 0114, http://www.ftc.gov/os/caselist/0710114/0710114.shtm

[32] Summary documents available at: Department of Justice, "United States v. Microsoft," http://www.usdoj.gov/atr/cases/ms_index.htm

[33] Krasner, 1991.

Outside Options and Distributive Change

Policy area characteristics of international organizations have an important effect on the availability of outside options for member states. In turn, attractive outside options will tend to make international organizations more malleable to *distributive change* – redistribution of national representation and influence among member states according to underlying geopolitical or economic realities.

In the context of international organizations, the use of outside options most often involves reallocating resources to external efforts rather than de jure forfeiture of membership. In policy areas characterized by low network effects and low barriers to entry, it is possible for states to shift to or create alternative organizations structured more favorably, or cheaply pursue unilateral or bilateral means to achieve their ends. This credible threat of exit[34] provides a source of leverage to redistribute influence within the existing organization. The logic is illustrated by the use of preferential trade agreements by states to secure greater bargaining leverage in the GATT/WTO process[35] or by US threats to use force outside the Security Council to secure more favorable bargaining outcomes.[36]

Formally, outside options affect bargaining by constricting the feasible bargaining range.[37] Comparatively speaking, equilibrium distributions of the gains from cooperation contained in small bargaining ranges (i.e. in the presence of attractive outside options) are more likely to be thrown out of equilibrium given an exogenous perturbation in underlying capabilities.[38] Ceteris paribus, assuming comparable shifts in underlying capabilities,

[34] Hirschman, 1970; Kato, 1998; Gehlbach, 2005.
[35] Mansfield and Reinhardt, 2003.
[36] Voeten, 2001.
[37] e.g., see Muthoo, 1999, 99-135; Voeten, 2001; Johns, 2007.
[38] I provide a formal model and more extensive discussion of this point in Lipscy, 2009. For the sake of brevity, the following simple model demonstrates the key point: assume a standard bargaining model, where country 1 and country 2 bargain over the gains from cooperation. The total benefits from cooperation (T) are given by each country's outside options (x_i), which are

institutions in policy areas with attractive outside options will experience more frequent renegotiations of bargaining outcomes and more rapidly reflect underlying shifts in relative power compared to institutions with unattractive outside options.[39] Hence, I propose the following general hypothesis:

Hypothesis: Distributional outcomes in competitive IOs with attractive outside options will exhibit less path dependence than distributional outcomes in less competitive IOs with unattractive outside options. Consequently, distributional outcomes in competitive IOs should more closely approximate the distribution of underlying state capabilities.

The subsequent sections provide more detailed specifications and empirical tests.

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assumed to reflect some measure of underlying capability, and some gain from cooperation (g) such that $T=x_1+x_2+g$. The variable g provides an indication of the general attractiveness of outside options. As $g\rightarrow 0$, outside options are more attractive, and as $g\rightarrow T$, outside options are unattractive. The total benefits from cooperation are distributed according to weight (w_i), where $w_1=1-w_2$. Country i will agree to cooperate only if $Tw_i \geq x_i$, i.e., the payoff from cooperation matches or exceeds the payoff of the outside option. It can be shown that cooperation can only be sustained under the following condition: $1-x_2/T \geq w_1 \geq x_1/T$. In the extremes, when outside options are not attractive at all, such that $g\rightarrow T$, the condition reduces to $1 \geq w_1 \geq 0$, i.e. cooperation is sustainable for any distributional weight. Hence, any exogenous shock resulting in a change in underlying capabilities can be accommodated with no shift in the distributional weight. In the other extreme, where $g\rightarrow 0$, the condition reduces to $x_1/(x_1+x_2) = w_1$, i.e. the only feasible weighting gives each country their relative share of contributions to the institution. Under this condition, any exogenous shift in x_i must result in a shift in w_i for cooperation to be sustained. In the intermediate range, as outside options become more attractive, exogenous shifts in underlying capabilities of a given magnitude are more likely to necessitate an adjustment in distributional outcomes (w) in order for cooperation to continue.

[39] Alternatively, if an institution's internal rules prove to be too rigid to accommodate such change, we may observe the actual exercise of outside options and the proliferation of alternative forms of cooperation within the same policy area.

The IMF and World Bank: Predictions

To specifically examine my claims regarding external factors, I choose two institutions that facilitate cooperation in different policy areas but which have identical internal rules for the redistribution of decision-making power – the International Monetary Fund and the International Bank for Reconstruction and Development (IBRD) of the World Bank.[40] These two institutions have identical de jure rules for the distribution of voting power. Voting power is predominantly determined according to the share of subscriptions held by each member state.[41] In turn, subscription shares are to broadly reflect a country's standing in the world economy, measured through indicators such as GDP, balance of payments, reserves, and the variability of current receipts. In both institutions, redistribution can occur as part of a general increase in capitalization or on an ad hoc basis for individual countries. Both institutions require a supermajority of 85% to approve any change in subscription shares.[42]

However, the de facto process for redistributing shares involves a highly politicized bargaining process.[43] While specific formulas are used as loose guidelines for calculating subscription shares, the formulas themselves have been the subject of much wrangling.[44] In fact, the Bretton Woods formulas have been adjusted ex post facto to produce results consistent with politically determined bargaining outcomes. For example, in 1963-1964, IMF staff revised the Bretton Woods formula by developing fifteen alternative formulas and

[40] I will use IBRD and World Bank interchangeably in the subsequent text.
[41] There is also a very small fixed component distributed equally to all members of 250 voting shares to each member.
[42] The threshold was adjusted in the 1970s from 80% to 85% to maintain the veto of the United States as its voting share declined below 20%. See Garristen de Vries, 1985, 524.
[43] Among others, see Horsefield, 1969; Garritsen de Vries, 1985, 511-543; Rapkin et al, 1997; Boughton, 2001, 849-875; Blomberg and Broz, 2007.
[44] The quota formulas used by the IMF during the relevant time period for this article are available in International Monetary Fund, "Financial Organization and Operations of the IMF," Washington, D.C., 2001, 57.

settling on a five-formula solution that produced a reasonable approximation to existing quota distributions. As Garritsen de Vries notes, "The number of formulas for quota calculations indicated the difficulty of deriving a single formula that would produce reasonable quota calculations for all members, while account was still taken of the existing structure of Fund quotas and the desirability of proceeding slowly with shifts in that structure."[45] By the 1980s, the complexity of formula calculations led one official to lament, "It was said that there are one-hundred-twenty ways by which to calculate a country's quota."[46]

Officially, subscription shares in the IBRD are to be derivative of and parallel to those in the IMF. However, significant discrepancies have developed over time due to divergent interstate bargaining outcomes. This case is therefore useful for isolating the effect of external factors on institutional change.

Policy Area Effects for the IMF and World Bank

In this subsection, I will examine the primary policy areas of the IMF and World Bank – respectively, international balance of payments lending and development lending. I will argue that international balance of payments lending is characterized by higher network externalities and higher barriers to entry compared to development lending. Consequently, compared to the IMF, the World Bank faces much greater institutional competition from bilateral as well as multilateral development agencies. World Bank member states therefore have more credible outside options and bargaining leverage. This leverage makes the World Bank more of a "realist" institution – the institution

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[45] Garritsen de Vries, 1985, 516.
[46] Ogata, 1989, 12.

quickly reflects changes in underlying economic power. In comparison, IMF members have limited bargaining leverage, and the institution is characterized by path dependence and resistance to distributive change.

Broadly speaking, the organizational policy areas of the IMF and World Bank may be characterized respectively as balance of payments (BOP) lending and development assistance. This is an oversimplification by any measure – prior to 1971, the IMF's mandate also included managing the Bretton Wood system of fixed exchange rates,[47] and the de facto roles of the two institutions sometimes overlap, leading to considerable criticism about "mission creep."[48] Nonetheless, these characterizations reasonably capture the primary activities of each institution in practice.[49] I will now turn to an analysis of the network effects and barriers to entry associated with each of these policy areas.

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[47] e.g., see Kahler, 2002.

[48] e.g., Einhorn, 2001; Stiglitz, 2002.

[49] The IMF has provided concessional financing to the world's poorest countries through the Trust Fund since 1977 and formally since 1986 through the Structural and Enhanced Structural Adjustment Facility and the Poverty and Growth Reduction Facility (PRGF). This financing overlaps to some degree with development lending, but the proportion of outstanding credit from these facilities to total outstanding credit has not exceeded 14% except for a brief period in 2006-2008 (which is outside the time period analyzed in this paper), when the IMF's other lending activities declined sharply due to unusual global macroeconomic stability (*IMF Annual Report*, Various Years, Appendix II). The Bank has also occasionally provided supplementary financing, along with other bilateral and multilateral development agencies, towards major IMF bailout packages, but the IMF has acted as lead negotiator and exercised control over the terms of such lending (e.g., see Blustein, 2003, 103-104). In terms of the Bank's routine activities, structural adjustment lending (now development policy lending), which has been provided since 1980, has some similarities to IMF lending, such as the use of conditionality to remedy structural problems. However, the primary focus of this lending is addressing the long-term developmental consequences of structural adjustment rather than remedying immediate balance of payments difficulties (e.g., see World Bank, *World Bank Annual Report*, 1985, 53).

Network Effects

Balance of payments lending is characterized by higher network effects compared to development lending due to three main factors: political sensitivity associated with conditionality and cross-national rescues, the benefits associated with information pooling, and credibility in the event of a crisis. These factors make it comparatively more difficult for countries to provide balance of payments lending on a bilateral or regional basis.

First, political cover provided by universality is more valuable in balance of payments lending. Balance of payments lending involves severe moral hazard and agency problems, which necessitate the frequent use of conditionality.[50] Such intrusive conditions are politically sensitive and difficult for countries to negotiate bilaterally. While conditions may be partially determined by parochial member state interests,[51] the IMF provides "cover" by virtue of its universality and technocratic expertise to reduce the impression of overt foreign intrusion in the recipient country's domestic affairs.[52] It is more difficult for regional institutions to provide such political cover due to narrower, uneven membership and local political sensitivities. This is well-illustrated by the decision of East Asian states to tie the plurality of Chiang Mai Initiative lending to IMF conditionality – as I will discuss in subsequent sections, the prospect of China or Japan

[50] e.g., see Williamson, 1983; Haggard, 1985; Polak, 1991; Haggard and Kaufman, 1992; Kahler, 1993; Drazen, 2002; Stone, 2002, 2004, 2008; Gould, 2003; Vreeland, 2003; Dreher and Vaubel, 2004.

[51] e.g. Thacker, 1999; Oatley and Yackee, 2004; Dreher and Jensen, 2007; Stone, 2008; Copelovitch 2008.

[52] This is the international analogue of the more common domestic variant, which holds that the IMF can provide political cover to push through unpopular domestic political reforms – e.g., Remmer 1986; Vreeland 2003; Mukherjee and Singer, 2009.

being implicated for imposing harsh conditions on regional neighbors such as Korea was considered politically unacceptable. Universal membership diffuses such political sensitivities.

The political cover afforded by the IMF also enables countries to launder[53] funds, sidestepping domestic opposition to international bailouts. Like rescues of domestic financial institutions, foreign bailouts are often criticized for using public funds to reward profligate behavior abroad. For example, the US rescue package for Mexico in 1995 was opposed by 80% of the public and came under heavy scrutiny from congressional Republicans.[54] The IMF not only allows countries to channel funds in a less overtly public manner, but the IMF's universality and perceived independence can also reassure skeptical publics in creditor states that bailouts will be accompanied by tough conditions. This appears to be one reason why German Chancellor Angela Merkel insisted on IMF involvement during the Euro debt crisis of 2010. Facing a skeptical German public, Merkel argued forcefully against a Europe-only bailout plan on the grounds that IMF involvement was the only way to credibly impose austerity on profligate member states such as Greece and deter additional requests for aid.[55]

Comparatively speaking, political cover is less salient for development lending. Actual motives aside, development lending is often associated with generosity and responsible global citizenship – something donors prefer to publicize rather than

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[53] Abbott and Snidal, 1998
[54] Morris and Passé-Smith, 2001.
[55] e.g., Walker, Marcus, Charles Forelle and Brian Blackstone, "On the Secret Committee to Save the Euro, a Dangerous Divide," *The Wall Street Journal*, 9-24-2010.

conceal.[56] Monitoring and enforcement of development projects can be done diffusely on a project-specific basis, blunting headline impact and political salience. Only a subset of development lending benefits from political cover – e.g. structural adjustment lending – and even there, the need is comparatively mitigated by the fact that negotiations can occur over long time horizons outside the politically charged atmosphere created by balance of payments difficulties.

Second, there are greater network effects associated with information pooling for balance of payments lending. Because of globalization and interconnected capital markets, balance of payments crises frequently produce contagion – e.g., the Asian Crisis of 1997-1998 affected seemingly unrelated countries such as Korea, Russia, and Brazil. As such, there are inherent and fundamental benefits associated with global surveillance and universal coverage.[57] Information sharing and combining of expertise might also incrementally benefit development lending – e.g., some development projects have cross-border environmental consequences – but there is no comparable imperative for universality.

Third, the need for credibility makes balance of payments lending subject to greater network effects. International financial crises are a game of confidence. In responding to a balance of payments crisis, the perception of credibility by private sector actors can be as important as the amount of lending provided.[58] An economic hegemon

[56] For example, the UN has promoted the norm that developed countries should contribute 0.7% of GDP towards official development assistance. For a detailed description, see Botcheva and Martin, 2001.
[57] This is a point often highlighted by the IMF itself, e.g. "In today's globalized economy, where the policies of one country typically affect many other countries, international cooperation is essential. The IMF, with its near-universal membership of 186 countries, facilitates this cooperation." (IMF, "International Monetary Fund Factsheet: Surveillance," 8-2006)
[58] e.g., see Rubin, 2004, 215.

with the will and capacity to support the system, if one exists, may exhibit such credibility.[59] In the absence of a hegemon, individual states will find it more difficult to restore confidence acting alone – hence an institution such as the IMF, which represents virtually all major creditor states in the international system.[60] Similar credibility issues do not arise in development lending, although multilateral pooling can mitigate risk and hence some modest network effects may be present.

Barriers to Entry

Barriers to entry are also likely to be higher in balance of payments lending compared to development lending. First, even prior to the issue of credibility, a balance of payments organization must have the capacity to mobilize a sizable pool of credit in the event of a major financial crisis. This will be difficult to achieve for incipient international institutions with limited membership, except in cases where members are well-endowed with foreign reserves. Development lending usually does not require the rapid mobilization of such liquidity and a small organization has the option to focus on small-scale projects.

Second, the IMF collects sensitive data from member countries such as available reserves. Countries are often reluctant to offer such data bilaterally or to economically proximate countries with potentially subversive motivations, placing limitations on the surveillance capabilities of alternative arrangements. For example, Japan had to reject a

[59] Kindleberger, 1986.
[60] Kindleberger, 2000, 211-238

bilateral bailout of Thailand early in the Asian Crisis because Thai authorities would only share crucial information regarding the status of their reserves to the IMF.[61]

Third, a balance of payments organization derives benefits from greater jurisdictional coverage over internationally active private financial institutions. This allows the institution to more effectively organize private sector "bail-ins" should they become necessary, as banks will be more willing to compromise if the institution can credibly guarantee that other banks will also hold steady.[62] Incipient organizations may find it difficult to establish broad jurisdictional coverage or develop relationships with a sufficiently wide range of private sector creditors.

Fourth, while both the IMF and World Bank have extensive professional bureaucracies that would be costly to reproduce, the costs may be somewhat higher to replicate an IMF. Because many governments participate to varying degrees in bilateral international development assistance, a domestic pool of bureaucratic expertise exists.[63] In contrast, bilateral involvement in international crisis lending tends to be more ad hoc and reliant on the IMF, limiting the available pool of outside specialists.[64]

Implications for Outside Options and Path Dependence

Table 1 summarizes the preceding points and the implications for institutional competition and outside options in each institution. The conditions underpinning balance of payments lending are conducive to greater network effects and barriers to entry

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[61] Sakakibara, 2000, 170.
[62] Gould, 2003.
[63] This is, of course, a second-order effect of the other factors.
[64] This factor is more ambiguous than the others. e.g., the size of IMF staff (2400) is smaller than that for the World Bank (10,000+), which could make it more costly if states wished to replicate the institutions in their entirety.

compared to development lending. Consequently, the IMF is predicted to face less policy area competition compared to World Bank. Dissatisfied member states in the IMF will have less attractive outside options and bargaining leverage. This difference in bargaining leverage will make distributional outcomes in the World Bank less path dependent and more reflective of underlying economic capabilities.

Before moving to empirical analysis of redistributive outcomes, it should be noted that the predictions regarding the intervening variable – level of competition in the policy area – are consistent with the empirical evidence. In the post-World War II period, balance of payments lending has been dominated by the IMF, with occasional assistance from other international financial institutions and creditor states. There are a few minor exceptions. For example, the Arab Monetary Fund has provided limited balance of payments lending to member states in the Arab League. However, total cumulative lending by the Arab Monetary Fund since inception only amounts to about $4 billion,[65] which is a small fraction of lending provided by the IMF – the IMF extended a $17.7 billion standby facility to Mexico alone in the 1994-1995 crisis and has $750 billion in resources.[66] As will be discussed in subsequent sections, East Asian nations have agreed to a multilateral currency swap arrangement which may reach $120 billion by 2009, but a plurality of lending is tied to IMF conditionality. Independent, bilateral provision of balance of payments lending was common in the period before World War II,[67] but has become comparatively rare after the establishment of the IMF – there are only a few exceptions, and they tend to be small in scale. For example, Japan extended a $2.5 billion short-term loan to Malaysia during the Asian crisis,[68] and the US Treasury entered

[65] Arab Monetary Fund, 2003.
[66] This figure was $250 billion prior to 2009, but the basic point stands.
[67] Kindleberger, 2000.
[68] Ministry of Finance (Japan), "The Road to the Revival of the Asian Economy and Financial System – Sustainable Growth in the 21st Century and Building of a Multilayered Regional Cooperative Network," Appendix 2 (7), 20 June 2000.

into currency swap arrangements with several countries during the global economic crisis of 2008.[69] China has also agreed to several bilateral currency swap arrangements since 2008, but these remain largely symbolic as the Yuan is not convertible.[70]

In contrast, in the field of development lending, myriad regional development agencies perform functions similar to the World Bank – among others, the Asian Development Bank, Inter-American Development Bank, Central American Bank for Regional Integration, African Development Bank, Islamic Development Bank, European Bank of Reconstruction and Development, Council of Europe Development Bank, Caribbean Development Bank, etc. On a yearly basis, the Asian Development Bank and Inter-American Development Bank each disburse about 40% of the lending of the World Bank.[71] A host of countries also provide bilateral development assistance through domestic aid agencies. In 2006, the largest bilateral donor, the United States, provided roughly $27 billion in aid, which is comparable to the total provision of World Bank loans, which was $24 billion.[72] Countries dissatisfied with the World Bank's policies can turn to a wide range of credible alternatives.

Empirical Examination: Japan in the Bretton Woods Institutions

In this section, I will illustrate the plausibility to the proposed theory by examining Japan's attempts to secure greater representation in the Bretton Woods institutions. Japan is chosen for several reasons. First, Japan's rapid economic growth in

[69] Kim, Jae-kyoung,"Korea, US Sign $30 Bil. Currency Swap Deal," *Korea Times*, 10-30-2008.
[70] e.g. Chen, Bob and Judy Chen,"China to Boost Yuan Swaps, Payments on Dollar Concern," *Bloomberg*, 4-2-2009.
[71] Asian Development Bank, *ADB Annual Report* (various years); Inter-American Development Bank, *Annual Report* (various years); World Bank, *World Bank Annual Report* (various years);
[72] USAID, *U.S. Overseas Loans and Grants: Obligations and Loan Authorizations, July 1, 1945-September 30, 2007*.; World Bank, *World Bank Annual Report (2008)*, World Bank Lending by Theme and Sector.

the mid-to-late 20th century opened up a large gap between its perceived economic status and its position in the Bretton Woods institutions. At the beginning of the 1980s, the magnitude of change needed to close this gap was comparable across institutions and the widest among member states in absolute terms. Second, Japanese officials undertook a diplomatic campaign in the early 1980s to obtain greater representation and voice in the Bretton Woods institutions, and official indicate that each institution was accorded equal priority. Finally, by the early 1980s, Japan had become the second largest economy in the world, making it the most important underrepresented state. This case study is not intended as a generalizable test, which is left for the quantitative analysis that follows. Rather, the experience of Japan illustrates the plausibility of my theory and the proposed mechanisms by establishing that the experience of the most important underrepresented state in this historical period is consistent with the framework.

In the early 1980s, Japanese policymakers initiated a campaign for greater representation and voice in the Bretton Woods institutions. Japanese representatives made it clear that they felt the existing distribution of shares failed to reflect underlying economic reality.[73] In particular, Japan pushed for unambiguous number two status in terms of voting shares – commensurate with the size of its economy – with an unofficial target set at around 8% of shares.[74] Simultaneously, Japan sought greater representation of its nationals as employees and greater ideological recognition for the merits of the "Asian Development Model." Japanese officials pursued an aggressive bargaining

[73] e.g., Statement by Haruo Mayekawa (Alternative Governor of the Fund and the Bank of Japan), *Summary Proceedings of the IMF-World Bank Annual Meetings*, 1981, p. 59; Statement by Michio Watanabe (Governor of the Fund and the Bank of Japan), *Summary Proceedings of the IMF-World Bank Annual Meetings*, 1982, p. 59.
[74] Rapkin et al, 1997, 178.

strategy, threatening to withhold financial contributions to the institutions if its objectives were not met.[75]

As I will demonstrate, this effort yielded quicker and more substantial results vis-à-vis the World Bank compared to the IMF. The characteristics of the underlying policy areas played an important role in constraining Japan's outside options. In particular, Japan has proposed regional alternatives to both the World Bank and IMF – respectively, the Asian Development Bank (ADB) and Asian Monetary Fund (AMF). While the ADB developed to become a major multilateral aid agency subject to considerable Japanese influence, the AMF failed to take off and subsequent regional swap arrangements remain dysfunctional and largely tied to IMF conditionality. This disparity, along with its large bilateral foreign aid program, has made Japan's outside options vis-à-vis the World Bank much more attractive and credible than those vis-à-vis the IMF.

Subscription Shares

Cross-national variation in subscription shares will be discussed in greater detail in the quantitative section. However, a simple comparison of Japan's shares in the IMF and World Bank makes it clear that Japan's objectives were met more rapidly and meaningfully in the World Bank. Figure 1 shows the ratio of Japan's shares of world GDP and subscriptions compared to the United States – this ratio is used to omit exogenous changes in subscription shares caused by the entry and exit of member states.[76] After it initiated its diplomatic campaign for greater representation in the early 1980s, Japan's

[75] Ibid, 177-178.
[76] Nominal GDP is used rather than PPP as this is the input used by the IMF in its quota formulas.

share in the World Bank increased considerably from a level comparable to its IMF share. By the late-1980s, Japan's shares in the Bank had increased to a level where Japanese officials considered their primary objective accomplished.[77] In comparison, IMF shares consistently lagged behind. One of Japan's major foreign policy goals was securing unambiguous number two status in each institution.[78] The timing of Japan's attainment of number two status is indicated by the grey dots. This goal was attained in 1985 for the IBRD but not until 1998 for the IMF, a lag of thirteen years.

Interviews with current Japanese Ministry of Finance officials indicate that Japan now considers its own representation in both institutions to be adequate, and the focus has shifted instead to securing greater representation for other East and Southeast Asian states. The adequacy of Japan's share position is largely the result of relative Japanese economic decline since the 1990s, which has brought Japan's voting shares in line with its standing in the world economy without a major adjustment on the side of the IMF. This is apparent towards the right-hand side of Figure 1.

Influence over Outcomes

Japan's attempt to secure greater influence over outcomes in the World Bank and IMF during this period also produced strikingly different results. Specifically, Japan successfully exerted a degree of ideological influence within the World Bank, particularly in reference to the merits of the "Asian Model," and Japanese authorities have pursued

[77] By 1989-1990, policy statements from Japanese officials reflect dissatisfaction with Japan's position in the IMF but not in the World Bank. See Statements by Ryutaro Hashimoto, *Summary Proceedings of the Annual Meeting of the IMF and World Bank*, 1989 and 1990.
[78] Personal Interview, Japanese Ministry of Finance Official, 2005.

development approaches tailored to its ideology in the ADB and through bilateral aid, credible outside options vis-à-vis the World Bank. This cannot be said of the IMF, as became apparent during the Asian Financial Crisis – Japanese influence over IMF ideology, lending, and conditionality proved extremely limited despite the active involvement of top Japanese officials.

In the early 1990s, Japan pressured the World Bank to move away from its traditional neoclassical approach that emphasized economic liberalization and "shock therapy" for the new post-Soviet Republics. A formal statement of this criticism came in 1991 with the issuance of "OECF Occasional Paper No. 1," which emphasized government-oriented growth measures and sharply criticized the World Bank orthodoxy. Around this time, Japan's economic success had led to revisionist accounts touting the merits of the Japanese and Asian models – Japan's criticism of the World Bank followed these lines. The significance of the OECF paper is demonstrated by the fact that it prompted a response, albeit a negative one, from then World Bank chief economist Lawrence Summers. World Bank president Lewis Preston remarked, "If there is a system out there that is a better mousetrap than the one we've got, we ought to use it."[79]

Japan took the further step of funding the "The East Asian Miracle" study,[80] which examined the rapid growth of Asian economies and conceded that state intervention can facilitate rapid, egalitarian growth under certain conditions. While the Miracle Report included many caveats, including the probable inapplicability of the Asian model to countries lacking an efficient bureaucracy, Japan exerted considerable

[79] Awanohara, 1995, 174.
[80] World Bank, 1993.

leadership by proposing and getting the World Bank to carry through with the study.[81] These initiatives also had a subtle impact on subsequent Bank policies, as Wade notes:

"…the Bank's softening of its stand against directed credit, as of 1995, owes something to the wider Japanese pressure on the Bank. Compared to the 1980s, the Bank is now less likely to insist that directed credit and interest rate subsidies should always be avoided. It is more likely to insist simply that the onus must be on the proposer to explain the special circumstances justifying directed credit in a given case. The shift is small but not trivial, and gives the Bank more flexibility in responding to Japan's continued use of directed credit."[82]

Japanese government officials in charge of relations with the Bretton Woods institutions perceive Japan's contemporary influence over World Bank lending policies as reasonably commensurate with Japan's economic standing, particularly in areas such as donor coordination and policies related to infrastructure and industrial development.[83]

Partly as a function of this institutional history, World Bank economists gave Asian economies a clean bill of health prior to the Asian Financial Crisis in what was dubbed a "halo effect."[84] This led to considerable friction with the IMF during the crisis. Many World Bank and ADB staff members were critical of the IMF's approach towards Asian crisis economies. Then World Bank chief economist Joseph Stiglitz, one of the primary authors of the Asian Miracle study, was particularly vocal in his criticism of the

[81] Awanohara,1995, 166-177.
[82] Wade, 1996.
[83] Personal Interview, Japanese Ministry of Finance Officials, 2005.
[84] Blustein, 2001, 92-96.

IMF's policy prescriptions.[85] As Blustein notes, "Stiglitz's battles with the IMF were the most visible part of a larger rift between the World Bank and other elements in the High Command. Many staffers and executives at the World Bank shared his position on the crisis, and they felt aggrieved because their institution…was being forced to contribute vast sums towards rescue packages as if it were some sort of giant automatic teller machine."[86]

In comparison, Japan's influence has been much more limited vis-à-vis the IMF. This remained true more than half a decade after the commission of the Asian Miracle study. Throughout the Asian Financial Crisis of 1997-1998, Japanese policymakers viewed the crisis as one of short-term capital movements rather than structural problems associated with the Asian Developmental Model. Japan was also the most heavily exposed developed country to the region in terms of measures such as bank lending, direct investment, and trade.[87] However, IMF conditionality repeatedly emphasized orthodox policies contrary to Japan's position.[88] For example, then Vice Minister for International Affairs Eisuke Sakakibara recounts negotiations with the IMF over Indonesia as follows:

"At the time, the main issue at stake was whether to construct a 'large package' dictating large-scale reform of the Indonesian economy and exceeding the $17.2 billion Thai package, or a 'small package' focusing on stabilization of the exchange rate… It is true

[85] e.g., Stiglitz, Joseph, "The Insider – What I learned at the world economic crisis," *The New Republic*, 2000.
[86] Blustein, 2001, 159.
[87] Lipscy, 2003
[88] For a more detailed overview, see Sakakibara, 2000; Amyx, 2002; Lipscy, 2003; Lee, 2006; Grimes, 2008.

that Suharto's regime was corrupt, and we also believed that the National Car Project should be eliminated – however, we were opposed to the IMF sticking its nose into these sorts of political or structural problems."[89]

Sakakibara and his deputy, Tatsuro Watanabe, engaged in a two-hour heated argument with the IMF mission chief, at one point threatening that "If you ignore the opinion of the Japanese government to this extent, we will have to consider our options…"[90] However, despite this overt intervention by the highest-level Japanese international financial authorities, IMF policy did not budge. As an IMF official recalls, "Like the U.S. did it for Mexico, Japan seemed to think that it was fine for Japan to do the same role… At the same time, the IMF figured out that the IMF's attack on the so-called Asian model was a bit too harsh for Japan to endure, given its track record of selling the model to the rest of Asia."[91]

Many key Japanese policymakers remain sharply critical of the IMF's response to the Asian Crisis. One official described the IMF's use of conditionality in East Asia as "flagellation of dead bodies."[92] A major Japanese policy objective post-1998 has been to increase the influence of East Asian states and East Asian views on developmental policy within the IMF to facilitate a more balanced response in the event of a future crisis in the region.[93]

[89] Sakakibara, 2000, 196.
[90] ibid.
[91] IMF Official as quoted in Lee, 2006, 352.
[92] Personal Interview, Japanese Government Official, 2005.
[93] For more on this point, see Lipscy, 2009.

The Asian Development Bank and the Asian Monetary Fund

The ADB and the AMF are two regional organizations proposed by Japan in the policy areas of the World Bank and IMF.[94] The ADB was established in 1966. Yasumoto notes that, "Japan [adopted] an unusually active, initiative-taking stance… [playing] a leading and critical role in the establishment and subsequent administration of the Asian Development Bank."[95] Not only is Japan the largest shareholder and contributor to the Bank, but it also provides 11% of the staff and has held the Presidency since inception. Woo Cumings points to direct Japanese leadership at the policy level, noting that, "In recent years Japanese nationals have headed strategic planning as well as program units."[96] This may seem to be a moot point given that the ADB is a regional institution and Japan is one of the largest economies in Asia. However, the membership of the ADB includes the United States as well as fifteen European countries representing the core leadership of the Bretton Woods institutions. Japan's active leadership role in the ADB is indicative of how Japan might act in other international organizations if not otherwise constrained.

Japan maintains considerable influence over ADB policy, and as a consequence, development projects tend to adhere more closely to Japanese economic views compared to those of the West. "The ADB's Asian directors [like Japan] tend to take a realistic view born out of the development experience in their respective countries."[97] This has

[94] Indeed, this comparison was explicitly promoted by Japanese officials during the Asian Crisis, e.g. "There's such a thing as the Asian Development Bank against the World Bank. Why not an Asian Monetary Fund?" (PBS Interview of Eisuke Sakakibara, 5-15-2001).
[95] Yasumoto, 1983, 3.
[96] Woo-Cumings, 1995, 241.
[97] Woo-Cumings, 1995, 245.

produced conflicts with ADB creditors espousing more orthodox perspectives, most notably the United States. Along with Japan's sizable bilateral official development assistance program, the ADB has evolved into a multilateral channel through which Japan can promote a developmental philosophy close to its own.

The AMF was also a regional institution proposed by Japanese financial authorities, but it failed to materialize. Japanese Ministry of Finance officials began serious work on the AMF proposal following the IMF-sponsored Thai support meeting held in Tokyo in 1997.[98] Sakakibara asserts that an "Asian sense of solidarity" pervaded this meeting and became a key factor in his decision to promote the AMF plan. The AMF would obviate tedious and time-consuming consensus building by automating commitments. In addition, "It was the desire to create a policy alternative to the IMF prescription that motivated the proposal to create the AMF."[99]

The US Treasury opposed the creation of an AMF. According to Sakakibara, then Deputy Treasury Secretary Larry Summers called him directly at his residence at midnight and angrily started, "I thought you were my friend."[100] During a heated two-hour conversation, Summers criticized the plan for excluding the United States and allowing for action autonomous of the IMF. US policymakers were concerned that the AMF would exacerbate moral hazard and undermine IMF credibility.

The AMF proposal ultimately failed due to divided support within East Asia and active US opposition.[101] However, Japan's aggressive promotion of the idea produced a rare moment when an alternative to the IMF had a semblance of credibility. This element

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[98] Sakakibara, 2000, 180-182.
[99] Sakakibara, 2001.
[100] Sakakibara, 2000, 185.
[101] Sakakibara, 2000; Amyx, 2002; Lipscy, 2003; Lee, 2006; Grimes, 2008.

of organizational competition brought about modest adjustment on the side of the IMF. Sakakibara notes that the US enticed Asian nations away from the AMF using promises of increased IMF quotas.[102] These quota adjustments occurred in 1998 to the benefit of Asian nations including Japan, which finally secured an independent number two position above that of Germany. In addition, Japan benefited from the opening of the IMF Regional Office for Asia and the Pacific in Tokyo, which, one observer notes, "is quickly developing into the locus of regional IMF activities such as economic surveillance."[103]

Japan's actions during the Asian Crisis reflected frustration with its inability to obtain desired outcomes within the IMF. Japanese officials viewed East Asian crisis economies as fundamentally sound and thought they should receive greater liquidity with less conditionality. However, with no regional alternatives and practical difficulties associated with large-scale bilateral balance of payments lending, Japanese options were limited.[104]

Similar challenges remained after the Asian Crisis. Japanese financial authorities took an active role in the creation of the Chiang-Mai Initiative (CMI), later upgraded to the Chiang-Mai Initiative Multilateralization (CMIM), a currency-swap network designed to provide balance of payments lending to Asian economies in crisis. However, Japanese policy has generally sought to make CMI and CMIM financing contingent on IMF conditionality. The CMI has tied 80-90% of its bilateral currency swaps to the presence

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[102] Sakakibara, 2000, 186.

[103] Rowley, 1997.

[104] As part of the New Miyazawa Initiative, Japan committed a small amount of bilateral balance of payments lending to Malaysia, a country that had rejected IMF orthodoxy and imposed capital controls. This was a largely symbolic measure however, as the amount committed ($2.5 billion) paled in comparison to IMF packages that had been assembled for other crisis economies.

of an IMF program.[105] Creditor states in the CMI, most prominently China and Japan, are hesitant to provide access to their reserves without any conditions whatsoever.[106] However, if the CMIM were to impose conditionality, it would be difficult for China or Japan to escape blame – in the CMIM, the two countries are slated to account for 64% of funds and probable voting shares.[107] The regional framework, because of its limited membership and skewed economic power, does not provide sufficient political cover for China and Japan to provide balance of payments lending in an effective and credible manner independent of IMF conditionality. Although the Chiang Mai Initiative remains largely tied to the IMF and has yet to function as an effective institution, some Japanese officials view its continued development as a mechanism to apply pressure vis-à-vis the IMF to take East Asian interests into account.[108]

Alternative Explanations

I have argued that Japan's ability to enhance its presence in the IMF and World Bank has been critically influenced by underlying characteristics of the respective policy areas. Before moving to an analysis of cross-national, quantitative evidence, I will address some alternative explanations. While they each contain some element of truth, none of these alternatives provides a full accounting of the evidence.

[105] Amyx, 2005, 6; Shamim, Adam, "Asia Reserve Pool Should Reduce IMF Links, Asean's Surin Says," *Bloomberg*, 5-3-2009.
[106] Sakakibara, 2001.
[107] ASEAN, "The Joint Media Statement of The 12th ASEAN+3 Finance Ministers' Meeting," Bali, Indonesia, 5-3-2009.
3 May 2009, Bali, Indonesia
[108] Personal Interview, Japanese Ministry of Finance Official, 2006.

First, a neorealist may argue that Japan's comparative success in the World Bank reflects underlying power asymmetries in the respective institutional areas. Put another way, Japan's influence in international institutions may simply reflect discrepancies between Japan's economic power in the area of development and balance of payments lending. This explanation is inconsistent with the evidence. Japan was the top holder of foreign exchange reserves from 1987 to 2006[109] – if balance of payments lending were simply a matter of capacity, Japan should have been in a commanding position of power for much of the time period analyzed. In addition, the timing of events is inconsistent with a realist account. Japan's relative financial strength peaked in the early 1990s, while Japan's voting strength in the IMF rose gradually from 4.18% in 1980 to 5.6% in 1990 to 6.15% in 1998. Voting shares in the World Bank rose most dramatically in the 1980s although Japan did not become the number one foreign aid donor until 1992.

Second, one might argue that Japan's influence in each of the Bretton Woods institutions is a function of *effort*. Perhaps Japanese officials tried more tenaciously to secure influence in the World Bank compared to the IMF. Japan's efforts to secure greater representation in the World Bank might have come slightly earlier in the 1980s compared to similar efforts vis-à-vis the IMF.[110] The lag, however, is not more than a few years and hardly explains the observed discrepancies – Japanese officials were clearly targeting IMF quota redistribution by 1981.[111] Reflecting the importance Japan placed on representation in the IMF, then Prime Minister Ryutaro Hashimoto issued a statement in 1989 that Japan would find it difficult to finance the institution unless given

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[109] IMF, International Financial Statistics.
[110] Rapkin et al, 1997.
[111] See *Summary Proceedings of the IMF-World Bank Annual Meetings*, 1981, 59.

"the proper ranking to reflect our economic power."[112] Finally, Ministry of Finance officials indicate that Japan has not systematically prioritized one institution over another. If anything, greater priority appears to have been placed on the IMF after Japanese objectives were met early in the World Bank.[113]

The flipside of the previous objection is that perhaps historically overrepresented states in the IMF have defended their positions more vigorously than in the World Bank for reasons exogenous to my theory – e.g. states inherently care less about the determination of development policies than balance of payments lending. This point is difficult to rule out conclusively, as my theory produces a similar empirical prediction: states should be more protective of their privileged positions in institutions exhibiting greater resistance to change. What we would like to know, but cannot, is how much countries would care about the IMF if it was an institution that faced intense competition or how much they would care about the World Bank if it were in a position comparable to the IMF. Considering the counterfactual, it is difficult to imagine that states would be disinterested in the World Bank if it were a monopolistic institution in charge of unilaterally setting global development lending allocations and priorities. Recent work has established the salience of foreign aid for political leaders in donor states.[114] Ideological support for market-oriented development policies appear to be at least as strong in the West as support for state-led development was in Japan in the 1980-1990s.

Finally, a historical institutionalist might allow for the existence of path dependence but attribute the observed phenomena to historical accidents or purely

[112] Rowen, Hobart, "Japanese Intensify Push for Higher IMF Ranking," *Washington Post*, 26 September 1989.
[113] Personal Interview, Japanese Ministry of Finance Official, 2005.
[114] Milner and Tingley, 2006; Bueno de Mesquita and Smith, 2007, Bueno de Mesquita and Smith, 2009.

incidental factors. It is impossible to deny the influence of non-systemic factors, including the personalities of key players such as Sakakibara and Summers. It is also undeniable that other bargaining methods such as issue linkage and moral suasion were employed at various points and likely had some impact. To address this critique, it is helpful to turn to the statistical evidence, which covers several decades and at least forty countries, which amounts to several hundred redistributive outcomes – it is unlikely that so many observed outcomes were driven by incidental factors alone.

Empirical Examination: Quantitative Analysis of Subscription Shares

Subscription shares in the IMF and World Bank are the predominant determinants of voting shares.[115] The shares are therefore a simple way to quantify distributional change in each institution. In this section, I will provide analysis based on two datasets. The first dataset was obtained from the IMF and includes all member states as of 2004, with information on subscriptions, economic variables used as inputs in the IMF formulas, and the IMF formula outputs.[116] I added World Bank subscription shares for 2004 as well as subscription information from prior years from the relevant *Annual Reports*. I use this data to test the following hypothesis:

H1. The distribution of subscription (voting) shares in the IMF, compared to the World Bank, should be more greatly affected by the distribution of shares in previous time

[115] Voting shares are calculated by adding a small fixed component (250 shares) to subscriptions. Hence, running the analysis using voting shares produces nearly identical substantive results.
[116] Data was obtained from *International Monetary Fund: Quotas, Updated Calculations*, International Monetary Fund Report Prepared for the Finance Department, 2006.

periods, i.e. the institution will be characterized by greater path dependence in distributional outcomes. World Bank shares should more readily reflect underlying economic power as measured by economic variables, primarily GDP.

In order to test this hypothesis, I first averaged the countries' shares across the two institutions in 2004 to rank all countries by combined average voting share. I then restricted the sample to the top forty countries. The combined average allows me to use the same set of countries for both institutions to make sure the results are not driven by the particular set of countries chosen. I restrict the number of countries to exclude countries whose positions are so small as to make bargaining over voting shares unlikely. As indicated earlier, subscriptions may be adjusted ex post to legitimize bargaining outcomes among large member states – smaller states often experience a shift in their relative shares as an externality. For the smallest members, proportional shares frequently shift due to extraneous factors – e.g., in the Eighth General Review of IMF quotas, Maldives received an 11% increase in its shares relative to other members due to rounding of its shares to the next 0.1 millionth SDR.[117] As a point of reference, the IMF granted ad hoc quota increases to China, Korea, Mexico and Turkey in 2006. In terms of rank in the dataset, these countries were respectively number 8, 22, 17, and 35. It therefore seems reasonable to include member states in this range as countries large enough to have an independent stake in their voting share. Including all member states or using alternative cutoffs such as the top thirty or fifty states does not alter the substantive conclusions in the subsequent analysis. The controls are economic variables used by the IMF that indicate a country's position in the world economy – nominal GDP (average of

[117] Boughton, 2001, 859.

2002-2004), reserves (twelve month average for 2004), current receipts (average of 2000-2004), current payments (average of 2000-2004), and variability of current receipts (average of 1992-2004).

The dependent variable is the share of subscriptions in each institution in 2004. The key independent variable is share of subscriptions in 1984, i.e. the dependent variable lagged by twenty years.[118] My predictions about path dependence imply that World Bank shares lagged by twenty years should have less predictive power over World Bank shares in 2004 than the same for IMF shares. All variables are log transformed.[119]

The results are presented in Table 2. For reference, the first two specifications are run with only the economic control variables. It appears that GDP most reliably predicts subscription shares in each institution. The next two specifications include the dependent variable lagged by twenty years. The result is consistent with *H1*. For the IMF, shares from twenty years prior are a strong predictor of contemporary subscriptions – a one percentage point increase in 1984 shares is associated with a 0.81 percentage point increase in contemporary shares (0.73-0.89 with 95% confidence). After controlling for 1984 subscription shares, the key economic variable, GDP, has no relationship with contemporary IMF shares. In comparison, the twenty-year lagged dependent variable is more weakly associated with contemporary World Bank shares – a one percentage point increase in 1984 World Bank subscription shares is associated with a 0.35 percentage point increase in contemporary shares (0.11-0.60 with 95% confidence). More importantly, even after controlling for the lagged variable, GDP remains a strong

[118] The results of the analysis are robust to the selection of alternative lag periods, e.g. 15 years, 25 years, and single year shifts in both directions, etc.
[119] This is done to avoid potential bias caused by correlation between the variance of errors and the magnitude of predicted subscription shares.

predictor of World Bank subscriptions – a one percentage point increase in GDP is associated with a 0.72 percentage point increase in subscription share (0.41-1.03 with 95% confidence).

The last column of Table 2 repeats the analysis for the IMF including the IMF Quota Formulas as calculated by Fund staff. The results demonstrate that once historical subscriptions are controlled for, the IMF formulas have no predictive power over current subscriptions.[120] This result is consistent with the stylized fact that IMF quota formulas are used as loose guidelines at best.[121]

One alternative way to test H1 is to consider *changes* in subscription shares over time as a function of changes in GDP over time. If the World Bank more readily reflects underlying shifts in economic power compared to the IMF, shifts in GDP should more readily translate into shifts in subscriptions. In this analysis, the dependent variable is change in subscriptions for each institution between 1984 and 2004.[122] The key independent variable of interest is change in GDP over the same time period. As controls, I include changes in reserves, current payments, and current receipts.[123] The results are

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[120] Although not reported in the table, the results for World Bank subscription shares are the same – the IMF formulas are not significant predictors of contemporary subscription shares after controlling for the economic variables and the lagged dependent variable.

[121] As a robustness check, I also ran these regressions including the key independent variables from Blomberg and Broz (2007): θ (deviation in income share relative to the median), R (right wing government), and the interaction term R*θ. These variables have the expected relationship with shares in both the IMF and World Bank prior to inclusion of the lagged dependent variables (negative for R*θ, positive for θ). However, these variables are not significant predictors of shares after the lagged dependent variables are included, and the regression results produce substantively identical results to those reported in Table 2.

[122] I use absolute subscriptions rather than subscription shares for this analysis as some of the independent variables cannot be expressed as shares due to missing data.

[123] As in the previous analysis, all variables are log transformed to account for potential bias caused by correlation between the variance of errors and the magnitude of predicted difference in subscription shares. Variability of current receipts is dropped from the analysis as there is too much missing data for 1984. As there was some missing data for 1984 values for the remaining control variables, I used Amelia II (King et al, 2001) to impute the missing covariates and

also consistent with H1 (The table is omitted for brevity – the results are available from author). Ceteris paribus, there is no statistically significant relationship between changes in GDP and changes in IMF subscription shares between 1984 and 2004. On the other hand, changes in GDP are associated with a statistically significant change in World Bank shares. Substantively, a one percentage point greater increase in GDP between 1984 and 2004 is associated with a 0.51 percentage point (0.29-0.73 percentage points with 95% confidence) greater increase in World Bank subscriptions during the same time period.

Shifts in economic power have translated into greater voting power in the World Bank over time. In the IMF, on the other hand, the shadow the past has proven remarkably resilient. Consistent with my theory, despite identical de jure rules, subscription shares in the IMF have exhibited greater path dependence.

To provide an additional test of my theory, I examine time series data on the relevant variables from 1975-1999.[124] I use this data to test the following hypothesis:

H2. IMF subscription shares are more autoregressive compared to World Bank shares.

On a year-by-year basis, an institution that is relatively "sticky" should experience less change in the variable of interest and therefore greater correlation across time periods. For this test, I restrict the sample to a set of large countries comparable to the previous analysis – countries that had subscriptions shares averaged across the IMF and World

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Kenneth Scheve's MI program to combine the multiply imputed datasets for the result presented in Table 3. As Iran is a clear outlier, it is omitted from the analysis.

[124] The economic variables in this dataset are not necessarily the same ones used by Fund staff in original quota calculations, as they were collected independently. Part of this data was collected by Brock Blomberg and Lawrence Broz, whom I thank for making their data available.

Bank in excess of 0.5% at any point in time.[125] All variables are log transformed as in the previous analysis. The models are estimated with country fixed effects.

The results are presented in Table 3. The variable of interest is the lagged dependent variable. The first two columns run the model for subscription shares. The results are consistent with *H2*. A one percentage point increase in lagged IMF shares are associated with a 0.70 percentage point increase in IMF shares (0.61-0.79 with 95% confidence), while the same for lagged World Bank shares are only associated with a 0.10 percentage point increase in World Bank shares (0.01-0.19 with 95% confidence).

The next two columns present similar results for absolute subscription amounts – this specification should produce more meaningful coefficients for the economic variables, which are measured in nominal terms rather than as shares.[126] Again, the results support *H2*. A one percentage point increase in lagged IMF quotas are associated with a 0.66 percentage point increase in IMF quotas (0.58-0.74 with 95% confidence), compared to 0.50 percentage points for the same in the World Bank (0.42-0.57 with 95% confidence). As predicted, GDP is positively associated with increases in World Bank subscriptions but not IMF quotas after controlling for the lagged dependent variable.[127]

One contributing factor to the results in Table 3 is the prevalence of ad hoc subscription increases outside of general reviews in the World Bank. While institutional rules allow both institutions to grant ad hoc increases in subscriptions at any time subject

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[125] There were 46 such countries. As in the previous analysis, the precise cutoff does not change the substantive conclusions that follow.

[126] It is difficult to express the economic variables as shares due to missing data, particularly in the earlier years. This is not an issue for the regression results in Table 2, for which the information is comprehensive.

[127] Again, I performed a robustness check by running these regressions including the key independent variables from Blomberg and Broz (2007). These variables are not significant predictors of subscriptions once the lagged dependent variables are controlled for, and the substantive results are virtually identical to what is reported in Table 3.

to approval by a supermajority, the World Bank has concluded a far greater number of such increases in the time period analyzed. A review of minutes from the IMF/World Bank Annual Meetings reveals that World Bank subscriptions have been increased frequently on an ad hoc basis during years where no general review of subscriptions was taking place. On the other hand, the IMF provided ad hoc increases outside of general reviews on only three occasions during the entire time period analyzed.[128] Consistent with my theoretical predictions, ad hoc share redistributions in the IMF have been fewer in number and smaller in cumulative magnitude.

Conclusion

In this article, I have proposed and tested a rationalist theoretical framework that endogenizes the tendency for international institutions to change. Like firms in markets, international organizations are deeply affected by their policy areas. Network effects and barriers to entry can reduce competition for international institutions, which leaves member states with unattractive outside options and limited bargaining leverage. Rising states dissatisfied with their position in such institutions will struggle to secure change. On the other hand, competitive international institutions tend to quickly reflect underlying power shifts. Voting share changes and the experience of Japan in the IMF and World Bank provide evidence in support of my theoretical claims.

This study has several significant implications for salient issues in the field of international relations that provide grounds for further research. First, if an institution is

[128] China in 1980 (change in representation from Taiwan to PRC), Saudi Arabia in 1981 (to bolster fund liquidity and conclude borrowing arrangement), and Cambodia in 1994 (resumption of fund relations).

predicted to be highly persistent and resistant to distributional change, initial bargaining will be more intense, implying greater difficulty of regime building.[129] This implies that monopolistic international institutions should be particularly difficult to create in the absence of special circumstances such as a hegemonic moment. Second, distributionally sticky institutions can extend the "afterglow" of initial conditions[130] – if institutional stickiness varies by policy area, underlying power shifts in the international system will feed through at different rates. Understanding such tendencies will better inform our study of international power transitions and conflict over international institutions. Third, this study provides guidelines for the proper level of analysis. In policy areas where institutions are expected to exhibit resistance to change based on underlying characteristics, the rules and structure of the institution will be crucial and should be examined in detail. On the other hand, where institutions are expected to unproblematically reflect underlying power, a greater focus on national interests and capabilities is warranted.

My analysis also has important implications for policymaking. As I noted in the introduction, redistributive institutional change is a major foreign policy priority for developing countries as well as more developed states such as Germany and Japan. As rising states demand greater say in the world order, redistributive institutional change will remain a high-profile policy issue. Power transitions can be notoriously destabilizing for the international system, often producing geopolitical tensions[131] and economic turbulence.[132] If major international institutions allow for smooth power transitions, such

[129] Fearon, 1998.
[130] Krasner, 1976; Keohane, 1984; Ikenberry, 2000.
[131] Organski, 1958; Kennedy, 1987.
[132] Kindleberger, 1986.

destabilization may be mitigated. Although states in relative decline may have the ability to retain greater authority in institutions subject to less competition, doing so may exacerbate perceptions of inequity and injustice. As such, greater understanding of the sources and consequences of institutional change should remain a priority for academic research.

Table 1: The IMF and World Bank: Policy Areas and Path Dependence

	Network Effects	Barriers to Entry	Outside Options	Distributive Outcomes
Balance of Payments Lending & Surveillance (IMF)	**Higher** - Political Cover - Laundering - Information Sharing (Contagion Risk) - Credibility Arising from Broad Membership	**Higher** - Sufficient Credit Availability in Crisis - Coverage over More Banks for Bail-ins - Access to Sensitive Information - Bureaucratic Expertise	Less Attractive	More Rigid
Development Lending (World Bank)	**Lower** - Pooling Funds - Pooling Information	**Lower** - Bureaucratic Expertise	More Attractive	More Flexible

Table 2: Path Dependence in IMF and World Bank Subscription Shares (OLS)

Indep/Dep Variables	IMF Subscription Shares (2004)	World Bank Subscription Shares (2004)	IMF Subscription Shares (2004)	World Bank Subscription Shares (2004)	IMF Subscription Shares (2004)
GDP	0.77* (0.13)	0.99* (0.12)	0.05 (0.04)	0.72* (0.15)	0.05 (0.04)
Reserves	-0.23* (0.08)	-0.19* (0.07)	0.03 (0.01)	-0.13* (0.04)	0.00 (0.02)
Current Receipts	0.44 (0.58)	0.08 (0.61)	0.32* (0.11)	-0.08 (0.46)	0.22* (0.10)
Current Payments	-0.83 (0.50)	-0.80 (0.52)	-0.25* (0.10)	-0.53 (0.41)	-0.35* (0.13)
Variability Of Receipts	0.55* (0.19)	0.59* (0.19)	0.07 (0.04)	0.43* (0.16)	0.01 (0.06)
Dependent Variable (1984)			0.81* (0.04)	0.35* (0.12)	0.79* (0.05)
IMF Formula					0.28 (0.17)
Constant	-7.33* (0.59)	-6.90* (0.55)	-7.76* (0.17)	-7.20* (0.47)	-4.73 (1.82)
n	40	40	40	40	40

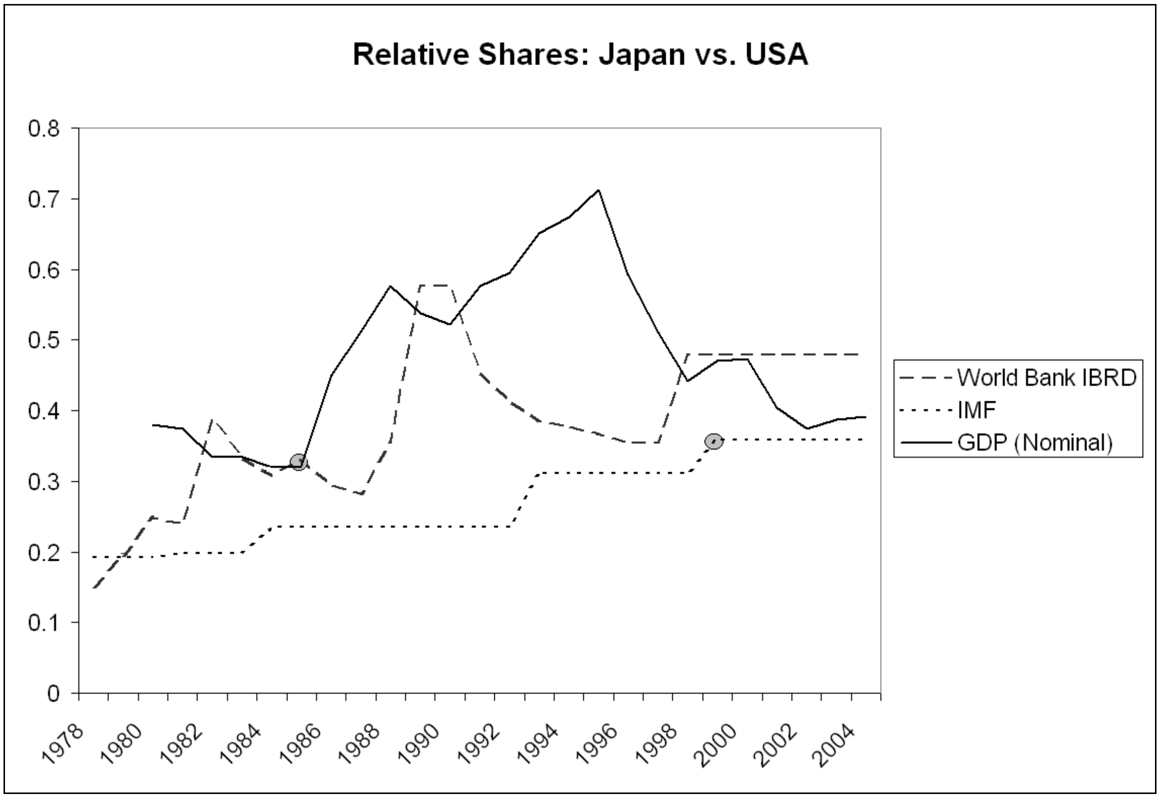
Note: Numbers in parenthesis are Huber-White standard errors. All variables are logged. Star denotes a coefficient at least two standard errors removed from zero.

Table 3: IMF and WB Subscriptions with AR(1) (OLS with Country Fixed Effects)

Indep/Dep Variables	IMF Subscription Shares (1976-1999)	World Bank Subscription Shares (1976-1999)	IMF Subscriptions (1976-1999)	World Bank Subscriptions (1976-1999)
GDP	-0.02*	0.04	-0.04	0.15*
	(0.01)	(0.05)	(0.03)	(0.06)
Reserves	-0.01	0.02	-0.01	0.04
	(0.01)	(0.03)	(0.02)	(0.03)
Current Receipts	0.05	-0.24	0.29*	-0.17
	(0.04)	(0.17)	(0.11)	(0.19)
Current Payments	0.02	0.25	0.13	0.32
	(0.04)	(0.18)	(0.12)	(0.20)
Variability Of Receipts	-0.02	-0.13*	-0.09*	0.08
	(0.01)	(0.04)	(0.03)	(0.05)
Dependent Variable(t-1)	0.70*	0.10*	0.66*	0.50*
	(0.05)	(0.04)	(0.04)	(0.04)
Constant	-0.25*	0.54	-0.52*	0.60
	(0.11)	(0.40)	(0.26)	(0.46)
n	483	483	483	483

Note: Numbers in parenthesis are standard errors. All variables are logged. The models include country fixed effects. Star denotes a coefficient at least two standard errors removed from zero.

Figure 1:



Note: Grey dot indicates attainment of unambiguous number two status by Japan. Relative shares are presented to eliminate changes in shares due to membership changes in each institution.

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