Angling for Influence: Institutional Proliferation in Development Banking

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Abstract

Why do states construct new international organizations (IOs) in issue areas that are already densely institutionalized? Functional theories point to the cooperative benefits that states gain from international institutions. Yet a growing literature on "international regime complexity" highlights the pathologies that arise when multiple, overlapping institutions collectively govern a particular issue. I argue regime complexes arise from a contest in bargaining power among states. The rules that confer influence in multilateral institutions often fail to adapt to the evolving distribution of state power. States engage in strategic institutional proliferation when their influence in existing institutions is constrained by outdated rules. I test this argument in the growing regime complex for development lending, an issue area with a single dominant institution (the World Bank) and a growing collection of alternative development banks. To overcome the endogenous assignment of multilateral influence, I leverage a natural experiment associated with the allocation of World Bank vote shares. I exploit a last minute change in the vote share formula, uncovered via archival research, as a source of exogeneous variation in state influence in the Bank. Results show that states are significantly more likely to engage in IO proliferation when their influence in the World Bank is misaligned with their underlying material power.

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1 Introduction

Over the last several decades, states have constructed a tremendous number of international organizations (IOs) designed to facilitate interstate cooperation. A commonly used dataset shows that the number of formal IOs has increased exponentially, growing from a single institution in 1815 to twenty-one in 1900, nearly a hundred in 1950, and over 300 in 2000.[1] As IOs proliferate, issue areas like trade, energy policy, and counterterrorism have become crowded with governance institutions. The recent proliferation of multilateral development banks has garnered particular attention from both policymakers and academics, as newly formed IOs like the Asian Infrastructure Investment Bank (AIIB) and the New Development Bank (NDB or "BRICS Bank") coexist warily with established institutions such as the World Bank.

This institutional proliferation is consequential for international cooperation. An emerging literature on "international regime complexity" examines how cooperative outcomes can suffer as the density of institutions rises. As Abbott et al. (2015) summarize, "typically, regime complex theory treats the co-existence of multiple governance actors with overlapping mandates as a pathology ('overlap' or 'fragmentation') that threatens governance effectiveness through redundancy, inconsistency, and conflict" (p.7). Policymakers echo these concerns.[2] While some argue that regime complexity does not necessarily undermine cooperation, at the very least institutional proliferation demands a high level of policy coordination among IOs (Gehring and Faude, 2014; Pratt, 2016).

These observations highlight a fundamental puzzle: why would states create such a

[1] See figure A1 in the appendix. Data are from version 2.3 of the Correlates of War IGO dataset (Pevehouse et al., 2004).

[2] For example, Eric Rosand, who served as a counterterrorism official in the U.S. Department of State, argues coordination problems among counterterrorism institutions "have limited the different bodies' overall contribution to the global non-military counterterrorism effort and have left many of the worlds vulnerabilities to terrorism unaddressed" (Rosand, 2006).

crowded global governance architecture for issues like development lending, trade, or counterterrorism? More broadly, why do states continue to add new international organizations to a dense network of IOs, resulting in a set of institutions that — at least from the perspective of effective, well-coordinated global governance — are potentially suboptimal? The answer proposed in this paper is that institutional proliferation emerges from a contest in bargaining power among states. Rather than a purposeful attempt to fragment global governance across multiple institutions, proliferation is a byproduct of state attempts to increase their influence over multilateral outcomes.

States seek influence in multilateral institutions because almost all cooperative ventures involve distributional effects. When institutions are created, multilateral influence generally reflects states' underlying material power. As the distribution of state power shifts, however, institutions do not smoothly adapt. A misalignment in power emerges when a state's influence within the regime is not commensurate with its unilateral power. States build new institutions as part of a strategy to re-align multilateral bargaining power.

This power alignment logic is a significant departure from established theory, in which states build and design institutions to reduce transaction costs, overcome market failures, and increase the gains from cooperation.[3] This functional explanation tends to view IO formation in a vacuum, ignoring the presence of existing institutions. It provides a convincing account of institution-building when few pre-existing institutions exist (such as the formation of the World Bank in 1944), but is less compelling when many institutions are already present (e.g., the creation of the AIIB in 2015). In the latter context, institutional proliferation is likely to exacerbate transaction costs by increasing uncertainty and introducing multiple bargaining venues. By offering an alternative rationale for the construction of IOs, I help fill a key gap

[3]Keohane (1984) was the among the first to articulate the argument that states build institutions because of their ability to reduce transaction costs. Subsequent accounts have identified additional cooperative effects of IOs — e.g., the ability to credibly commit to liberal reforms (Mansfield and Pevehouse, 2006) — but remain consistent with the basic functional logic tying demand for institutions to their anticipated cooperative benefits.

in the existing literature: an answer for why states create multiple, overlapping IOs in a particular issue area.

To test the link between power misalignment and institutional proliferation, I examine the evolution of development lending institutions, which grew from a single development bank in 1944 to at least twenty-five overlapping international organizations today. My theory of institutional proliferation suggests that states are more likely to construct new development banks when their influence in the central institution (the World Bank) is misaligned with their underlying material power. I use an instrumental variable approach to overcome the endogeneity of state influence in the Bank, leveraging a natural experiment associated with the allocation of World Bank vote shares at the 1944 Bretton Woods Conference. Specifically, I exploit a last minute change in the vote share formula as a source of exogenous variation in state influence in the Bank. Statistical tests confirm that states are significantly more likely to engage in the proliferation of development banks when their vote power in the World Bank is incommensurate with their broader economic power. These results represent the first systematic empirical test of institutional proliferation.

The paper is organized as follows. In Section 2, I describe existing arguments regarding the creation of international institutions and develop a theory in which states use IO proliferation to rectify misalignments in multilateral influence. Section 3 introduces the regime complex for development lending as an ideal case for assessing the theory, presents several testable hypotheses, and describes the dataset. Section 4 presents empirical results, and Section 5 concludes.

2 Institutional Proliferation in World Politics

The question of why states create international institutions has long interested students of international cooperation (Krasner, 1982; Keohane, 1982). The dominant theory is the

functional logic originally developed by Keohane (1984): states construct institutions to realize joint gains from cooperation. Multilateral institutions lower transaction costs and enable states to reach cooperative bargains that would be difficult to achieve in their absence. Recognizing these benefits, states create institutions to capitalize on the expected gains from cooperation. This functional account of state demand for institutions also been used to explain institutional design: Koremenos et al. (2001) argue that states choose the design of international institutions in order to minimize transaction costs in specific issue areas. Early critics of functionalism emphasized the role of state power and interests in shaping international regimes (Mearsheimer, 1994; Krasner, 1991), but did not offer an alternative account of why states construct institutions.

While the functionalist explanation offers insight into institutional *formation*, it struggles to explain institutional *proliferation* within a particular issue area. Cooperative outcomes often suffer as issue areas become crowded with institutions. Independent rule-making by multiple IOs can result in a fragmented and conflicting set of international rules, increasing uncertainty.[4] Duplication across IOs undermines the efficiency gains from institutionalized cooperation, and the presence of multiple focal points frustrates coordination. As a result, it is hard to explain institutional proliferation solely by pointing to its anticipated cooperative benefits.

The deficiency of the functionalist argument is particularly clear in the case of development lending, where institutional proliferation has at least two effects. First, it induces inefficiencies as development banks engage in redundant efforts to screen proposals, negotiate with borrowing countries, and audit funded projects. Development banks have recognized

[4]The literature on international regime complexity provides many examples of rule conflict among multiple IOs: Raustiala and Victor (2004) describe "legal inconsistencies" in the regime complex for plant genetic resources, and further argue that "legal conflict among overlapping rules...is a recurring and difficult challenge for regime architects" (300). Similarly, Helfer (2009) finds institutions adopting a "competing regulatory approach" in the intellectual property regime complex (40), Davis (2009) notes "the potential for contradictory legal rulings" among trade institutions (25), and Pratt (2016) highlights the arbitrage opportunities created by conflicting standards in counterterrorism IOs.

these problems and spend significant time and effort attempting to coordinate with each other. Second, proliferation shifts power from lending states, who are often the architects of new development banks, to potential borrowers. As states construct more development banks, borrowers can opportunistically "forum shop" and generate competition among lending institutions. Among other effects, this dynamic makes it more difficult for development banks to encourage economic, social, or environmental reform via condition-based lending.

A second proposed source of demand for IOs is democratic political institutions. Scholars argue democracies join international organizations at higher rates than their autocratic counterparts (Russett and Oneal, 2001; Mansfield and Milner, 2012). States in transition to democracy may have a particularly strong demand for institutions in order to demonstrate credibility and lock in policy reforms (Moravcsik, 2000; Mansfield and Pevehouse, 2006; Poast and Urpelainen, 2013). While this argument helps explain why a subset of states (e.g., transitioning democracies) would construct new IOs rather than join or reform existing ones, it provides a poor guide to broader empirical patterns of IO proliferation. Among the more than five hundred IOs included in the Correlates of War IGO dataset, for example, less than 40% were created by a coalition of mostly democratic states. Autocracies and mature democracies have engaged in institutional proliferation in trade, energy, climate change, counterterrorism, and many other issue areas. How can we explain the behavior of these states?

A common thread in the functionalist and regime-type arguments is the tendency to view IO construction as an isolated enterprise. In a departure from this trend, a growing set of studies explicitly considers the operation of multiple institutions in the same issue area. Scholars working under the framework of "international regime complexity" (Raustiala and Victor, 2004; Alter and Meunier, 2009), "contested multilateralism" (Morse and Keohane, 2014), and "institutional choice" (Jupille et al., 2013; Urpelainen and de Graaf, 2013) examine how IOs with overlapping mandates shape cooperative outcomes. Insofar as

these studies propose a cause of IO proliferation, they have emphasized preference divergence among member states. When member states of an IO come to disagree about the ideal structure of cooperation, dissatisfied states may choose to form a new institution.

Diverging preferences are undoubtedly an important driver of institutional proliferation. In the empirical analyses that follow, I approximate state preferences for development finance to help explain why states proliferate multilateral development banks. However, preference divergence alone provides an incomplete explanation for two reasons. First, institution-building is costly. When members of an IO develop different preferences over multilateral policy outcomes, we should expect these states to first attempt the less costly alternative of reforming the existing institution. The success or failure of this reform attempt will determine whether states decide to form a new IO. To understand when reform attempts will succeed, we must examine the distribution of influence in the current institution. If institutional influence is commensurate with material power, member states will reach an accommodation that reflects each state's ability to contribute to international cooperation. If power is misaligned, however, reform efforts may prematurely stall, leaving states dissatisfied with both the distribution of multilateral influence and the content of institutional rules. We cannot understand why states create new IOs without examining the power structure of current institutions.

Second, even when states have identical preferences regarding the fundamental rules and norms governing an issue area, they may be dissatisfied with the distribution of influence conferred by existing institutions. Uncertainty about other states' preferences and the potential for future preference shifts motivate states to prioritize influence rather than trusting that their peers have similar interests.[5] Status concerns also generate a demand for influence even when preferences are harmonious. States – and particularly rising powers – often have

[5]Koremenos et al. (2001) also argue that uncertainty about preferences is an important driver of state behavior in IOs. In their account, this uncertainty leads states to restrict membership in the institution.

a strong desire for recognition and respect, generating sensitivity about their position in international institutions (Paul et al., 2014).

For these reasons, a full explanation of institutional proliferation must supplement the preference-based account with state concerns over multilateral influence. The next section develops such a theory. A focus on state influence recognizes that existing institutions exert at least two distinct effects on state behavior. They help states reduce transaction costs and achieve cooperative gains, as Keohane (1984) argues. However, they also structure power relations between states. Institutions distribute influence to member states, either via formal decision-making rules (e.g., the veto granted to five states in the UN Security Council) or by informally allowing powerful states to exert authority at key moments (Stone, 2011). States can use influence within institutions to push for rules or standards that reflect their preferences, or to steer material benefits toward themselves and their allies.[6] IO influence is continually contested and reshaped as states seek to maximize formal authority and jockey for informal power within the institution.

2.1 Power Alignment and Institutional Proliferation

The primary argument of this paper is that state competition for bargaining power, rather than an attempt to maximize gains from cooperation, drives states to construct new IOs. The argument begins with the assumption that states prefer greater multilateral influence, defined as the ability to control the activities and policy decisions of multilateral institutions. States value influence for several reasons. It helps them ensure that multilateral rules reflect their own policy preferences, allows them to steer cooperative benefits to themselves and their allies, and confers status and prestige.

The desire for influence generates dissatisfaction among states who believe that existing

[6]For example, Gowa and Kim (2005) demonstrate that the effects of the General Agreement on Trade & Tarrifs (GATT) were concentrated among member states with the greatest bargaining power; cooperative benefits to other members were negligble.

institutions fail to provide them with an appropriate level of control. Under certain conditions — most importantly, when a large imbalance arises between a state's underlying material power and its influence in the regime — the state will construct a new institution which offers it greater control over cooperative outcomes. This perspective prioritizes power alignment in IOs. States pay close attention to their relative influence in multilateral institutions. They expect this influence to reflect their unilateral capacity outside the institution; when it does not, they are more likely to become revisionist and challenge the existing regime via institutional proliferation. This power alignment logic has a long tradition in political and social science. For example,Keohane and Nye (1977) argue that the rules within a single regime are likely to change when bargaining power is misaligned. Gilpin (1983) similarly posits that hegemonic wars occur due to misalignment between state power and the distribution of benefits in the international system. Surprisingly, this logic has not yet been applied to the proliferation of international institutions.

In the power alignment theory, states *strategically* proliferate institutions. They pay the potentially high costs of IO formation in order to increase their influence over multilateral governance of the issue. Institutional proliferation bestows additional influence to states in at least two ways. First, proliferating states usually design new institutions that give them greater decision-making power than existing IOs. In the new Asian Infrastructure Investment Bank, for example, China controls approximately 26% of formal vote shares (compared to less than 5% in the World Bank). This level of control reflects China's status as a founding member and chief architect of the new institution.

Second, IO proliferation can reshape influence in the issue area more broadly by offering some states an additional outside option during multilateral negotiations. A state with a credible threat of exit gains bargaining leverage, shifting negotiation outcomes in its favor (Hirschman, 1970; Voeten, 2001; Schneider, 2011). Other scholars have noted how institutional exit options can potentially alter bargaining power among states (Helfer, 2004),

including among development banks (Lipscy, 2015). According to this logic, the creation of the AIIB will grant China additional influence over lending decisions in the World Bank, since it can credibly threaten to shift proposed programs to the AIIB.

The key independent variable in the theory is alignment between a state's influence in existing institutions and its underlying material power. I define a state's "underlying material power" as its ability to achieve desired outcomes in the issue area via unilateral action.[7] As the definition implies, states' relevant material power resources will vary according to the issue area. The relevant material power for security institutions is military strength; for trade and financial institutions, it is economic capacity. I define "influence in existing institutions" in a similar manner, as a state's ability to control multilateral outcomes in the issue area. Though I primarily examine formal vote power in the empirical analysis, the definition encompasses broader multilateral power resources such as agenda-setting power and informal authority.

Institutional proliferation is therefore a strategy that states use to augment their control over multilateral outcomes. If executed successfully, this strategy generates additional influence in both the new IO and the legacy institution. However, the strategy also entails costs which constrain its use by states. Two constraints are particularly important. The first is the difficulty of amassing a coalition of states to join a new organization. Institutional proliferation is not a unilateral act; it requires the participation of multiple states. The operational success and perceived legitimacy of a new IO grows as it attracts more members, increasing the need to amass a large coalition. Powerful states can buy off potential collaborators through concessions and side payments, but constructing a new organization is significantly easier if there is an existing set of states that are similarly dissatisfied with the current regime.

[7]This definition is similar to Gruber (2000)'s conception of states' "go-it-alone power" in international institutions, as well as Stone (2011)'s notion of "structural power."

The second constraint is efficiency costs associated with institutional proliferation. Cooperative benefits change as new IOs are added to an issue area. When the act of creating a new institution generates large efficiency costs for the proliferating state, proliferation will be less likely. The size and incidence of these costs will vary across issue areas.[8] In issue areas like trade and investment, they are relatively small. Creating a new trade institution (e.g., a preferential trade agreement) does not impose costs on proliferating states. There may be a loss of efficiency from trade diversion, but these costs are not borne by the proliferators; instead, they take the form of negative externalities imposed on states left out of the new agreement. In other issue areas, the introduction of multiple institutions creates significant costs for proliferators. The creation of a new development bank, for example, generates a loss of power for lending states (i.e., those that provide funding for the institution). Each additional development bank provides borrowers with another venue for development finance, facilitating forum-shopping and undermining the monopoly power of lenders. Since proliferating states usually become the primary lenders in a new development bank, they feel these costs directly.[9] Notably, my argument implies that states sometimes willingly pay these efficiency costs – in effect, sacrificing cooperative gains – in order to strengthen their influence over multilateral outcomes.

The power alignment account differs from recent work on IO formation in two ways. First, by emphasizing power in addition to state preferences, I highlight the distributional conflict that looms powerfully in the background of many international institutions. Even when states agree on the fundamental rules and norms governing an issue area, they may be dissatisfied with the distribution of influence conferred by existing institutions. Second, I

[8]As Martin (1992) argues, each issue comes with a unique set of transaction costs that provide the foundation for states' strategic interaction.

[9]Lipscy (2015) uses a similar logic to explain why development lending has seen a large amount of institutional proliferation compared to balance of payments lending (i.e., the IMF). Because of incentives created by the structure of the issue area, we should expect some issues to experience significantly more proliferation than others.

provide the first systematic empirical test of institutional proliferation. This is an advancement over existing studies, which rely primarily on anecdotal and case study evidence. In addition, I overcome the endogeneity concerns that often plague studies of international institutions by leveraging a natural experiment associated with the distribution of vote shares in the World Bank.

3 The Multilateral Development Lending Regime

In this section, I introduce the case I will use to test the effect of bargaining power misalignment on institutional proliferation. Development lending is an ideal case for several reasons. First, it is a relatively hard case compared to other issue areas. As noted in the previous section, the incentive structure of development lending makes institutional proliferation a less attractive strategy for lending states, who are the actors best positioned to create new banks. The high costs of proliferation act as a damper on states' behavior, limiting their willingness to build new institutions. On the other hand, the practice in development banks of explicitly codifying state influence in terms of vote shares may make states more sensitive to power misalignment.

Second, development lending is a highly salient issue area with a clear functional rationale for institutionalized cooperation (i.e., the coordination of global development finance efforts) and a substantial amount of institutional proliferation that is difficult to fully explain on functionalist grounds. While proliferating states often claim that new development banks are designed to fill specific gaps or sharply depart from the practices of existing institutions, new banks often replicate and even partner with the institutions its founders criticized (e.g., the AIIB and World Bank). Concern among Western policymakers about recent instances of IO proliferation (e.g., the AIIB and New Development Bank) is a testament to the continued importance that states attach to governance of the issue area.

Finally, development banking provides several measurement advantages that enable large-N empirical tests. These include the presence of a clear focal institution that distributes formal voting power unequally to member states (the World Bank), as well as a unique opportunity for causal identification provided by the allocation of vote shares at Bretton Woods, the conference that created the World Bank and International Monetary Fund (IMF). I discuss this historical episode in greater detail in the Section 4.

3.1 Evolution of the Regime Complex

The regime for multilateral development lending began in 1944, when a large group of states created the International Bank for Reconstruction and Development (IBRD), commonly known as the World Bank. The main impetus for the World Bank was the need to coordinate European economic reconstruction after World War II. Over time, the emphasis on "development" overtook the initial focus on "reconstruction" as the Bank became primarily a provider of development finance for less developed countries. From its inception, state influence within the Bank was determined by states' formal vote shares, which are distributed unequally among member states. These vote shares are tied to the capital subscriptions states are expected to contribute to the Bank, though in later years much of the capital for Bank programs came from private finance rather than state contributions.

For the first decade of its existence, the World Bank was the world's only large multilateral development lending institution. Beginning in the mid-1950s, however, coalitions of states began to construct additional development banks. Many of these early banks were associated with new or existing international organizations. In 1956, for example, members of the Council of Europe created a development bank of their own.[10] Two years later, European states created the European Investment Bank (EIB) as part of the Treaty of Rome. In 1959,

[10]Although the bank was created by Council of Europe (COE) members and retains the name of the original institution, it has autonomous decision-making authority and is formally a separate legal entity from the COE.

states in the Western Hemisphere created the Inter-American Development Bank (IADB), and the Asian Development Bank followed in 1966. The new banks tended to focus their lending activities on specific geographic regions, though state membership was generally not restricted by region (e.g., the United States and United Kingdom were both founding members of the Asian Development Bank). Like the World Bank, these institutions typically employed weighted decision-making rules that allocated unequal influence to member states. While vote shares in each bank is correlated with states' economic power, the distribution of influence differs significantly across institutions.

By 1977, states had created at least eighteen multilateral institutions that participated in development lending alongside the World Bank. These included new sub-regional institutions, like the Arab Fund for Economic and Social Development (1968) and Caribbean Development Bank (CDB), as well as development banks emanating from existing institutions (e.g., the OPEC Fund for International Development). At this point, state demand for institutional proliferation slowed. Four additional development banks were created in the period from 1978 - 2012.[11]

In the late 2000s institutional proliferation increased once again, as groups of mostly developing countries led a series of efforts to build banks which gave them greater control over lending decisions. In 2009, a collection of Latin American states led by Venezuela, Brazil, and Argentina announced plans for the Bank of the South, a new development bank long advocated by Hugo Chavez. In 2013, the BRICS countries (Brazil, Russia, India, China, and South Africa) similarly created the New Development Bank (NDB), intended "as an alternative to the existing US-dominated World Bank."[12] The following year, 21 Asian states joined a Chinese-led effort to create the Asian Infrastructure and Investment Bank,

[11] The Eastern and Southern African Trade and Development Bank was founded in 1985, the European Bank for Reconstruction and Development in 1991, the Black Sea Trade and Development Bank in 1992, and the African Export Import Bank in 1993.

[12] "About the New Development Bank", http://ndbbrics.org

which plans to focus on infrastructure lending in Asia. Despite a lobbying campaign by the United States to prevent its allies from joining the AIIB, thirty-six additional countries (including Australia and many European states) signed the 2015 Articles of Agreement to become "founding members" of the bank.

Table 1 summarizes the observed cases of institutional proliferation in the regime complex for development lending. The table displays all multilateral development lending institutions created by states, starting with the establishment of the IBRD in 1944.

Institution	Founded
International Bank for Reconstruction and Development (IBRD)	1944
Council of Europe Development Bank (CEDB)	1956
European Investment Bank (EIB)	1958
Inter-American Development Bank (IDB)	1959
International Bank for Economic Cooperation (IBEC)	1965
African Development Bank (AfDB)	1965
Asian Development Bank (ADB)	1966
East African Development Bank (EADB)	1967
Arab Fund for Economic and Social Development (AFESD)	1968
Caribbean Development Bank (CDB)	1970
Andean Development Corporation (CAF)	1970
Islamic Development Bank (IsDB)	1973
Nordic Investment Bank (NIB)	1974
Arab Bank for Economic Development in Africa (ABEDA)	1975
OPEC Fund for International Development (OFID)	1976
Nordic Investment Bank (NIB)	1976
Development Bank of the Great Lakes States (BDEGL)	1976
International Fund for Agricultural Development (IFAD)	1977
Eastern and Southern African Trade and Development Bank (ESATDB)	1985
European Bank for Reconstruction and Development (EBRD)	1991
Black Sea Trade and Development Bank	1992
African Export Import Bank	1993
New Development Bank (NDB)	2013
Bank of the South (BoS)	2014
Asian Infrastructure Investment Bank (AIIB)	2015

Table 1: Institutional Proliferation of Multilateral Development Banks

There is an abundant academic literature examining the politics of the World Bank, regional development banks, and other international financial institutions. At least two conclusions from this research program are relevant for understanding institutional proliferation. First, these institutions are inherently political; they distribute development finance on the basis of "high politics" at least as much as technical need (Frey and Schneider, 1986; Thacker, 1999; Stone, 2011; Dreher et al., 2009; Kersting and Kilby, 2016). This invites distributional concerns from member states who have differing preferences over the allocation of loans. Second and relatedly, influence in international financial institutions is contested and highly sought after by states (Krasner et al., 1981; Zangl et al., 2016). In both the World Bank and regional development banks, states can use their influence to steer benefits to allies in support of broader foreign policy goals (Fleck and Kilby, 2006; Lim and Vreeland, 2013). States also trade influence in the World Bank to buy votes in other multilateral instituions (Dreher and Sturm, 2012).

3.2 Development Bank Proliferation: Testable Hypotheses

The power alignment theory of institutional proliferation argues that the formation of new multilateral development banks is driven by a divergence between states' influence in the development lending regime and the underlying distribution of material power. This argument implies the following primary hypothesis, which I test in the next section:

H1 (Power Alignment Hypothesis): States are more likely to create new development banks when their influence in existing institutions is exceeded by their underlying material power.

The hypothesis raises two issues. First, how does a misalignment of bargaining power arise in the first place? A "rationally designed" IO should distribute influence among states so as to minimize the potential for institutional proliferation. In practice, however, interna-

tional organizations face a range of constraints that prevent them from smoothly adapting to changes in the distribution of states' material power (Zangl et al., 2016). Decision rules often give incumbent member states veto power over alterations in institutional influence, creating paralysis within the organization. Many IOs also delegate control to international bureaucrats (Hawkins et al., 2006), creating vested interests that resist adaptation. Organizations tend to develop path dependent processes that resist change. While a full examination of these processes is beyond the scope of this paper, some degree of inflexibility in existing IOs is a scope condition for the operation of the theory.

The second issue concerns the constraints on institutional proliferation discussed above. I argued states confront two key constraints: 1) the difficulty of amassing a like-minded coalition of states, and 2) the efficiency costs generated by creating new IOs. Efficiency costs will vary primarily across issue areas, and therefore cannot be directly tested in a single issue study. The need to construct a coalition of actors, however, suggests that each state's decision to engage in institutional proliferation is driven not only by its own dissatisfaction, but the dissatisfaction of other states. Creating a new IO requires coming to an agreement with potential partners over the purpose, design, and distribution of authority in the new institution. When a large group of states is concerned about their influence in existing institutions, it is easier to find potential partners with whom these negotiations can be successfully concluded. The need for a like-minded coalition generates the second hypothesis:

H2 (Coalition Hypothesis): A state is more likely to create new development banks when others are dissatisfied with their influence in existing institutions.

Finally, I pair these power misalignment hypothesis with the preference divergence explanation emphasized in existing work. Scholars have long recognized that states attempt to use World Bank lending to satisfy political aims (Frey and Schneider, 1986; Thacker, 1999). The third hypothesis incorporates this insight. It assumes states prefer to steer World Bank

loans toward their geopolitical allies. If a high percentage of World Bank financing is targeted toward a state's allies, it will be satisfied with the distribution of loans and therefore less likely to engage in institutional proliferation. As World Bank loans depart from the ideal distribution, the probability of preference-driven proliferation will increase.

H3 (Preference Hypothesis): A state is less likely to create new development banks when the World Bank delivers a high percentage of financing to its allies.

3.3 Measurement and Data

To test these hypotheses, I collect data on the proliferation of development banks as well as states' influence in the central institution, the World Bank. The dependent variable is state participation in institutional proliferation. To operationalize proliferation, I identify twenty-four unique development banking institutions that were created after the establishment of the World Bank (displayed in Table 1 above).[13] I then construct a dichotomous variable, *Institutional Proliferation*, which is measured at the state-year level; it takes a value of one when a state joins a new development bank in the year of its founding, and zero otherwise. The dataset includes approximately 9,000 observations, and institutional proliferation occurs in 3.1% (282) of state-year units.

The primary independent variable is the alignment of influence within existing institutions. To measure this this variable, I first collect annual data on formal vote shares in the World Bank (IBRD). The World Bank is the clear focal institution in the regime complex. Since its inception, it has remained the largest multilateral development bank in terms of lending, personnel, and bureaucratic expertise.[14] Formal vote power in the Bank therefore provides a reasonable measure of states' influence over multilateral development lending.

[13]I do not consider the World Bank institutional proliferation since no pre-existing development bank was present.

[14]Figure A3 in the appendix shows the percent of total global development assistance provided by the World Bank from 1970-2010.

Vote power varies significantly both cross-nationally and within countries over time. Figure 1 displays the distribution of formal World Bank vote power in 2014 for the 30 states with the highest vote share. The United States is the dominant power in the institution, with slightly over 15% of total vote share. Figure 2 shows change in states' vote power in the Bank over the last 35 years. As the plot demonstrates, some countries received significantly more formal authority in this period (e.g., China and Japan) while others saw their relative influence reduced (United States, United Kingdom).

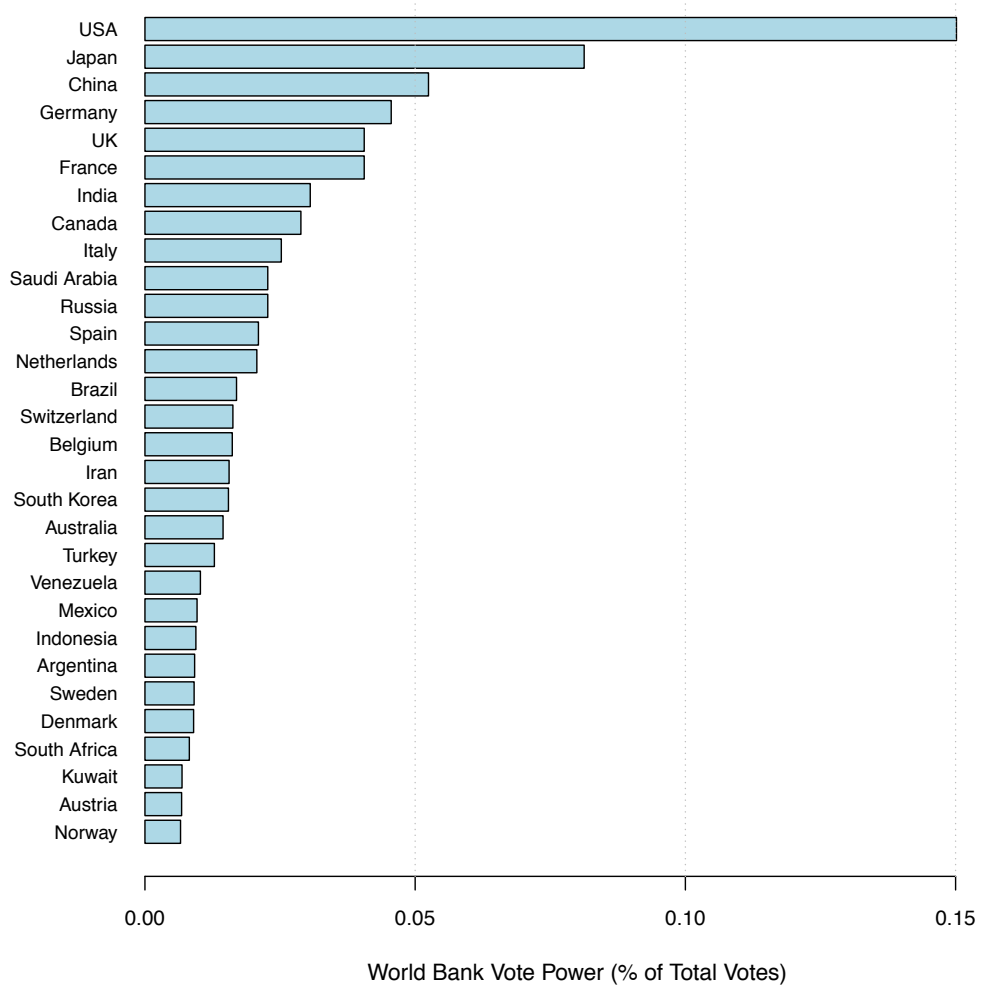

Figure 1: World Bank Vote Share, 2014. The figure displays the 30 states with the most formal influence in the World Bank (as calculated by share of formal votes in 2014). Data are from World Bank annual reports.

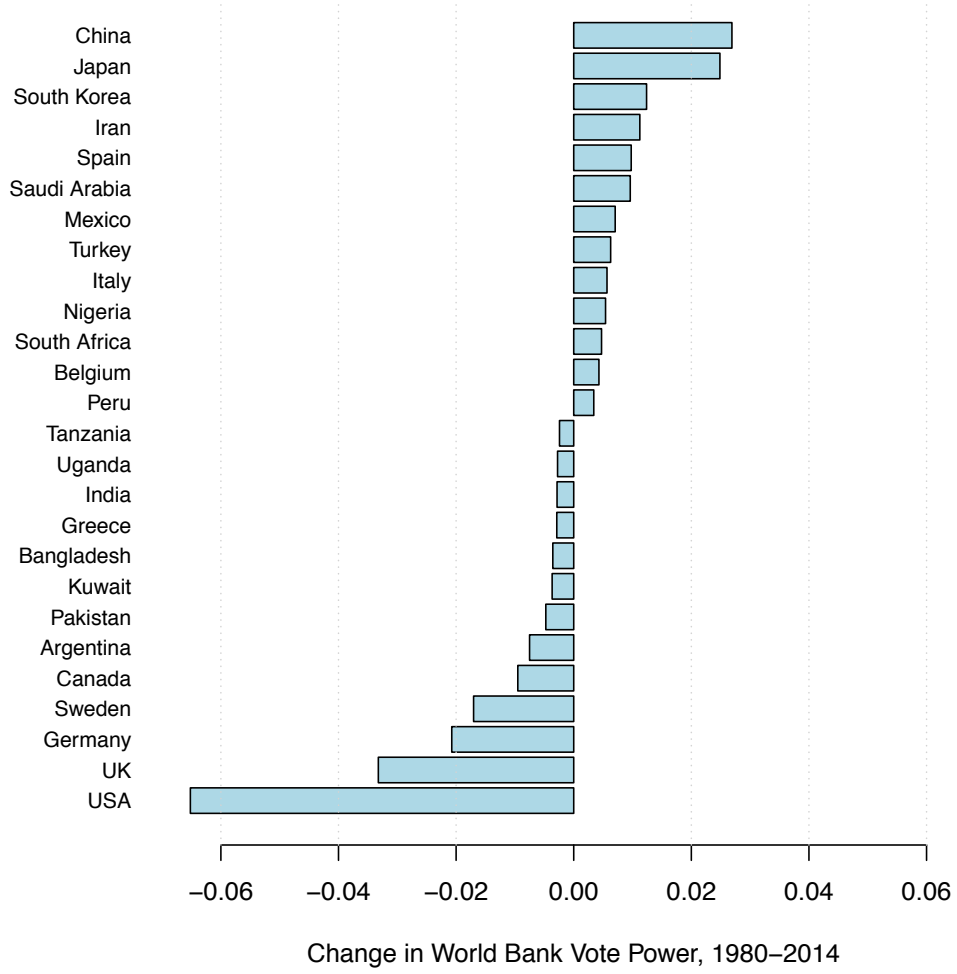

Figure 2: Change in World Bank Vote Share, 1980-2014. The figure shows changes in share of formal influence within the World Bank for select states over the period 1980-2014. Data are from World Bank annual reports (changes calculated by author).

The independent variable of interest is misalignment in bargaining power, which is a measure of the difference between a state's regime-specific influence and its underlying material power. Figure 3 demonstrates this relationship by plotting 2014 World Bank vote power for a subset of states (Y-axis) against the same states' share of 2014 global GDP, a measure of material economic power (X-axis). As the figure shows, some states (e.g., Turkey, France) have a share of World Bank vote power that is almost exactly commensurate with their underlying economic capacity. Others appear to "punch above their weight," with

vote power outstripping their economic might (e.g., Saudi Arabia). A few states are in the unfortunate situation of being significantly undervalued in the World Bank relative to their economic power (e.g., China, Mexico). These are precisely the states I expect to engage in institutional proliferation.

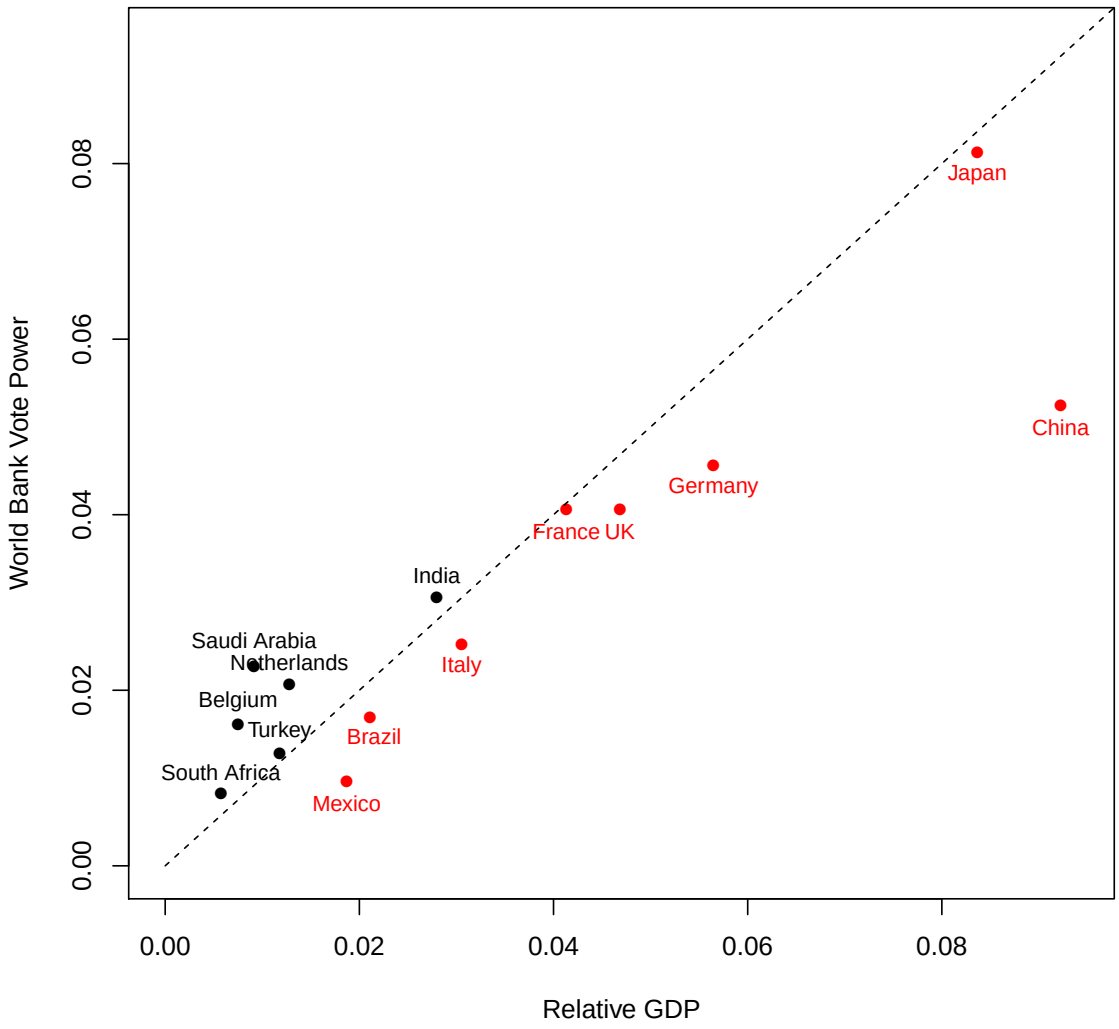

Figure 3: World Bank Vote Share vs. Relative GDP, 2014. Select states are plotted according to their share of World Bank vote power (Y-axis) and economic power (GDP, X-axis) in the year 2014.

I use the data displayed in Figure 3 to create a variable called *Vote Power Bias* for each state-year observation. This is the main independent variable used in the empirical analysis.

It measures the ratio of state i's World Bank vote share in year t to its share of global GDP in the same year: $\frac{\text{World Bank vote share}_{it}}{\text{GDP share}_{it}}$. Lower values ($< 1$) indicate a state's formal influence in the central development lending institution falls short of its underlying material power. **H1** suggests we should observe a negative effect of this variable on the probability of institutional proliferation.

I also hypothesized that states are more likely to engage in institutional proliferation when they have access to a coalition of like-minded partners who are similarly dissatisfied with their influence in existing institutions (**H2**). I construct a second independent variable, *Coalition*, to test this hypothesis. To create this variable, I assume all states that are "undervalued" in the World Bank (i.e., *Vote Power Bias* < 1) represent a potential coalition of partners for a state interested in creating a new institution. The variable *Coalition* measures the number of these potential partners in a given year.

Finally, **H3** captures the effect of preference divergence over World Bank lending on the proliferation of new development banks. I construct a measure of satisfaction with World Bank lending based on the distribution of Bank funds to states' allies. To do so, I collect data on annual World Bank financial disbursements as reported in the AidData 3.0 dataset (Tierney et al., 2011). I then calculate the percentage of World Bank funds that are disbursed to a state's formal allies, as identified in the the Correlates of War Alliances dataset. **H3** expects a negative and significant effect of this variable on institutional proliferation.

A series of control variables address potential confounders. The most important are related to states' functional demand for multilateral deveopment lending. I collect several variables that proxy for state desire for development assistance. These include states' population (logged) and incoming flows of bilateral and multilateral development aid (per capita). I also include states' outgoing aid flows, to capture the possibility that more charitable states will create new development banks in order to facilitate the delivery of development assistance. Another variable controls for democratic political institutions, reflecting the higher

propensity of democracies to create and form IOs.[15]

Because many development banks are regionally defined, I control for the regional allocation of World Bank loans. This addresses the possibility that states form development banks when their geographic region is underserved by the World Bank. I also include fixed effects for each region to account for varying baseline propensities of some regions to form new banks.[16] All independent variables are lagged by one year. Finally, I account for time dependence via a cubic polynomial term measuring the number of years since a state last engaged in institutional proliferation (not shown in the tables below).

In the next section, I first test the three primary hypotheses in a traditional regression framework. These results provide initial evidence that power misalignment and state preferences drive institutional proliferation. I then address the possibiliy that unobserved variables confound the relationship between *Vote Power Bias* and institutional proliferation. Doing so requires delving into the history of the Bretton Woods conference, where the World Bank was created.

4 Results

The first empirical tests consist of a series of logistic regression models predicting the dichotomous outcome, institutional proliferation. In all models, errors are clustered at the country level. I estimate variants of the following model for state i in year t:

$$\begin{aligned}\Pr(\text{Institutional Proliferation}_{it}) \;=\; & \mathit{logit}^{-1}(\alpha + \beta_1 \text{Vote Power Bias}_{i,t-1} + \beta_2 \text{Coalition}_{i,t-1} \\ & + \beta_3 \text{WB Loans to Allies}_{i,t-1} + \beta_4 X_{i,t-1})\end{aligned}$$

[15]States' polity scores are from the Polity IV dataset.

[16]Regions are defined according to the World Bank's regional classification scheme

where the variables *Vote Power Bias*, *Coalition*, and *WB Loans to Allies* represent the three hypotheses described above, and $X_{i,t-1}$ is the vector of control variables.

Table 2 displays the coefficient estimates and standard errors for the fitted models. Column 1 shows a reduced form model that includes the primary independent variable, *Vote Power Bias*, and controls for democratic institutions, population, and aid flows. The effect of *Vote Power Bias* is negative and significant, consistent with **H1**. As a state is underrepresented in the World Bank, it is indeed more likely to create new development lending institutions. However, the estimated effect is substantively small. A one standard deviation decrease in vote power bias is associated with a 1% reduction in the probability of institutional proliferation. Column 2 adds variables to test the other two hypothesized relationships. As in the first model, the effect of *Vote Power Bias* is negative and significant, though small in magnitude. The insignificant coefficient on *Coalition* provides no evidence for **H2**: the presence of a coalition appears to have a negligible effect on the probability of institutional proliferation. The effect of state preferences, by contrast, has a comparatively large effect, consistent with **H3**. As the World Bank distributes loans to a state's allies, the state is significantly less likely to participate in the proliferation of other development banks.

	Dependent variable:		
	Institutional Proliferation		Bilateral Aid
	(1)	(2)	(3)
Vote Power Bias	-0.112^{***}	-0.129^{**}	-0.036^{***}
	(0.034)	(0.059)	(0.005)
Polity	-0.013	0.032	0.133^{***}
	(0.022)	(0.031)	(0.033)
Population	-0.545^{***}	-0.162	-0.071^{*}
	(0.112)	(0.206)	(0.005)
Regional Aid Received Per Capita	-0.024	-0.012	
	(0.015)	(0.017)	
Aid Flows	0.010^{***}	0.004^{***}	
	(0.001)	(0.001)	
Aid Received Per Capita	-0.026^{***}	-0.013	
	(0.009)	(0.009)	
Coalition		-0.049	
		(0.044)	
WB Loans to Allies		-4.142^{*}	-4.156^{***}
		(2.159)	(0.370)
Observations	2,794	2,794	3,786

Table 2: Logit Estimates. Results of logistic models examining the effect of bargaining power alignment on states' propensity to construct new development banks. Standard errors are clustered by country. Statistical significance is denoted by: *p<0.1; **p<0.05; ***p<0.01.

These results provide initial evidence that power alignment has an effect on the propensity of states to form development banks, though the effect is smaller than state preferences for the distribution of development funds. As states become frustrated with the World Bank — with respect to their influence in the organization or its pattern of lending — they are more likely to create new development banks where their demands can be met. States also have another alternative: they can shift emphasis toward bilateral development aid if they are dissatisfied with existing multilateral institutions. Column 3 tests whether states compensate for the perceived shortcomings of the World Bank by increasing bilateral aid. The dependent variable in this model is aggregate flows of (logged) bilateral development assistance from each state, as reported in the AidData 3.0 dataset. Because aid flows are now the dependent variable, I drop the aid-related controls from the regression. I also drop the *Coalition* variable, since no coalition is necessary to deliver bilateral aid. Results are very similar to the first two models. As states face negative vote power bias in the World Bank, they are significantly more likely to give bilateral assistance. Similarly, states decrease bilateral assistance when the World Bank distributes funds to their allies.

The logit results should be interpreted with caution. Vote shares in the World Bank are not randomly assigned. They are the outcome of a complex bargaining process that is inextricably linked to states' political power, diplomatic prowess, and preferences for development lending. This political process makes it likely that unobserved factors influence both states' vote power bias and their propensity to create new development banks. Endogeneity could generate bias in either direction, depending on how vote shares are allocated. If powerful states are able to bargain for greater influence in the Bank and can also more easily amass a coalition for new institutions, the results in Table 2 are attenuated (biased upward). On the other hand, if states that are devoted to condition-based lending are given greater influence in the Bank, and these same states tend to resist the creation of new banks, the estimates will be biased downward.

Because the direction of the bias is not clear *ex ante*, I use an identification strategy that accurately estimates the effect of power alignment even in the presence of unobserved confounders. Specifically, I overcome the endogenous assignment of vote power by leveraging a natural experiment that occurred during the creation of the World Bank. Late in this process, the Bank's architects switched formulas for allocating votes to member states. I use this last minute change to develop an instrument for *Vote Power Bias* in order to estimate the true causal effect.

4.1 Vote Share Allocation at Bretton Woods

Serious planning for the institution that would become the World Bank started in the early 1940s, in the midst of the second World War. American policymakers, anticipating the need for multilateral cooperation to assist in the reconstruction of Europe after the war, began to draw up designs for a "Bank for Reconstruction and Development of the United and Associated Nations" in 1942 (White, 1942). Primary responsibility for planning the bank, as well as an International Stabilization Fund (which would become the IMF), was given to Department of Treasury official Harry Dexter White. White's influence on the Bank was profound; his thinking shaped its institutional goals, structure, and decision-making procedures. From 1942 until the Bretton Woods Conference in July 1944, White worked closely (and often contentiously) with his British counterpart, the noted economist John Maynard Keynes, to put plans for the bank into action (Steil, 2013).

White's professional correspondence provides a detailed picture of the Bank's origins, including his plans to distribute vote shares among the founding member states. Initial drafts of the bank, prepared in a series of memos for Treasury Secretary Henry Morgenthau Jr., describe a highly technical institution, with each member state assigned a unique, minimum

number of stock shares they would hold in the bank.[17] The earliest formula for member state stock shares was simple and intuitive: each member would contribute "2 percent of its estimated national annual income," and states would receive "50 votes plus one vote for each share of stock held" (White, 1942). This formula for allocating vote power had a clear basis in states' economic power: those with a higher national income would contribute more to the bank's capital, and therefore would receive greater influence in the organization.

As White began to negotiate the terms of the bank with American allies, it soon became clear that the purely technical formula would have to bend to certain political realities. The UK, which was comparatively limited in national income but a had very large trade volume, successfully lobbied the United States to add international trade as an element in the vote share formula (White, 1943). White would have to contend with similar requests from China and the USSR, the other two major US allies in the war effort. To complicate matters, US officials soon determined it would be too onerous to negotiate the allocation of vote shares in the World Bank and IMF separately; instead, they decided to come up with a single distribution of decision-making power that would apply to both institutions.

U.S. officials soon realized that the effort would not succeed without first achieving a politically feasible distribution of votes among the "Big Four" allies: the US, UK, USSR, and China. Accordingly, the relative vote power of the Big Four was set at the highest political level, in violation of the original formula envisioned by White. The United States would receive the largest capital subscription of approximately $2.9 billion, the UK half that amount, and the USSR and China slightly less. As in White's initial draft of the bank, each state's voting power was tied to their capital subscription (Mikesell, 1994). Having achieved agreement among these fundamentally important states, White desperately wanted to limit diplomatic negotiations with the other 40 states who would attend the Bretton

[17]Stock shares were essentially capital subscriptions; states with a higher number of shares were required to commit greater capital resources to the bank, and they were also given greater influence over lending decisions via increased vote power.

Woods conference. His strategy for doing so was to tie vote shares to a "scientific formula" and thus limit procedural complaints about the allocation of votes. The challenge was finding a reasonable formula that would still respect the political decision over voting power granted to the Big Four. White assigned this task to an aide named Raymond Mikesell.

Mikesell recalls the assignment from White in his memoir of the negotiations preceding Bretton Woods. White instructed Mikesell to construct a formula using four variables — national income, foreign trade (exports and imports), gold reserves, and dollar holdings. He "gave no instruction on the weights to be used," but insisted the formula accurately reflect the agreed upon vote shares among the Big Four (Mikesell, 1994, p. 22). Mikesell went through "dozens of trials" (p. 23) to create a formula that satisfied these difficult constraints; many of his rejected drafts are included among White's archival records. The formula Mikesell eventually developed was difficult to justify on any rational basis: member state capital subscriptions would be determined by the sum of 2 percent of national income, 5 percent of gold and dollar holdings, 10 percent of average imports, and 10 percent of the maximum variation in exports from 1934-1938. This sum was then multiplied by the ratio of average exports from 1934-1938 to national income in 1940 to get a state's final capital subscription (Mikesell, 1994).

In practice, what this complex formula accomplished was to add a great deal of randomness to the initial allocation of vote shares in the World Bank. White and Mikesell were aware of this fact, and took great pains to hide the details of the formula from potential member states. Their concern is apparent in White's personal correspondence. Responding to a memo from Mikesell detailing one proposed vote formula, White scribbles in the margins: "Deny it ever existed!"

As the US and its allies prepared for the Bretton Woods conference, they circulated the proposed distribution of vote shares to participating states, but withheld Mikesell's

formula.[18] At Bretton Woods, the vote quotas arising from the formula were used as starting points for negotiation. States were permitted to issue protests, and some succesfully lobbied for increases in vote power over their initial allocation. It appears that deviations from Mikesell's formula were fairly limited, however. One important reason was effective US control of the "Committee on Quotas" at the conference; the committee was chaired by high-ranking Treasury official Fred Vinson, and its technical advisor was none other than Raymond Mikesell (Mikesell, 1994).

In addition to being an interesting historical episode, the allocation of vote shares at Bretton Woods can be used to help mitigate the endogeneity of bargaining power. I exploit the "randomness" associated with the use of Mikesell's formula to create an instrument for vote power in the World Bank. Specifically, for each state I calculate the change in vote power that arose by shifting from White's original vote formula (2% of national income) to the complex formula that was ultimately used at Bretton Woods. Because vote shares in the World Bank are highly path dependent, the shift in vote allocation at Bretton Woods had a long-term effect on their relative control of the institution. The initial change in vote shares can therefore be used as an instrument for states' bargaining power in the World Bank.[19]

There are two assumptions embedded in the instrumental variables approach. The first, often referred to as the "exclusion restriction," is that the instrument only affects the outcome (institutional proliferation) through its relationship with the independent variable (*Vote Power Bias*). In this case, this assumption requires that the "extra" vote power a state received (or lost) by transitioning to the Mikesell formula is independent of the state's underlying political power or its preferences for development lending. This is clearly not

[18]Mikesell would report that despite his insistence that vote shares were dervied using a scientific formula, delegates "were intelligent enough to know that the process was more political than scientific" (Mikesell, 1994, p. 23).

[19]The additional vote share gained via the change in vote quota formula is positively correlated (0.21) with future vote shares in the World Bank.

true for the "Big Four" allies, whose political power prompted the new vote formula in the first place. For all other states, however, the change in vote share was exogenous to political considerations.[20] Two pieces of evidence support this assertion. The first is the historical record, which indicates White and Mikesell intentionally searched for a vote quota formula with a single goal in mind: to accurately match the political promise made to the big four allies. Mikesell is clear that the *only* instructions White provided were related to the big four allies; other considerations were ignored as he adjusted the formula to get the US, UK, USSR, and China in the correct relative order.[21] The fact that the formula itself was hidden from other states at Bretton Woods affirms the notion that their interests were not reflected in its construction.

Second, the available data demonstrate no clear correlation between the change in vote shares and observed indicators of political or economic power. Figure 4 demonstrates the distribution of the change in vote shares resulting from the use of the Mikesell formula. About half of Bretton Woods participants benefited from the shift in terms of greater vote power; others saw their formal influence fall. This change is poorly correlated with the outcome of interest (Institutional Proliferation, correlation = 0.01) and with observed determinants of state power, such as GDP (0.1) and military strength (0.2).

[20]Importantly, I do not claim that political considerations did not influence the ultimate allocation of vote shares in the Bank itself — merely that the change in vote shares from the original plan to the Mikesell formula was independent of political power for those outside the "Big Four." In practice, the formula did not fully determine vote shares but were used as guidelines to start negotiations at Bretton Woods. The actual votes deviated from the Mikesell formula, sometimes significantly (see Stone (2011, p. 54)).

[21](Mikesell, 1994, p. 22-23) states: "White gave no instruction son the weights to be used, but I was to give the United States a quote of approximately $2.9 billion; the United Kingdom (including its colonies), about half the U.S. quota; the Soviet Union, an amount just under that of the United Kingdom; and China, somewhat less...I confess to having exercised a certain amount of freedom in making these estimates in order to achieve the predetermined quotas. I went through dozens of trials, using different weights and combinations of trade data before reaching a formula that satisfied most of Whites objectives."

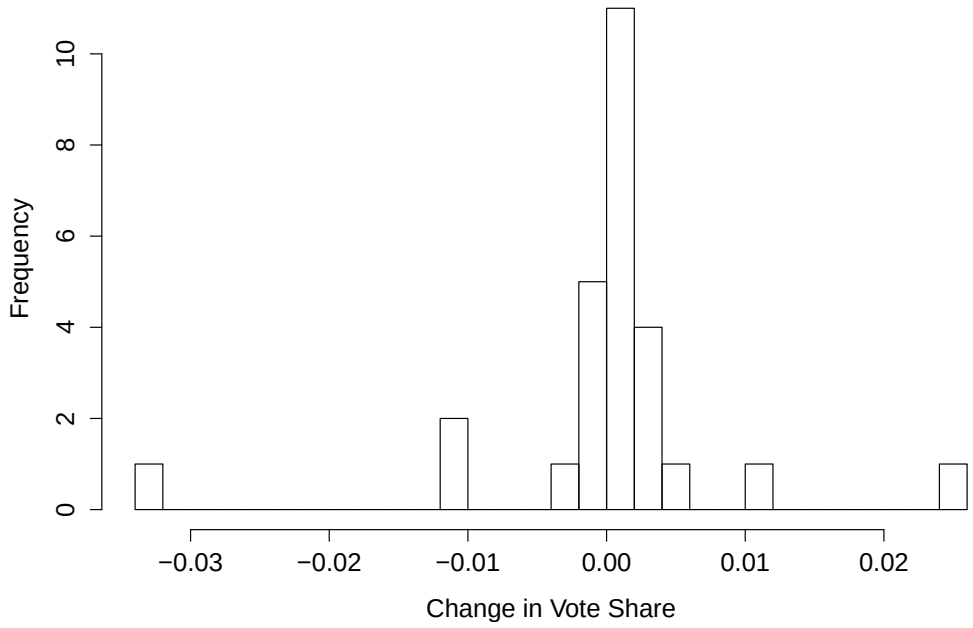

Figure 4: Change in Vote Power associated with the Mikesell Formula. Distribution of changes in expected formal vote power arising from the shift from a national income-based vote formula to the Mikesell formula, for states that participated in the Bretton Woods conference.

The second IV assumption ("monotonicity") is that the instrument affects all observations in the same direction. This assumption is violated if an increase in vote power resulting from the formula shift decreases the propensity of some states to engage in institutional proliferation, while increasing the propensity of others. While this assumption is not directly testable, it is highly unlikely that states become more dissatisfied with the World Bank after being given greater control of the institution.

I use two-stage least squares (2SLS) estimation with the following models for each stage. For state i in year t:

$$\text{Vote Power Bias}_{it} = \alpha_1 + \gamma_1 \text{Formula Shift}_i + \gamma_2 X_{it} + \epsilon_{it} \quad (1)$$

$$\text{Institutional Proliferation}_{it} = \alpha_2 + \beta_1 \hat{\text{Vote Power Bias}}_{it} + \beta_2 X_{it} + \delta_{it} \quad (2)$$

where X_{it} is a vector of control variables discussed in the previous section.

4.2 IV Results

Table 3 presents the results of the 2SLS models testing the effect of bargaining power misalignment on the probability of institutional proliferation. In all models, reported standard errors are clustered by state. Model 1 is the primary instrumental variable model discussed in the previous section. It includes the key independent variable, *Vote Power Bias*, instrumented by the vote quota change arising from Mikesell's formula. As above, a negative effect of *Vote Power Bias* indicates that states with a disadvantageous vote power bias are more likely to create new development banks.

I include the same control variables as in Table 2, and supplement them with the four component variables used by Mikesell to develop the vote quota formula used at Bretton Woods.[22] Including these variables in the model controls for the possibility that Mikesell strategically altered the formula to privilege or undermine states other than the Big Four. The historical record suggests this is unlikely, but to be cautious I include states' imports, exports, national income, and gold reserves in the years before Bretton Woods. The instrument thus measures the change in voting power arising from Mikesell's formula, conditioning on the variables in the formula.

The estimated effect of *Vote Power Bias* on institutional proliferation is negative and statistically significant in Model 1, suggesting states are less likely to create new development banks when their authority in the World Bank is aligned with their underlying economic power (consistent with **H1**). The coefficient is larger in substance than in the non-instrumented regression: each one-unit increase in *Vote Power Bias* decreases the probability of institutional proliferation by approximately 6.4%. This effect size is more than double

[22]These variables are not shown in the results table. They include: states' national income in 1940; average exports form 1934-1938; gold and dollar reserves in 1940; and maximum variation in exports from 1934-1938.

the overall baseline rate of institutional proliferation in the dataset (3.1%). To demonstrate this effect with a prominent example, suppose the World Bank decided to offer China more authority in 2012, changing its *Vote Power Bias* from its observed value (0.395) to a value equivalent to Belgium (2.119). The results indicate China would be approximately 11% less likely to create a new development bank (as it did with the Asian Infrastructure Investment Bank shortly thereafter).

Column 2 adds variables representing the other two hypotheses. The effect of *Vote Power Bias* is similar in magnitude and signficance to model 1. There is no evidence that the difficulty of amassing a multilateral coalition constraints institutional proliferation (**H2**). The *Coalition* variable is substantively small and statistically insignificant. The model does provides support for the effect of state preferences over the distribution of World Bank loans (**H3**). The *WB Loans to Allies* variable is statistically significant. If the World Bank increases funding to a given state's allies by one standard deviation (10.2%), the state is 2.7% less likely to engage in institutional proliferation. This is about half the estimated effect of the power alignment variable.

The functional variables find some support in the IV results. States that give more development aid are more likely to create development banks. More broadly, states that reside in regions that are undeserved by the World Bank (i.e., their rate of loans per capita is low) have a higher propensity to engage in institutional proliferation. Perhaps surprisingly, democracies are no more likely to create development banks than any other type of state.

	Dependent variable: Institutional Proliferation	
	(1)	(2)
Vote Power Bias	-0.064^{**}	-0.062^{**}
	(0.025)	(0.023)
WB Loans to Allies		-0.266^{*}
		(0.104)
Coalition		-0.001
		(0.002)
Population	-0.022^{*}	-0.040^{*}
	(0.010)	(0.023)
Polity	-0.002	-0.001
	(0.001)	(0.001)
Aid Given	0.045^{***}	0.054^{***}
	(0.008)	(0.010)
Aid Received Per Capita	-0.004	-0.001
	(0.003)	(0.001)
WB Loans to Region	-0.002^{*}	-0.002^{*}
	(0.001)	(0.001)
Observations	621	621
States	31	31
F-statistic	29.841	19.106

Table 3: Effect of Vote Power Bias on Institutional Proliferation. Results of IV estimation examining the effect of bargaining power alignment on states' propensity to construct new development banks. Standard errors are clustered by country. Statistical significance is denoted by: *p<0.1; **p<0.05; ***p<0.01.

The strength of the IV model is internal validity; it correctly estimates the effect of *Vote Power Bias* even in the presence of unobserved confounders. The primary disadvantage in this context is the need to restrict the sample of observations. To ensure the instrument is

exogeneous, I excluded the "Big Four" states (US, UK, China, Russia) and only included other states that joined the World Bank in its early years.[23] Calculating the change in states' vote allocations further reduces the number of available observations. These models therefore estimate the local effect of *Vote Power Bias* on those observations affected by the instrument, which excludes many potential states of interest. Tables A2 and A3 in the appendix demonstrate how this sample differs from the countries excluded from the IV analysis.

Diagnostic tests indicate the instrument is strongly correlated with *Vote Power Bias* (F-statistic = 19.1), and further suggest that OLS estimates are likely to be inconsistent (Wu-Hausman test, p = 0.05).[24] Following (Conley et al., 2012), I perform sensitivity analysis to examine how robust the findings are to violations of the exclusion restriction. In this case, the instrument (the Mikesell formula) can have a direct effect on the outcome (institutional proliferation) of up to $+-0.07$ until the results become statistically insignificant. This is equivalent to each additional vote gained in the Mikesell formula (out of 2400 shifted votes) increasing or decreasing the probability of institutional proliferation by 7%.

The findings presented above are robust to the inclusion of additional controls (democratization, trade openness, military strength, and a count of state memberships in other banks). I re-estimated the models on a sample of "highly active" development banks (those with $\geq$ \$100 million in lending capacity), with similar results. One potential concern is that the use of the Mikesell formula to instrument future vote power bias in the World Bank results in a weak instrument, since the shift in formula only occurs at one point in time. While the

[23]The 31 remaining states in the sample are: Argentina, Australia, Belgium, Brazil, Canada, Chile, Colombia, Costa Rica, Czechoslovakia, Denmark, Dominican Republic, Ecuador, Egypt, Germany, Greece, Haiti, Iran, Italy, Japan, Mexico, Netherlands, Peru, Poland, Portugal, South Africa, Spain, Thailand, Turkey, Uruguay, and Venezuela.

[24]See Table A1 in the appendix for results from the first stage of the instrumental variables model.

F-statistic from the first stage regression suggests the instrument is sufficiently strong,[25] I calculated the Anderson-Rubin standard errors which are robust to weak instruments. *Vote Power Bias* retains its statistically significant effect on institutional proliferation.

Finally, the 2SLS results shed light on the direction of the bias in the non-instrumented regressions. The fact that the estimated effect of *Vote Power Bias* in the traditional regression was much smaller in magnitude suggests that these results suffer from attenuation bias. This points to states' political power as a more important confounder than unobserved variation in state preferences over condition-based lending.

5 Discussion and Future Research

This paper argues that states are more likely to create new IOs when they believe their influence in existing institutions is constrained by outdated rules. This argument is a direct challenge to functional explanations of institutional formation. Rather than attempting to maximize cooperative benefits, states build institutions as part of a competition for influence in multilateral organizations. When states' underlying material power is not reflected in current institutions, the likelihood of institutional proliferation rises.

The paper makes three contributions to the literature on international cooperation. First, it provides a rationale for creating new IOs that is consistent with the crowding of governance institutions that has been observed in many issue areas. The ability of the power misalignment theory to explain institutional proliferation is an important advancement over existing theories which were crafted to explain the formation of a single institution. A notable implication of the theory is that we will observe more institutional proliferation than is strictly optimal for cooperation, because states are continually contesting influence over global governance. This problem will be particularly acute when institutions are rigid and

[25]Traditionally, an F-statistic of greater than 10 is considered a sign that the instrument is not weak. In the 2SLS models shown, the F-statistic is greater than this threshold (29.8 and 19.1)

fail to adapt to changes in the distribution of state power.

Second, the paper provides one of the first empirical tests of institutional proliferation in world politics. It does so by taking advantage of a unique natural experiment in the distribution of vote shares at the Bretton Woods conference. Results supports the notion that states engage in institutional proliferation to rectify imbalances in multilateral bargaining power. The substantive effect of power misalignment is larger in magnitude than diverging preferences among states.

Finally, the theory presented in the paper has important implications for two possible downstream effects of institutional proliferation. The first is the ultimate distribution of governing authority in the regime complex. My argument suggests new institutions provides proliferating states with an additional exit option, which should strengthen their hand in negotiations. Stone (2011) similarly argues access to outside options should give states greater informal authority in existing IOs. The second effect is the orientation of the new IO toward existing institutions. If states create institutions with the specific intent of providing bargaining leverage, the new institution must be an effective substitute for the original IO. Despite the claims of its founders, new institutions will probably not operate in fundamentally different ways than the organizations they are created to challenge. Future research should begin to unpack and examine both of these expected effects.

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Appendix

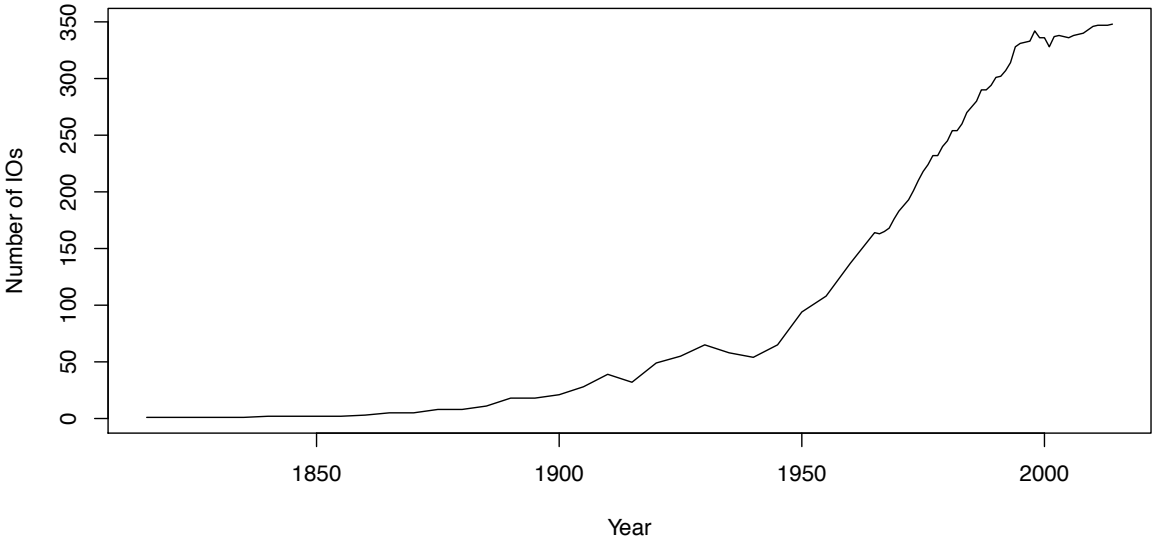

Figure A1: Growth in Number of IOs

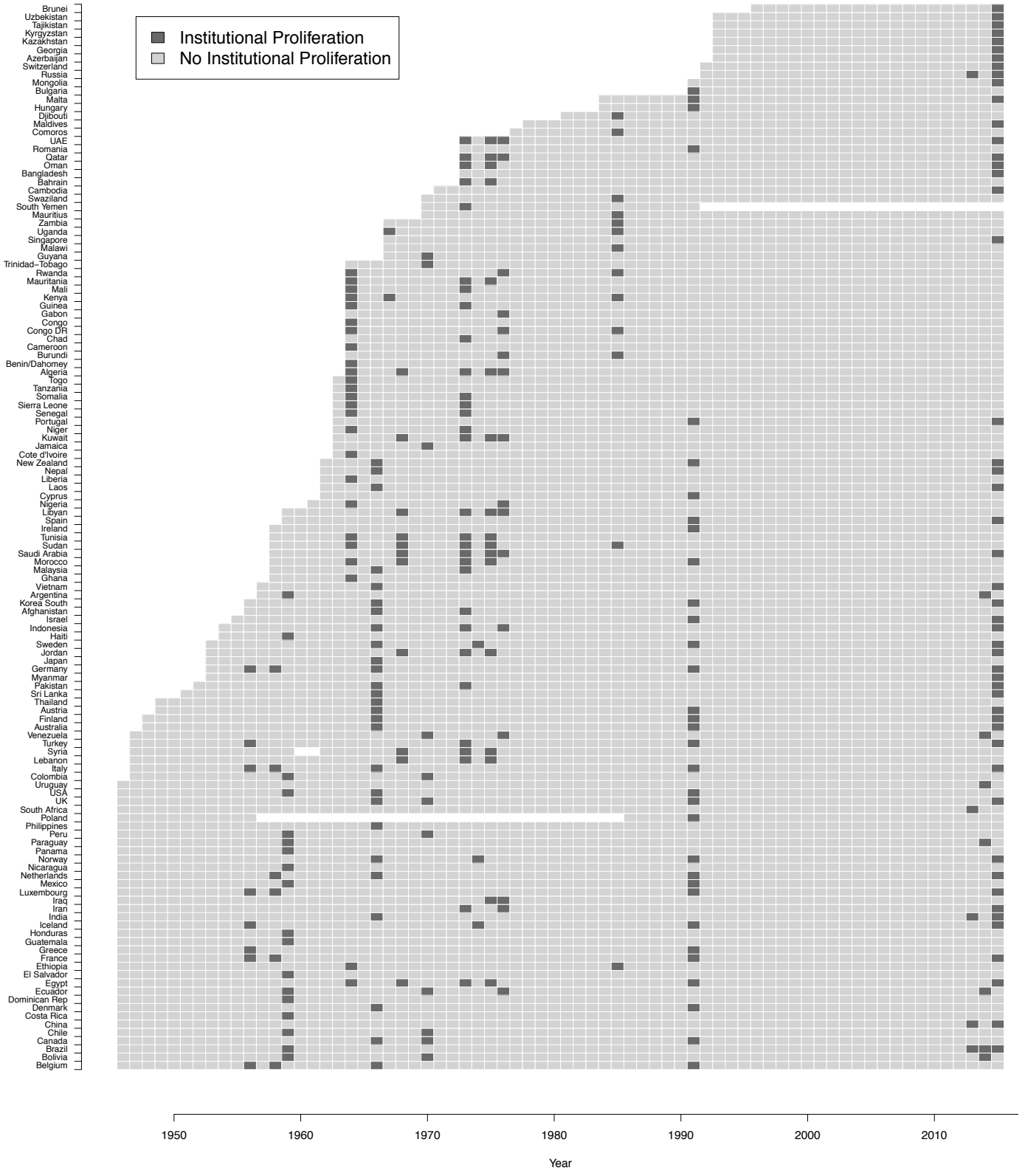

Figure A2: Institutional Proliferation Variable

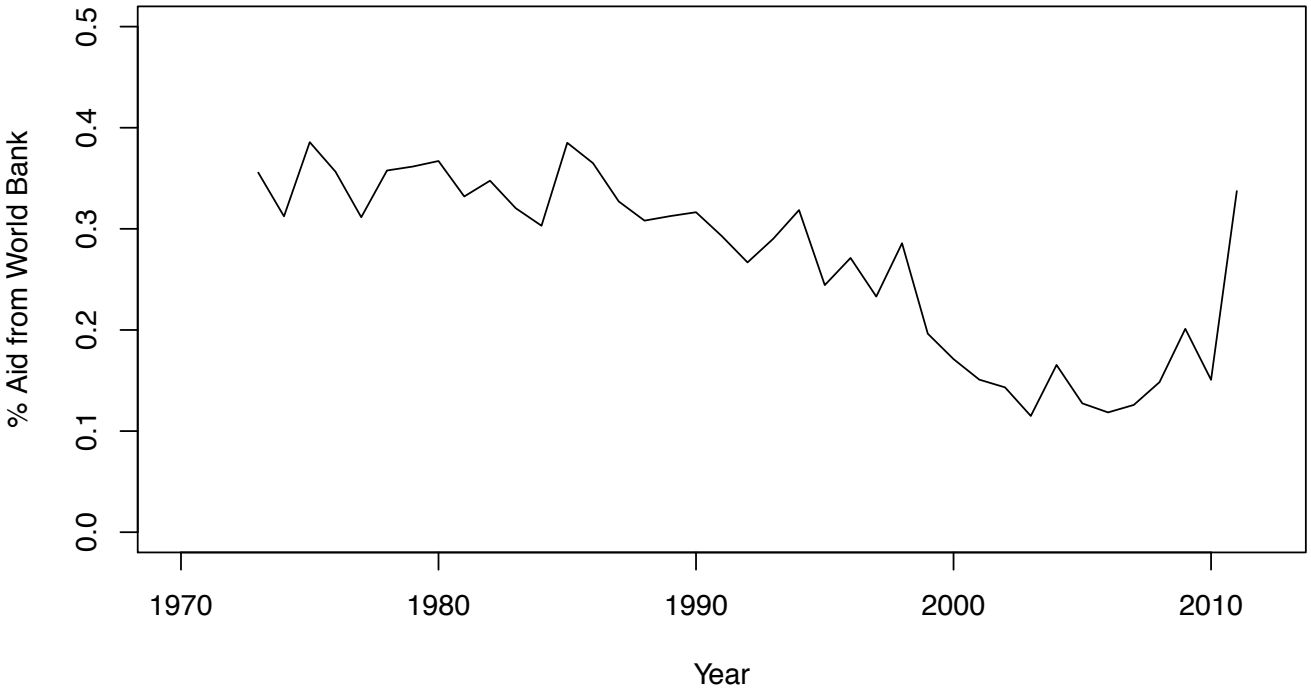

Figure A3: World Bank Share of Total Development Assistance. Data is from the AidData dataset.

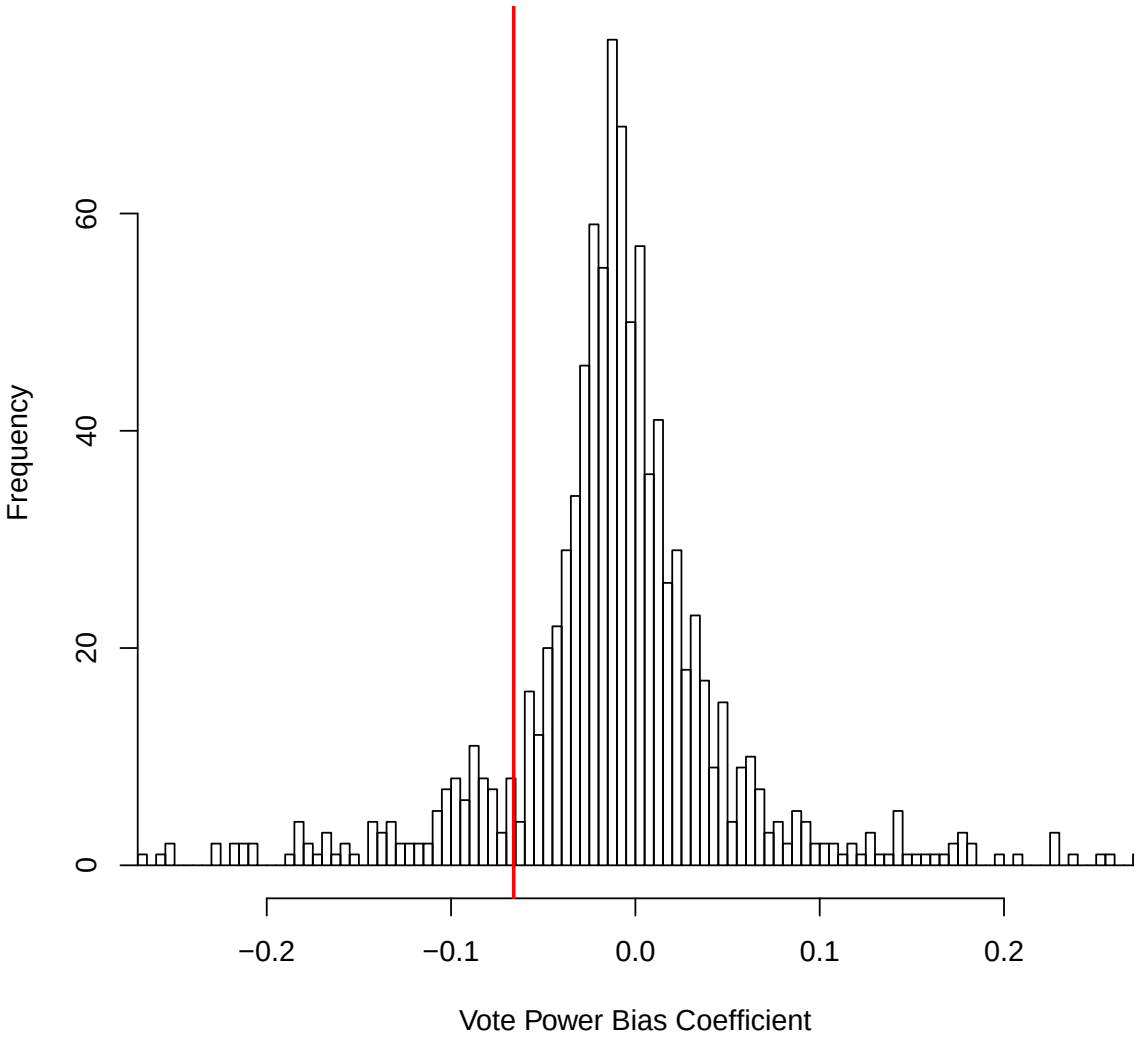

Figure A4: Placebo Test

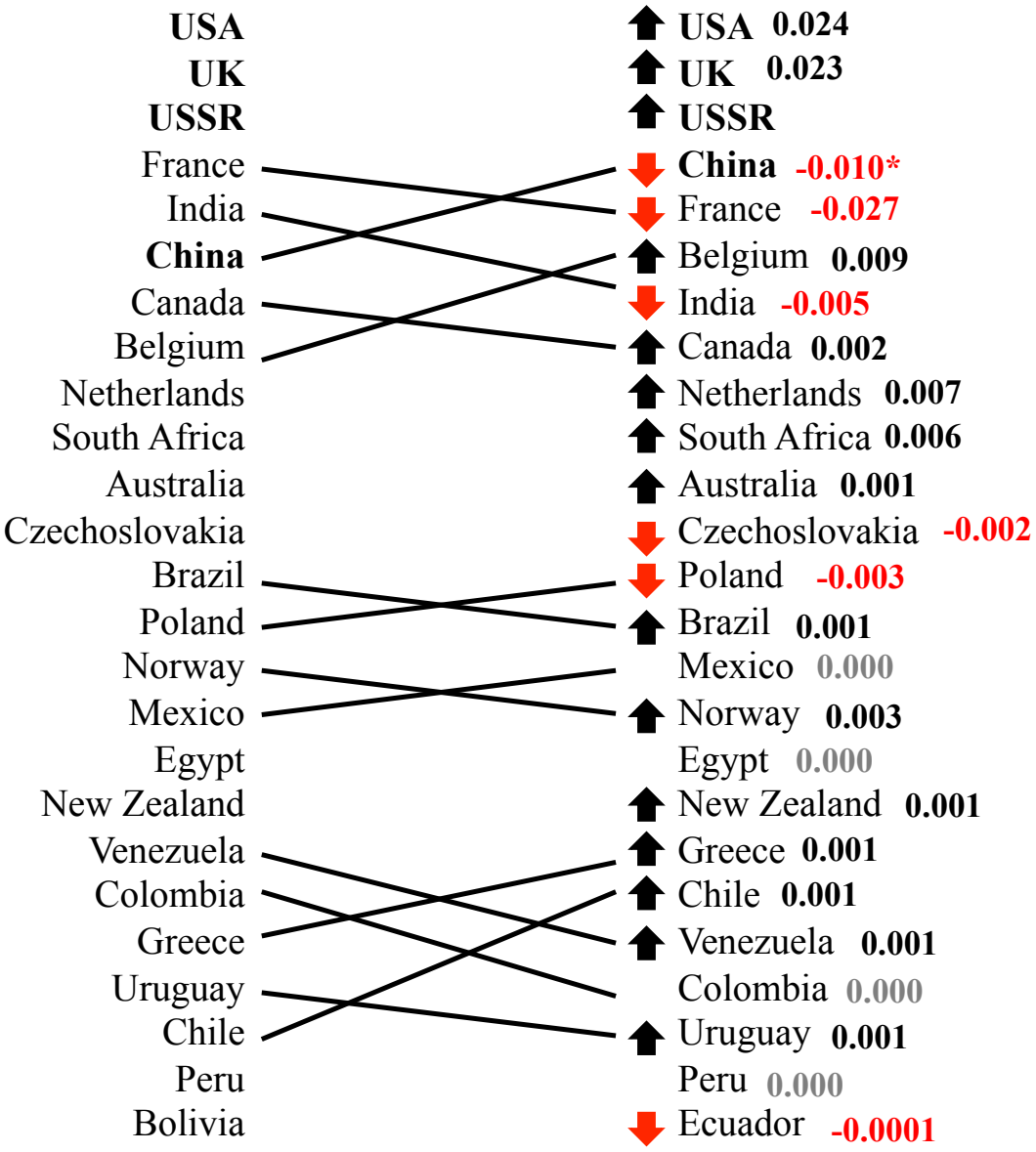

Figure A5: Change in Rank Order of World Bank Member States from Mikesell Formula

	Dependent variable: Vote Power Bias
Quota Change	-0.106^{**}
	(0.024)
Avg. Exports, 1934-38	0.002
	(0.001)
Variation in Exports, 1934-38	0.018^{***}
	(0.005)
Avg. Imports, 1934-38	0.014^{***}
	(0.005)
Gold and Dollar Reserves	0.006^{***}
	(0.002)
National Income, 1940	-0.0005^{**}
	(0.0002)
Population	-0.475^{***}
	(0.095)
Polity	-0.050^{***}
	(0.009)
World Bank Loans to Allies	-1.800^{**}
	(0.783)
Total Aid Flows	0.0002^{***}
	(0.0001)
Military Strength	-34.013^{**}
	(15.476)
Aid Per Capita	0.011^{***}
	(0.004)
World Bank Loans to Region	-0.004
	(0.007)
Observations	621
Note:	*p<0.1; **p<0.05; ***p<0.01

Table A1: First Stage Results. Results of the first stage model examining the effect of the instrument (Quota Change) on Vote Power Bias. Time polynomial not shown. Statistical significance is denoted by: *p<0.1; **p<0.05; ***p<0.01.

	GDP pc	Population	Aid Given	Aid Received pc	WB Loans to Allies (%)
IV Countries	14.72	32,525,555	744.20	0.034	0.14
Non-IV Countries	9.82	21,833,709	240.16	0.060	0.10

Table A2: IV vs Logit Sample: Descriptive Statistics

	Dependent variable: Institutional Proliferation	
	(1)	(2)
	IV Countries	Non-IV Countries
Vote Power Bias	−0.088	−0.126**
	(0.304)	(0.062)
WB Loans to Allies	−7.620	−2.610
	(5.235)	(2.720)
Population	−0.092	−0.040
	(0.780)	(0.252)
Polity	0.049	0.026
	(0.060)	(0.039)
Aid Given	0.010***	0.002
	(0.004)	(0.003)
Aid Received Per Capita	−0.151**	−0.006
	(0.075)	(0.007)
Observations	733	2,188
States	31	90
Note:		*p<0.1; **p<0.05; ***p<0.01

Table A3: IV vs Logit Sample: Effect of Vote Power Bias