

Outside Options and the Renegotiation of International Organizations

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I. Introduction

According to the *Yearbook of International Organizations*, one of the earliest intergovernmental organizations was the Kalmar Union of Nordic states, established in 1397 and considered a precursor to the contemporary Nordic Council. The union entailed a common foreign policy and a promise of mutual defense among the kingdoms of Denmark, Norway, and Sweden. However, the union effectively ended in 1521. The Nordic Council describes a major point of disagreement as follows: "...Norwegian and Swedish landowners – along with the German members of the Hanseatic League – were of the opinion that Denmark dominated the decision-making process."² The Central American Federation, established in 1823, was similarly disbanded only a few decades after formation as Guatemala's asymmetrical representation in the Federal Congress (44% in 1825) exacerbated a "...showdown between the Guatemalans and the provincials with the myriad of jealousies and resentments built up over the years that were far from being resolved."³

Much contemporary criticism of international organizations also singles out perceived overrepresentation and domination of select states, usually the United States or some subset of advanced industrialized nations.⁴ The following statement by the Indian Permanent Mission to the United Nations (UN) on UN Security Council reform is illustrative:

"The overwhelming majority of the UN General Assembly members today are developing countries. They are also, most often the objects of the Council's actions. They must have a role in shaping those decisions which affect them. The present composition of the Security Council, particularly the

² Nordic Council, "Nordic Co-operation," Website accessed on 11/10/2005, http://www.norden.org/web/1-1-fakta/uk/1-1-4-nordens_hist.asp?lang=6.

³ Perez-Brignoli (1989), 70.

⁴ Among others, see Thacker (1999), Foot et al (2003).

permanent members' category, is weighted heavily in favour of industrialized countries. This imbalance must be redressed in an expansion of the Council, by enhancing the representation of developing countries in both permanent and non-permanent members' categories."⁵

Former Japanese Bank of Japan Governor Toshihiko Fukui expressed similar sentiments about the distribution of quotas in the International Monetary Fund (IMF), which determine voting shares, by noting that "It is important to recognize that the current distribution of IMF quotas represents another form of unsustainable global imbalance."⁶

Cases like these are characterized by a basic tension: on the one hand, existing institutional structures facilitate international cooperation in a particular policy area, setting forth rules and norms that determine how states cooperate and distribute the fruits of cooperation. On the other hand, dissatisfied states view the status quo as fundamentally unfair or biased against their own interests and seek reform or redistribution. While major contemporary international organizations are in no immediate danger of disbandment, how such conflicts are resolved will likely have significant implications for the smooth functioning of the international system and viability and legitimacy of the international organizational architecture in the long run.

In this article, I present a theory of institutional *renegotiation*. Much of the existing literature in international relations focuses on distributive bargaining at the initial stages of cooperation, treating subsequent cooperation as primarily an enforcement problem. However, a large subset of redistributive negotiation regarding international organizations occurs long after the initial bargaining phase. Status quo distributional rules often reflect outcomes from a different game

⁵ Permanent Mission of India to the United Nations, New York, "India and the United Nations: UN Reform Process," available at: http://www.un.int/india/india_and_the_un_unreform.html.

⁶ "Statement by the Honorable Toshihiko Fukui Governor of the Bank of Japan and Alternate Governor of the IMF for Japan at Twelfth Meeting of the International Monetary and Financial Committee Washington, D.C.," September 24, 2005, Available at http://www.mof.go.jp/english/if/imfc_050924_st.htm.

involving different actors, interests, and strategic settings. In such cases, status quo distributional rules are effectively exogenous. However, such exogenous rules often prove to be quite sticky – while initiatives to reform or renegotiate international institutions are legion, actual change is far less common. Ex post renegotiation of international institutions reflects dynamics distinct in important ways from ex ante bargaining. These dynamics are the focus of this article.

I will propose a formal model of institutional renegotiation and develop two main arguments about redistributive institutional change. First, the magnitude and frequency of change should be correlated with the general attractiveness of outside options available to states. Attractive outside options constrain the bargaining range and make extreme distributive outcomes unsustainable in equilibrium. In policy areas where outside options are unattractive, distributive arrangements can deviate considerably from underlying power distributions without precipitating institutional change. In such cases, seemingly glaring imbalances can persist despite much diplomatic grandstanding or hyperbole.

Second, internal rules governing the ease of institutional reform will interact with the attractiveness of outside options to affect how institutions evolve in response to underlying shifts in member state power or capabilities. Some institutions are designed with internal rules providing for considerable flexibility in the renegotiation of distributional outcomes. Such rules make it less costly for dissatisfied states to initiate renegotiation. As such, challenges and renegotiation will tend to occur frequently. On the other hand, some institutional designs set a high bar for renegotiation, for example requiring a large majority or unanimity support for a proposal to be considered. In such cases, even states with attractive outside options may not be able to successfully challenge an unacceptable status quo. Such institutions will therefore more likely exhibit characteristics of path dependence or bargaining failure and exit.

This article will proceed as follows. In Section II, I will discuss some instances of path dependence in major contemporary international institutions and place the theoretical puzzle within the existing literature. Previous scholarship has focused primarily on bargaining in the initial phases of cooperation and has therefore largely neglected ex post bargaining. Section III presents a formal model of renegotiation and derives some comparative statics, which will be applied to some of the most prominent instances of contemporary ex post renegotiation efforts in Section IV. Finally, Section V provides a conclusion and suggestions for further research.

II. Renegotiation in International Politics

Scholars of institutions have long recognized the tendency for institutions to “lock in” initial conditions, even after considerable shifts in underlying realities (Arthur, 1989; David, 1994; Goldstone, 1998; Pierson, 2000). This tendency has also been observed in institutionalization at the interstate level, particularly in terms of extending the stabilizing effects of hegemony beyond the apex of hegemonic power (Krasner, 1976; Keohane, 1984; Ikenberry, 2001). Such institutional rigidity can be helpful for maintaining continuity and stability in the international system. However, it can also produce glaring discrepancies between a state’s perception of its place in the international order and its ability to obtain preferred outcomes in institutional settings.

Historically, a particularly contentious form of institutional rigidity has been the perceived rigidity of distributional outcomes – the distribution of national representation and influence among member states in an international institution. Rapidly growing states have often expressed frustration at what they see as the excruciatingly slow pace of change in, among other things, voting shares, composition of personnel, and influence and agenda-setting power over policy initiatives.

This has been a particularly important issue for high-growth states that were poorly represented at the initial bargaining phase of major post-World War II international organizations. Among these states are Japan, Germany, and Italy, the Axis Powers of World War II, as well as many developing states that were either dependencies or simply too weak to play a major role in initial bargains.

While such states have increased their relative geopolitical and economic weight in the international system, recognition of their newfound status in international organizations has not been automatic.

Easily quantifiable measures point to a striking lack of change in distributional attributes of some of the most prominent international organizations. The five permanent members of the UN Security Council – China, France, Russia, United Kingdom and United States – have remained static since inception despite fairly dramatic shifts in underlying geopolitical conditions. While it is difficult to construct a single measure that accounts for the geopolitical weight of a state in the international system, the case for accepting new members appears to be quite strong. According to one widely cited measure, the Composite Index of National Capability collected by the Correlates of War project,⁷ Japan has outranked France and the United Kingdom since roughly the 1970s and has been about on par with Russia since the collapse of the Soviet Union. A similar argument could be made for the inclusion of Germany and India, two countries that have also been active participants in UN peacekeeping operations. In terms of overall contributions to the regular budget of the UN, Japan and Germany are currently the second and third largest contributors, together accounting for about 25% of the total budget, far outstripping the contributions of permanent members China (3.16%) and Russia (1.42%).⁸ Nonetheless, reforming the Security Council has proved difficult despite repeated attempts.

⁷ Singer, et al, 1972 (v. 3.02).

⁸ Secretariat of the United Nations, “Status of contributions as at 31 January 2007,” ST/ADM/SER.B/709.

The voting shares of the IMF have also exhibited a tendency to overrepresent inception members and underrepresent post-inception members (Rapkin et al, 1997). Figure 1 separates G7 states into Allied and Axis powers according to their affiliation during World War II and plots shares of IMF voting power as a proportion of shares of world gross domestic product – the most straightforward measure of a country’s weight in the global economy. By this measure, the wartime Axis powers (Germany, Italy, Japan) have lagged behind their actual place in the world economy despite the passing of half a century and dramatic shifts in economic realities. In contrast, the former Allied powers (Canada, France, United Kingdom, United States) remain overrepresented.⁹

[Figure 1 about here]

Similarly, employment at international organizations has tended to favor nationals from the victors of World War II at the expense of defeated powers. Figure 2 plots the number of “leading people” in international organizations by country of nationality as compiled by the Union of International Associations in 2003. As the figure indicates, employment of nationals from Germany, Italy and Japan lags behind other key states including substantially smaller nations such as Belgium. Figure 3 plots the same information by educational background of the employee. Employees educated in all of the city of Tokyo are only a fraction of those educated in single academic institutions such as Harvard or Yale. The selection of top level executives also remains stable by convention in a range of institutions – most notably the norm that assigns a European national as

⁹ The IMF quota formulas incorporate measures besides GDP, including share of world trade and reserves. However, the quota formulas themselves have been historically subject to negotiation among major quota holders and actual quota shares do not necessarily reflect outcomes of the quota formulas. Among others, see Lipsey (2008) and Boughton (2001).

the Managing Director of the International Monetary Fund and a US national as the President of the World Bank.

[Figure 2 and Figure 3 about here]

This discrepancy likely has multiple causes – for example, due to limited labor market mobility, Japanese nationals have traditionally faced greater obstacles and risk in pursuing full-time employment at international organizations. However, there are several institutional factors that tend to make employment static. Most notably, the distribution of institutional headquarters tilts towards countries such as France and the United States, which played important roles in institution building in the postwar period. The presence of an institutional headquarters can facilitate the employment of host-country nationals for a variety of reasons, among them: 1. Reducing hardship for nationals who can continue to reside in their home country; 2. Greater visibility and opportunities to establish contacts with current employees; 3. Self-reinforcing network effects, e.g. due to the tendency for current employees to prefer new hires with similar training or skills.

The dissatisfaction expressed by states over such disparities is not merely an issue of prestige. Japanese diplomats note that Japan's lack of permanent representation on the UN Security Council has proven costly on several occasions, particularly in terms of lack of access to information and inability to shape the agenda on resolutions vis-à-vis North Korea.¹⁰ Lack of employee representation also diminishes the ability of member states to make use of informal networks to acquire relevant information and shape the policy output of an organization. The location of an institutional headquarters can also affect the ideological leanings of an international organization and consequent policy output. Notably, the orthodoxy of the US Treasury and Bretton Woods

¹⁰ Personal Interview, Japanese Representative to the United Nations, 2005.

institutions in the 1990s espousing sound macro and liberal market policies as a prerequisite to economic growth acquired the location-specific appellation – “The Washington Consensus.”

Regardless of the particular manifestation, perceived imbalances in distributional features of international organizations have been a politically salient issue for dissatisfied member states. Diplomatic campaigns to bring about redistributive change are a common feature across institutional settings. Nonetheless, there is striking variation in the degree of actual change that materializes, as will be described in the empirical section.

Despite the development of a large body of literature during the past few decades on international institutions, regimes, and organizations, detailed examinations of institutional change have been relatively scarce. One leading cause for this scarcity is the neorealist-neoliberal debate of the 1980s-1990s. This debate focused scholarly attention on whether or not international institutions “matter.” More specifically, are international institutions epiphenomenal to underlying state interests and capabilities (the neorealist position), or do they have an independent impact on the outcome of international politics (the neoliberal position)?¹¹ In the former case, institutional change is simply a reflection of underlying interstate dynamics and unworthy of independent examination.

The neorealist-neoliberal debate split scholars into opposing camps and focused attention on the dichotomous questions of whether international institutions mattered, whether they exerted an independent effect, and whether institutional change was purely epiphenomenal to underlying state interests. Much of the subsequent work in the neoliberal tradition has responded to this debate by

¹¹ Among others, see Gilpin (1981), Krasner (1983), Keohane (1984), Mearsheimer (1994/5), Pierson (1996), Glennon (2003).

demonstrating that international institutions do indeed exert a powerful influence on international relations in a wide range of empirical applications.¹²

Nonetheless, the dichotomous nature of the neorealist-neoliberal debate has left the literature largely devoid of generalizable, rationalist theories about variations in the proclivity for institutions to change (Powell, 1994; Martin, 1997). Specifically, what variables might explain differences in the tendency for international institutions to resist or accept change? When are we likely to observe institutions that will rapidly mirror underlying shifts in preferences and power, and under what conditions will we find institutions that remain robust in the presence of such shifts?

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 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 (Pierson, 2000; Goldstone, 1998; David, 1994). 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 (Pierson, 1996). While such factors can be magnified in the presence of increasing returns processes, deriving generalizable propositions from haphazard events is problematic.

Redistributive institutional change can be conceptualized as a bargaining problem. In an anarchic international system with no higher authority, states dissatisfied with existing distributional

¹² For an excellent survey, see Martin and Simmons (1998).

outcomes must bargain with other states for a revision of the status quo. If such bargaining is successful, a new redistributive arrangement will emerge and institutional change will be observed. However, the existing literature on international institutions has focused almost exclusively on bargaining at the initial stages of cooperation, and subsequent cooperation is generally characterized as an enforcement problem (Fearon, 1998; Drezner, 2000; Blaydes, 2004). This characterization of institutional bargaining is elegant and helpful for analyzing a wide range of empirical variation. However, it does not provide much leverage over an important and common feature of international bargaining – renegotiation of distributive arrangements in the presence of a preexisting institution.

The type of ex post renegotiation I analyze in this article is also distinct from ex ante bargaining over institutional design features (Koremenos, Lipson, and Snidal, 2001) such as escape clauses (Rosendorff and Milnder, 2001) or provisions for flexibility (Koremenos, 2001). Empirically, international institutions and associated rules are often created by a different set of actors operating under vastly different conditions than those who subsequently seek redistributive change. For example, the UN Charter was negotiated initially in 1942-1945 primarily among the US, USSR, and Great Britain with some input from the fifty initial signatory members. About two-thirds of UN membership is now comprised of states that had no role in negotiating the Charter, a document that specifies the composition of the Security Council as well as specific procedures for reform. The UN Charter is not subject to renegotiation on each occasion a new member is admitted to the institution. For states such as Germany and Japan, such institutional rules have been effectively exogenous. In more extreme cases, such as governance over the internet, status quo institutional arrangements have been established unilaterally, essentially without an initial bargaining phase.¹³

Through analysis of a formal model of redistributive renegotiation, I provide two main insights about redistributive institutional change. First, international institutions in policy areas with generally

¹³ See Section IV.

attractive outside options will tend to experience change that is comparatively more responsive to shifts in relative underlying power. In other words, IOs where member states have favorable alternatives will approximate the epiphenomenal institutions of the traditional neorealist perspective. Where outside options are unattractive, dissatisfied states tend to lack the bargaining leverage to push through favorable reform. Existing work that analyzes the use of outside options has generally focused on unilateral action by hegemonic states (Oatley and Nabors, 1998; Gruber, 2000; Voeten, 2001). In contrast, I examine how outside options across policy areas can affect the bargaining leverage of dissatisfied states regardless of their relative power positions. Second, institutional change is also a function of institutional rules, particularly any conditions affecting the cost of initiating a challenge to status quo distributions. However, whereas high costs can facilitate rigidity and path dependence where outside options are unattractive, they will tend to encourage exit in the presence of attractive outside options. Hence, the interaction of the external environment and internal rules shapes the trajectory of distributive institutional change.

III. Formalization

I will consider a model in which two states bargain over the fruits of cooperation in the presence of a pre-existing agreement. The strategic setting is akin to the standard Rubinstein bargaining model (Rubinstein, 1982), with several added features to reflect the stylized facts. The two-player version of the model can be interpreted as bargaining by two states or two groups of states acting as coherent units. The main findings are not dependent on the two-player assumption – I will discuss extensions to the n-player case in the subsequent subsection. As in standard bargaining models, the two states bargain over cooperative gains that are assumed to be unattainable

unilaterally. I also allow for outside options (Binmore, Shaked, and Suttten, 1989; Muthoo 1999; Voeten, 2001; Johns, 2007), i.e. the possibility that players can choose to strategically opt out of the bargaining game.

Unlike conventional games of bargaining over international institutions, which generally assume negotiation from scratch, I incorporate a pre-existing and exogenous distribution of cooperative payoffs. Hence, I am modeling *renegotiation* of agreements or institutional arrangements that are already in existence. As an empirical matter, ex ante institutional rules are often handed down in the form of charters, treaties, agreements, or norms from bargaining outcomes or unilateral decisions reflecting a different set of actors, interests, and strategic settings. The model allows for the examination of bargaining in the shadow of such ex ante rules.

The Model

There are two players, 1 and 2, that bargain over potential cooperative agreements in a policy area. Each player makes a contribution to the cooperative arrangement, x_i ($i = 1,2$) ($x_i > 0$), which is also the maximum payoff the player can receive if it chooses not to pursue cooperation with the other player. One can think of x_i as an indicator of each player's material resources or power – a high x implies that a player brings a large contribution to the cooperative arrangement but also has the ability to obtain a fairly large payoff from opting out and going it alone. I assume non-negative and non-zero gains from cooperation, such that the total payoff from cooperation is defined as $x_1 + x_2 + g = \pi_0$, where $g > 0$ represents the gains from cooperation and π_0 represents the total payoff from cooperation. An agreement on partition α_i is defined as a division of the total payoff from cooperation such that player i receives payoff α_i . In the two player game, player j ($i \neq j$) will receive

the total payoff from cooperation remaining after α_i is subtracted. Any α in the game is greater than or equal to zero and less than or equal to π_0 .

[Figure 4 about here]

The extensive form game is depicted in Figure 4. At the first stage of the game, the two players are operating under a pre-existing cooperative arrangement that partitions π_0 according to exogenously given weight α_{1SQ} , where α_{1SQ} represents the share of total cooperative payoffs received by player 1 and $\alpha_{2SQ} = \pi_0 - \alpha_{1SQ}$ represents the payoff received by player 2.¹⁴ Player 1 is potentially dissatisfied with the status quo. I define dissatisfaction as a status quo partition such that $\alpha_{1SQ}/\alpha_{2SQ} < x_1/x_2$, or $\alpha_{1SQ} < x_1$. That is, player 1 is dissatisfied if the status quo partition gives player 1 a smaller proportion of total gains than its proportion of contributions to the cooperative arrangement or if the status quo partition gives player 1 a smaller payoff than it can obtain by opting out. Only one of the two players can be dissatisfied by assumption, and I assume player 1 is the only potentially dissatisfied player.¹⁵

In the initial stage of the game, 1 can choose to abide by the status quo (SQ), initiate a challenge (CH) to renegotiate the existing partition, or pursue exit (X). If 1 chooses to abide by the status quo, the game ends and the players receive the status quo payoffs $(\alpha_{1SQ}, \pi_0 - \alpha_{1SQ})$. If 1 chooses to exit, the game ends and the players receive their outside option payoffs, (x_1, x_2) . If 1 chooses to challenge, 2 has an opportunity to opt out or make a new offer. If 2 chooses to make an offer, the

¹⁴ One way to interpret α_{SQ} is as an equilibrium outcome of this game in a prior time period when some parameter, such as the relative x 's, were of a different value.

¹⁵ Note that both states cannot be dissatisfied simultaneously by assumption. There are four possible cases of mutual dissatisfaction: 1. If $\alpha_{1SQ} < x_1$ and $\alpha_{2SQ} < x_2$, $x_1 + x_2 + g > \pi_0$ (i.e. $x_1 + x_2 + g \neq \pi_0$, which is a violation of an assumption) since $g > 0$. 2. If $\alpha_{1SQ}/\alpha_{2SQ} < x_1/x_2$, $\alpha_{2SQ}/\alpha_{1SQ} > x_2/x_1$, i.e. both states cannot be dissatisfied with their proportions simultaneously. 3. If $\alpha_{1SQ} < x_1$ and $\alpha_{2SQ}/\alpha_{1SQ} < x_2/x_1$, $x_1\alpha_{2SQ} < x_2\alpha_{1SQ}$, which implies $\alpha_{2SQ} < x_2$, which is a violation of assumptions as in the first case. 4. If $\alpha_{2SQ} < x_2$ and $\alpha_{1SQ}/\alpha_{2SQ} < x_1/x_2$, $x_2\alpha_{1SQ} < x_1\alpha_{2SQ}$, which implies $\alpha_{1SQ} < x_1$, which is a violation of assumptions as in the first case.

game continues to the next stage, which is modeled as an alternating-offers Rubinstein bargaining game with outside options.

I assume that initiating a challenge entails some cost, c ($c \geq 0$), such that in subsequent stages the total payoff from cooperation is reduced to $\pi = \pi_0 - c$. One can interpret c as any costs incurred as the result of bringing a challenge to the status quo. Such costs might include lobbying efforts if a challenge requires approval of third parties in order to be placed on the agenda, bureaucratic and diplomatic costs involved in gathering and disseminating relevant information, and the resources expended on coordinating a challenge if the players represent a group of states acting as a unit.

Assuming 1 has initiated a challenge and 2 has chosen not to exit, 2 responds by proposing a new partition α_2 .¹⁶ 1 can respond by accepting 2's proposal (A), in which case the payoffs are $(\pi - \alpha_2, \alpha_2)$. 1 can also choose to exit at this stage, in which case both players receive their outside option payoffs, (x_1, x_2) . Finally, 1 can reject 2's proposal and make a counteroffer (CO), in which case the game moves to the next stage.

If 1 chooses to make a counteroffer, it will offer a new partition, α_1 . 2's choices are akin to 1's in the previous stage. Payoffs are discounted by the player-specific discount factor δ_i ($0 < \delta < 1$) in this stage, by δ_i^2 in the subsequent stage, by δ_i^3 in the subsequent stage, and so on.

¹⁶ As in the standard Rubinstein bargaining model, the initial proposer will have a bargaining advantage in equilibrium. The main substantive conclusions of this article do not change if 1 were able to offer the initial proposal, although challenges are more likely and 1 is much less likely to remain dissatisfied in equilibrium. Modeling 2 as the initial proposer produces equilibrium outcomes more easily reconciled with empirical facts. First, from a casual survey of the evidence, it appears much more common for institutional renegotiation to result in dissatisfied states remaining dissatisfied rather than previously satisfied states becoming dissatisfied with the new outcome, which is a likely equilibrium outcome if 1 proposes. Second, allowing 2 to make initial proposals is attractive for the sake of stability of outcomes, which is a common feature characterizing redistributive outcomes in international organizations. When 2 proposes first, 2 never finishes the game as a dissatisfied state in equilibrium. If the game were to be replayed with the equilibrium partition as the new status quo partition, and all parameters remained the same, 1 will abide the status quo. Hence, the equilibrium partition is stable to a repeated challenge by 1 in the meta-game in the absence of an exogenous shock such as a change in x_i . This does not necessarily hold if 1 is the initial proposer. When 1 is the initial proposer, 2 may finish the game dissatisfied. If 2 were then able to initiate a challenge as the dissatisfied state and make a proposal, a new equilibrium may be possible in which 1 is dissatisfied even given the same parameters, and so on. Such frequent challenge-counterchallenge cycles are not a common feature of institutional renegotiation.

Analysis

Equilibria are derived using subgame perfection and stationarity and are available in the appendix. Once a challenge occurs, there are four types of possible equilibrium outcomes depending on the relative magnitude of each player's outside options. Intuitively, if both players have attractive outside options, 1 will receive and accept an offer equivalent to its outside option, and 2 will receive the remaining cooperative payoff. The outcome is analogous if only 1 has an attractive outside option. If only 2 has an attractive outside option, 1 will receive a payoff decreasing in 2's outside option and increasing in 1's discount factor, and 2 will receive the remainder. Finally, if both have unattractive outside options, the equilibrium solution is equivalent to the standard Rubinstein bargaining model – payoffs will depend on relative discount factors, with the more patient player tending to receive a greater share of total payoffs. Figure 5 graphically depicts the equilibrium payoffs as a function of each player's outside options in the case where a successful challenge occurs.

[Figure 5 about here]

The structure of payoffs gives rise to the following proposition:

Proposition 1: Consider the unique subgame perfect equilibrium of the game in which a challenge occurs and a new partition is accepted. In this equilibrium, *ceteris paribus*:

1. Equilibrium payoffs are not a function of outside options when outside options are small compared to total cooperative payoffs, such that $x_1/\pi \leq \delta_1\mu_1$ and $x_2/\pi \leq \delta_2\mu_2$.
2. Payoffs are a function of the outside options of one of the players when outside options are large as a proportion of total cooperative payoffs, such that $x_1/\pi > \delta_1\mu_1$ and $x_2/\pi > \delta_2\mu_2$.
3. If $c = 0$, as the gains from cooperation, g , approach zero, the equilibrium partition α_1/α_2 approaches x_1/x_2 .

Proof: See the appendix

If a challenge to redistribute shares is successful, the degree to which the new shares reflect outside options is contingent on the overall attractiveness of outside options. In other words, in cooperative settings where attractive outside options are available, those outside options will have a direct effect on the ex post distribution of cooperative payoffs.

On the other hand, in settings where outside options are unattractive, redistributive outcomes will be determined by relative patience rather than outside options. From a substantive perspective, major redistributions favoring dissatisfied states based on relative patience appear unlikely. In practice, renegotiation of international institutions often occurs while the status quo distribution is still in place and some form of the status quo is expected to continue if renegotiation fails. For example, the UN Security Council has largely remained operative in its present form despite several failed attempts at expansion and reform. As such, under most circumstances,

satisfied states are more likely to exhibit greater patience than dissatisfied states as renegotiation takes place.¹⁷

The third condition of Proposition 1 shows that large disparities between relative power (as expressed by x_1/x_2) and relative distributions of cooperative payoffs cannot be sustained when outside options are generally attractive. In other words, such disparities should only be possible when outside options are unattractive in a particular policy area compared to gains obtainable from cooperation.

It is reasonable to assume that relative attractiveness of outside options will generally correlate with a country's material capabilities or geopolitical/economic power in a particular policy area. As such, Proposition 1 implies that successful redistributive challenges in policy areas with attractive outside options will tend to occur in response to and tend to closely reflect shifts in relative power. On the other hand, successful challenges in policy areas where outside options are unattractive will not be correlated with shifts in relative power and should produce outcomes unrelated to relative power.

The equilibrium conditions under which 1 challenges give rise to the following proposition:

Proposition 2: Higher costs of challenge will tend to make challenges less likely. In particular:

1. When outside options are attractive, a high cost of challenge will tend to produce exit.
2. When outside options are unattractive, a high cost of challenge will tend to result in maintenance of the status quo.

¹⁷ Another way to model this is to explicitly assign the status quo partition as the reversion points for each player. This would make redistribution through relative patience impossible in equilibrium, as the satisfied player will not accept $\alpha_2 < \alpha_{2SQ}$.

Proof: See the appendix

In general, a high cost of challenge reduces the likelihood of a successful redistributive outcome. The alternative outcome depends on the attractiveness of outside options. If outside options are generally attractive, the outcome will be exit. Rather than choosing to accept a dissatisfying status quo within the institution, the dissatisfied state will opt out and pursue its attractive outside option. On the other hand, if outside options are unattractive, the status quo can be maintained even in the presence of highly dissatisfactory conditions for 1. In this case, player 1 has no appealing choice – it has minimal bargaining leverage and bargaining is too costly for a more favorable distribution to be renegotiated. However, opting out will result in an unattractive payoff. Hence, even if it is highly dissatisfied, 1 will choose to abide by the equilibrium under these conditions.

Extension to n-players

Unlike the bilateral case, applications of the Rubinstein bargaining setup to multilateral bargaining generally suffer from multiple equilibrium problems (Herrero, 1985; Suetten, 1986, Osborne and Rubinstein, 1990). In particular, Herrero (1985) has shown that virtually any equilibrium distribution of payoffs can be supported in a multilateral version of the Rubinstein bargaining game. In addition, even when extensive form games are designed such that a unique subgame perfect equilibrium exists, small changes to the sequencing and structure of offers can considerably alter the distribution of equilibrium payoffs (Krishna and Serrano, 1996; Muthoo, 1999; Suh and Wen, 2003).

Therefore, rather than deriving equilibria for a specific n-player extensive form game, I demonstrate that the propositions from the preceding subsection carry over in a somewhat modified form the n-player case regardless of the specific assumptions one makes about the extensive form. The propositions and proofs are provided in the appendix. Substantively, because outside options set the boundaries on the bargaining range, a wider range of outcomes can be supported when outside options are unattractive. As such, outcomes in which more states are dissatisfied by greater magnitudes are possible with unattractive outside options. Conversely, when outside options are attractive, large deviations between distributional outcomes and relative power cannot be sustained. As in the two player game, high costs will make a renegotiated outcome less likely and exit or status quo maintenance more likely.

IV. Empirical Implications

Table 1 presents a substantive representation of the predictions from the formal model. The table provides predictions about likely institutional outcomes through renegotiation assuming an exogenous shift in relative power favoring a dissatisfied state.¹⁸ This might encompass factors such as rapid development in an economic institution, buildup of military capabilities in a security institution, or technological changes that alter the balance of power in a given policy area.

As indicated in Proposition 2, the likelihood of renegotiation in equilibrium is a decreasing function of the costs of initiating a challenge. Hence, renegotiation should be more frequent in institutions where costs of challenge are low. However, bargaining outcomes are also a function of

¹⁸ The state might have been dissatisfied ex ante or become dissatisfied as a result of the shock. I am simply assuming that at the beginning of the game modeled in Section III, player 1 is dissatisfied.

outside options. If outside options are attractive while costs of challenge are high, the dissatisfied state is likely to opt out of the institution and pursue its outside option. Empirically, it is unusual for states to renounce their membership in an international organization – exit more often takes the form of reallocating diplomatic and financial resources to bilateral initiatives or other multilateral fora. In international trade, for example, stasis caused by expanding membership and unanimity rule within the World Trade Organization (WTO) has encouraged more and more states to pursue regional preferential trading agreements (Mansfield Reinhardt, 2003). This includes countries such as Japan, which have traditionally viewed such regional agreements with skepticism and tended to prioritize progress at the multilateral level.

If outside options are unattractive while costs of challenge are high, the likely outcome is maintenance of the status quo. Although dissatisfied states may be deeply frustrated about the status quo distributive outcome, they have very little bargaining leverage to bring about change. This will be particularly true for institutional settings in which renegotiation takes place while the institution remains operative and bargaining failure is likely to result in reversion to the status quo.¹⁹

If challenge costs are low and outside options are attractive, redistributive bargaining can be expected to occur frequently. In such cases, shifts in relative power will be quickly reflected in redistributive bargains, and the overall distributional outcomes should closely approximate underlying power relationships. Institutions with low challenge cost and attractive outside options should therefore be most malleable to redistributive institutional change and least susceptible to path dependence. In this sense, this type of institution conforms most closely to the traditional neorealist view of international institutions as largely epiphenomenal to state power. The model moves

¹⁹ If an institution is established with a specific time frame for expiration or the challenge is highly disruptive for the normal functioning of the institution, a revision of the status quo based on relative discount factors is possible. However, such revisions will not be affected by shifts in relative power.

beyond previous debates by predicting *under what conditions* institutions will be epiphenomenal rather than asserting that institutions are or not malleable to underlying power.

Finally, if challenge costs are low but outside options are unattractive, redistributive bargaining will not be responsive to underlying shifts in relative power. Holding all else constant, increases in relative power should result in no change in redistributive outcomes. However, renegotiation of status quo distributions may occur due to modest fluctuations in relative patience. Hence, while renegotiation in these types of institutions may be frequent, outcomes should not mirror underlying changes in geopolitical or economic power.

In this section, I will examine some of the most prominent efforts at redistributive institutional change in recent years in light of the theoretical propositions derived in Section III. My predictions are not deterministic – institutional change can occur for a variety of reasons external to my theory, including ideational and normative shifts, issue linkage, domestic political factors, and changes in preferences. However, the evidence indicates that the theory provides a plausible explanation for a meaningful range of the observed empirical variation in institutional change.

ICANN

The internet operates based on a unique set of identifiers – the domain name system (DNS), Internet protocol (IP) addresses and autonomous system (AS) numbers, and Protocol port and parameter numbers. Until 1998, the regulation of such identifiers was under the direct purview of the Department of Defense of the United States. This authority was transferred in 1998 to the Internet Corporation for Assigned Names and Numbers (ICANN), a nonprofit organization based

in California.²⁰ Consistent with the premises of the formal model proposed in Section III, bargaining over the creation of ICANN primarily took place between US government authorities and private sector actors with little involvement of other states.²¹ However, as internet use has globalized and expanded to include a wide range of functions traditionally regulated and by sovereign states, other nations have developed an interest in internet governance. Such interests run the gamut from more technical questions such as whether non-Latin characters should be allowable in domain name addresses to more “high politics” concerns such as whether the current regulatory regime might give the US military an upper hand in cyber warfare or other non-conventional uses of the internet. In some instances, ICANN’s authority over the DNS has been used for explicitly political purposes, as when Afghanistan’s country code “.af” was registered by expatriate Afghans rather than the Taliban-controlled Afghan government in the 1990s.²²

Despite its legal status as a nonprofit organization with non-government representatives from across the globe, ICANN continues to fall under the direct jurisdiction of the US government. In particular, changes to the root zone file of the DNS by ICANN must be authorized by the National Telecommunications and Information Agency of the US Department of Commerce.²³ In comparison, the regulatory influence of other governments has been severely constrained. ICANN bylaws prohibit government representatives from sitting on the Board of Directors, and government input is restricted to providing advice through the toothless Government Advisory Committee.²⁴ In practice, ICANN has largely operated under the leadership of private sector actors under the loose guidance of US government agencies.

²⁰ ICANN, “About,” available at <http://www.icann.org/en/about/>

²¹ Franda, 2001, 55.

²² “Countries, companies debate U.N. control over Internet,” Associated Press Worldstream, March 27, 2004

²³ Thierer et al, 2003, x.

²⁴ Feld, 2003, p. 346-358.

This status quo has led to calls for greater internationalization of governance over the internet. Other developing states such as members of the European Union have generally expressed frustration with the US-dominated system and called for a greater regulatory role by international organizations. However, the greatest source of dissatisfaction is among developing country governments, particularly autocratic states that perceive the free flow of information on the internet as a potential threat to regime stability. Former UN Secretary General Kofi Annan notes:

“...developing countries find it difficult to follow all these processes and feel left out of Internet governance structures. The United States deserves our thanks for having developed the Internet and made it available to the world. For historical reasons, the United States has the ultimate authority over some of the Internet's core resources. It is an authority that many say should be shared with the international community.”²⁵

One major security issue concerning ICANN is the possibility that US authorities could unilaterally disrupt internet traffic to entire countries by manipulating or deleting their identifying information from servers under their direct jurisdiction.²⁶ Chinese government officials have expressed concerns that “... foreign domination over registration of Chinese domain names will result in an outflow of foreign exchange, create potential threats to state security, and humiliate China.”²⁷ Dissatisfied states, particularly developing countries that prefer greater state regulation over internet activity, have publicly advocated moving authority away from ICANN towards international organizations such as the UN and International Telecommunications Union (ITU).²⁸ These concerns have been

²⁵ Annan, Kofi, “The U.N. Isn't a Threat to the Net,” *The New York Times*, November 5, 2005.

²⁶ “Countries, Companies Debate U.N. Control over Internet,” Associated Press Worldstream, March 27, 2004.

²⁷ Franda, 2002, 96.

²⁸ “External Forces Chip Away at Internet's Overseer,” *The International Herald Tribune*, March 8, 2004.

articulated in a series of international conferences under the auspices of the UN, particularly the World Summit on the Information Society in 2003 and 2005 and subsequent Internet Governance Forum meetings.

The policy area of ICANN provides a classic illustration of network effects (David, 1985). If France used one set of identifiers that overlapped with identifiers used in Germany, computers would not be able to locate each other globally. Once a standard for identification is established, it is extremely costly to unilaterally create and deviate to an alternative naming standard. Hence, there is a strong incentive for all actors to coordinate on one system of assigning unique identifiers. The policy area is therefore characterized by extremely unattractive outside options for states wishing to renegotiate a more globalized regulatory regime for the internet.

In addition, costs of renegotiation are high. There is no formal mechanism by which a dissatisfied state can bring a proposal to the table to increase their decision-making authority over ICANN. In fact, while the US Department of Commerce directly oversees ICANN, other states have no formal jurisdiction over the institution. Hence, bringing a challenge to the ICANN regime requires costly consensus-building outside the institution and challenging the United States through diplomatic channels. In addition, the policy area is highly technical and dominated by private sector actors, making it challenging for many governments to formulate actionable reform proposals.

The US government has consistently taken the position that internet governance should be coordinated by ICANN, with its private sector representation, rather than international governmental bodies such as the UN.²⁹ There is also strong bipartisan support in the US Congress for retaining authority with ICANN, and many policymakers view US authority over the internet as

²⁹ “UN Summit to Focus on Internet,” *Technews*, December 5, 2003.

a reasonable return on investment given the technical and financial resources invested by the US government to develop the internet.³⁰

Given this combination of US intransigence and dominance in a policy area with unattractive outside options, it is unsurprising that there has been no successful challenge against US dominance over the regulation of internet identifiers. While policy recommendations from several international conferences have proposed broadening the scope of international regulation over the internet, the ICANN regime has undergone virtually no change in this direction. The US government has largely ignored international initiatives to renegotiate governance of the internet. The US continues to send delegations to international discussions over the internet and agreed to the establishment of the Internet Governance Forum (IGF), a “forum for multi-stakeholder policy dialogue.”³¹ However, from a substantive perspective, the US Department of Commerce has made no meaningful change in its regulatory authority over with ICANN, and congressional hearings on ICANN generally treat the institution as a domestic regulatory matter.³² Since no state possesses an attractive outside option vis-à-vis ICANN and there are no direct mechanisms by which to challenge US dominance over the institution, the result has been path dependence as predicted by the model. The US government has virtually no incentive to concede ground through direct negotiations with dissatisfied states. Hence, the political outcome has been maintenance of a highly skewed status quo dominated by the United States despite rapid growth of global internet use.

³⁰ “U.N. Internet Confab Takes On ICANN, Or Does It Really?” *Telecom Policy Report*, November 6, 2006.

³¹ <http://www.intgovforum.org/>

³² “U.N. Internet Confab Takes On ICANN, Or Does It Really?” *Telecom Policy Report*, November 6, 2006.

The specific provisions of the UN Charter, the governing document of the Security Council, were negotiated in 1942-1945 primarily among the United States, the Soviet Union, and Great Britain, with fifty initial signatory members, about a quarter of present membership. The Charter stipulated permanent membership in the Security Council – “The Republic of China, France, the Union of Soviet Socialist Republics, the United Kingdom of Great Britain and Northern Ireland, and the United States”³³ – as well as procedures for subsequent renegotiation – “Amendments to the present Charter shall come into force for all Members of the United Nations when they have been adopted by a vote of two thirds of the members of the General Assembly and ratified in accordance with their respective constitutional processes by two thirds of the Members of the United Nations, including all the permanent members of the Security Council.”³⁴ These terms have not been subject to bargaining on each occasion a new state joins the UN. In fact, the UN Charter has been amended only four times since inception, and only one of those amendments concerned the Security Council.³⁵

In recent years, some of the most vocal proponents of UN Security Council reform have been member states that had virtually no role in negotiating the initial institutional rules or procedures for institutional change. The most prominent supporters of reform, the G4, are composed of countries that were not present at the initial bargaining table (Germany, Japan) or were much smaller actors in the international system at the time (India, Brazil). Hence, this institutional

³³ *United Nations Charter*, Article 23.

³⁴ *United Nations Charter*, Article 108.

³⁵ On August 31, 1965, the Security Council was expanded from 11 to 15 members, but no new permanent members were added.

setting also conforms to the modeling assumptions of an exogenous ex ante distributional arrangement.

The primary function of the Security Council has been to authorize and legitimate the international use of force (Hurd, 2002; Voeten, 2005; Thompson, 2006). Compared to ICANN, the attractiveness of outside options vis-à-vis the UN Security Council is not immediately clear. Voeten (2001) points out that the US has gained bargaining leverage over the Security Council by threatening the unilateral use of force, an outside option. However, no states among the G4 possess anything near the global power projection capabilities of the US military or the second-order legitimacy that might be derived from the US multilateral alliance network. In fact, the G4 have generally attached high priority to the UN in their foreign policies and invested heavily in the UN system in terms of both financial and manpower contributions. G4 policymakers do occasionally refer to the possibility that the Security Council will be superseded by other institutions without reform. For example, in a speech to the General Assembly, Ambassador Thomas Matussek of Germany stated, “One thing is clear - if the Security Council does not reform itself, there is a risk that other bodies will attempt to take its place. Such a rivalry would be detrimental to us all.”³⁶

However, in practice, there are few attractive multilateral alternatives to the Security Council for the G4. In recent years, Japan has proposed the “Quadrilateral Initiative,” whose membership also includes Australia, India, and the US, as well as the “Arc of Freedom and Prosperity,” which encompasses democratic states on the outer rim of the Eurasian continent.³⁷ These initiatives may be seen as attempts to create a new source of international legitimization based on principles of

³⁶ Permanent Mission of Germany to the United Nations, “Statement by the Permanent Representative of Germany, H.E. Ambassador Thomas Matussek, before the 64th General Assembly of the United Nations,” 28 September 2009.

³⁷ Among other sources, see Aso, Taro, “Arc of Freedom and Prosperity: Japan's Expanding Diplomatic Horizons,” Speech by Mr. Taro Aso, Minister for Foreign Affairs on the Occasion of the Japan Institute of International Affairs Seminar.

democratic cooperation.³⁸ However, such initiatives are in nascent stages at best and hardly constitute a credible alternative to the Security Council. Germany is a member of several multilateral organizations such as the European Union and North Atlantic Treaty Organization, but it is difficult to imagine Germany successfully utilizing these international organizations to legitimize an act of force. India and Brazil are also members of various regional and international groupings such as the Nonaligned Movement, which may confer a degree of legitimacy in limited contexts to their foreign policy proposals. However, these organizations are in most cases too narrow or homogenous to serve as focal points (Voeten, 2005) or sources of reliable information (Thompson, 2006), key sources of the Security Council's credibility in authorizing force.

Hence, outside options can be thought of as generally weak for dissatisfied states in the policy area of the UN Security Council. Outside options for status quo states are likely more heterogeneous. For reasons already mentioned, the US probably has a more credible outside option vis-à-vis the Security Council than other privileged members such as France or Russia. From a modeling standpoint, this difference is largely inconsequential for the theoretical predictions. If outside options of dissatisfied states are weak, equilibrium outcomes depend on either relative discount factors or the status quo state's outside option (bottom half of Figure 5). Hence, outcomes will not be responsive to shifts in relative power attributable to increases in the outside options of dissatisfied states as opposed to declines in the outside options of status quo states.

Costs of bringing a challenge against the Security Council can be considered quite high. While the UN Charter sets out a specific procedure for reform, there is no provision for periodic review or guidelines stipulating what type of states should merit inclusion on the Council. Hence, mounting a successful challenge requires consensus-building to gather support from a plurality of General Assembly members, a task that is often accomplished through generous checkbook

³⁸ Also see Ikenberry and Slaughter, 2006.

diplomacy.³⁹ In addition, dissatisfied states must expend considerable resources justifying their status as deserving members given the ambiguous criteria for inclusion. For example, Japan's candidacy was widely criticized for its historically limited manpower contributions to UN Peacekeeping Operations, an issue the Japanese government has sought to address through expanded participation in such efforts beginning in the 1990s.

In addition to the factors already mentioned, discussions over Security Council reform take place while the institution remains fully operative, and reform failure equates to maintenance of the status quo. While dissatisfied states must maintain costly lobbying efforts to keep reform initiatives alive, status quo states often face minimal costs as they can ultimately rely on their veto authority. Hence, status quo states can be thought of as being far more patient than dissatisfied states when it comes to efforts to redistribute authority over the UN Security Council. Dissatisfied states have weak bargaining leverage both in terms of relative patience and outside options. This means maintenance of the status quo is the most likely bargaining outcome.

Consistent with the predictions of the model, UN Security Council reform has proven difficult. Prospects for some type of reform appeared promising from 2000 to 2004, when US Ambassador Richard Holbrooke expressed US openness to considering some types of Security Council Reform (Satoh, 2001). This was followed by consideration of proposals by the High-level Panel on Threats, Challenges and Change and the UN Millennium Project, culminating in a report by UN Secretary General Kofi Annan outlining two possible plans for Security Council reform (Annan, 2005). However, the reform initiative stalled as major Chinese protests against Japanese membership on the Security Council captured international attention (Weiss, 2007) and US

³⁹ e.g., "Japans Opens Checkbook in Bid for Permanent Security Council Seat," *The Yomiuri Shinbun*, April 6, 2005.

enthusiasm for reform waned. Japanese policy makers generally point out that US reluctance rather than the threat of a Chinese veto ultimately killed the possibility of UN reform.⁴⁰

Despite repeated attempts and high-profile diplomatic efforts by some of the most influential states in the international system since the end of the Cold War, UN Security Council reform efforts remain stalled. One former Japanese Ministry of Foreign Affairs officer noted that after the previous round of failure, prospects for reform look increasingly bleak and Japanese inclusion on the UN Security Council is unlikely to ever materialize.⁴¹ Negotiators point to the difficulty of achieving support from the heterogeneous group of developing states needed to secure a two-thirds majority in the General Assembly as well as the veto-wielding P5.⁴² Notably, despite these high-profile failures at securing Security Council Reform, G4 states remain committed to the UN system and there has been very little talk of exit or cutting back on contributions to peacekeeping efforts or other aspects of UN operations.

Reform of the Security Council is not impossible. However, if reform materializes, it will likely be due to factors exogenous to my theory, such as normative persuasion or issue linkage. The bargaining leverage of dissatisfied states vis-à-vis status quo states is strikingly weak, and this will likely remain true unless an alternative source of international legitimization such as a Concert of Democracies emerges.

⁴⁰ Personal Interviews, Ministry of Foreign Affairs Official, 2005; Ministry of Foreign Affairs Official, 2007; former Ministry of Foreign Affairs Official, 2008.

⁴¹ Personal Interview, Ministry of Foreign Affairs Official, 2008.

⁴² Personal Interview, Japanese Ministry of Foreign Affairs Official, 2007.

Unlike the UN Security Council or ICANN, the IMF and World Bank⁴³ have relatively flexible institutional rules that allow for redistribution of member state representation. Each institution has adopted a weighted voting procedure in which voting power is largely determined according to the share of subscriptions held by each member state.⁴⁴ In turn, subscription shares are to broadly reflect a country's standing in the world economy, measured through such indicators as GDP, balance of payments, reserves, and the variability of current receipts. In both institutions, redistributions can occur as part of a general increase in capitalization or on an ad hoc basis for individual countries. Although subscriptions are in theory determined by mechanical formulas, in reality they are the outcome of interstate bargaining and have deviated considerably in both institutions from the theoretical values.⁴⁵ Because the IMF and World Bank have identical membership and internal rules governing the redistribution of voting shares, a comparison of outcomes in the institutions allows us to isolate the impact of outside options on institutional change.

The cost of initiating a challenge to status quo distributions in each institution can be considered relatively low for two primary reasons. First, the distribution of voting shares is subject to negotiation during periodic reviews and increases to the capital stock of each institution. Hence, a potentially dissatisfied state need not organize or coordinate a major diplomatic effort to bring a redistribution initiative to the table for discussion.⁴⁶ Second, voting shares are weighted, making small, incremental adjustments feasible. This implies that even minor shifts in voting share can be pursued without necessitating costly compromise over an indivisible good such as veto power or

⁴³ When I mention the World Bank in this article, I am primarily referencing the International Bank for Reconstruction and Development.

⁴⁴ There is also a very small fixed component distributed equally to all members in addition to subscriptions.

⁴⁵ For greater detail, consult Lipsy (2008).

⁴⁶ It should also be noted that the normal functioning of each institution can be disrupted to some degree by holding out during negotiations over capital increases. This implies that relative patience may potentially favor dissatisfied states.

permanent representation. Third, weights are determined according to a clear and unambiguous set of guidelines based on measures that correlate with a country's standing in the world economy. Hence, large disparities between real and theoretical voting shares are easily identified and do not require costly justification as might be in the UN Security Council, where the qualifications for permanent member status are unstated and ambiguous.

While the cost of challenge may be comparable in these two institutions, the attractiveness of outside options differs considerably. Balance of payments lending, the policy area of the IMF, has been generally dominated by the IMF, with occasional assistance from other international financial institutions and creditor states.⁴⁷ In comparison, in the field of development lending, myriad regional development agencies⁴⁸ perform functions similar to the World Bank, and a host of creditor states provide bilateral development assistance through domestic aid agencies. Hence, a state dissatisfied with the World Bank has myriad other venues through which it can distribute or receive foreign aid. In comparison, outside options in balance of payments lending are quite limited. I provide a full account of the reasons for these differences in Lipsy (2008).

As predicted by the model, renegotiation has been relatively frequent for both the IMF and World Bank. Voting shares have been renegotiated in both institutions on a general basis about once every five to seven years, and ad hoc adjustments have been made for individual countries on a case by case basis. However, voting shares have adjusted more meaningfully in the World Bank and in line with underlying shifts in economic weight compared to voting shares in the IMF. Figure 6

⁴⁷ An interesting exception is the Arab Monetary Fund, which 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 amounted to about \$4 billion (Arab Monetary Fund, 2003), 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.

⁴⁸ Among others, one may point to 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.

provides a simple illustration of this point. The figure depicts correlations between current voting shares and lagged voting shares in the IMF and World Bank over 1, 2, 3, 4, 5, and 20 year time horizons (data are for 1975-2005). As the figure shows, IMF voting shares have been considerably less likely to change over time compared to those in the World Bank. Although renegotiation of IMF shares has occurred frequently since inception, the outcomes have been less responsive to shifts in economic power and tend to more closely mirror *ex ante* distributions. Statistical analysis of IMF and Bank shares shows that IMF shares are more autoregressive across time periods and less likely to increase when a member state experiences relative growth in economic indicators such as GDP, foreign exchange reserves, and shares of world trade (Lipsy, 2008).

Hence, redistributive outcomes in these two international organizations also conform to my theoretical predictions. While episodes of redistribution have been fairly common in both the IMF and World Bank, share allocations have been far more responsive to shifts in relative power in the Bank. In the IMF, dissatisfied states have been unable to exercise bargaining leverage through the threat of exit. Hence, despite frequent renegotiations, the institution has remained comparatively path dependent to the advantage of early members.

IFAD

The International Fund for Agricultural Development (IFAD) is one of the specialized agencies of the United Nations, established in 1977 during the aftermath of the 1974 World Food Conference.⁴⁹ That Conference had been organized to brainstorm an effective response to the food crises of the early 1970s that primarily affected the Sahelian countries of Africa; its outcome was the setting up of IFAD to “finance agricultural development projects primarily for food production in

⁴⁹ <http://www.ifad.org/governance/index.htm>

the developing countries”, and to tackle the root causes of food insecurity and famine in the developing world.⁵⁰ The underlying aim of this new organization was to essentially provide long-term loans at low interest to small and usually very poor developing countries in order to enable farmers to improve their production methods with new plows or seeds or other methods.⁵¹ The IFAD was however dogged by controversy and major disagreement over the distribution of voting rights among its member states from the mid-1980s to 1995.

The background to the voting rights controversy was that the IFAD started out in 1977 with a system of equal voting rights coupled with unequal financial contributions for three blocs of countries: OECD, OPEC, and the rest of the world. Each bloc had one third of the voting rights, however only the OECD and OPEC blocs actually contributed money to the organization- OECD contributed 58 percent of the budget, whereas OPEC contributed the remaining 42%. The rest of the membership (from the developing world) did not contribute any funds, but nevertheless had a say as the IFAD’s activities were geared towards their countries. In IFAD terminology, the three voting blocs were defined as follows:

- Category I/List A (States members of the Organization for Economic Co-operation and Development (OECD)) - originally contributed 58% of budget.
- Category II/List B (States members of the Organization of the Petroleum Exporting Countries (OPEC)) - originally contributed 42% of budget
- Category III/List C (other developing countries).⁵²

⁵⁰ Ibid

⁵¹ Dionne, E.J., U.N. Farm Agency Settles a Dispute, New York Times, March 2, 1985.

⁵² <http://www.ifad.org/gbdocs/repl/7/iii/c/REPL-VII-3-R-6.pdf>, IFAD Consultation on the Seventh Replenishment of IFAD’s Resources- Third Session: Voting Rights of Member States and Membership of the Executive Board, Report No. REPL.VII//3/R.6, 15 June 2005, p. 1

Each bloc/category of states held one third of the total votes (600 votes each out of a total of 1,800). Any combination of voting blocs, whether OECD + OPEC, or the OPEC + List C combination of developing countries, held two thirds of the voting power, and an equal proportion of representation within the organization's Executive Board. This balance allowed the interests of both contributing countries and developing countries to be equally represented in the organization.

Divisions then arose following a decision by the OPEC bloc in the early 1980s to arbitrarily cut its share of financial contributions following the declines in oil revenues and a freeze in participation by Iran, Iraq, and Libya for geopolitical reasons. The OPEC move was met with an angry reaction from the Reagan administration, which already held a dim of the United Nations and its specialized agencies and had withdrawn the U.S. from UNESCO around the same time. The United States, along with other OECD countries, threatened to cut contributions to the IFAD unless balance was restored.

IFAD is essentially a development lending institution, much like the World Bank. Although the institution specializes in food security issues, similar lending is often provided by other non-specialized bilateral and multilateral aid agencies. Hence, there are plenty of attractive outside options available for member states. However, unlike the World Bank, the internal rules governing the voting structure of IFAD were extremely rigid at inception, making a challenge costly. Article 6, Section Three⁵³ of the governing document of IFAD dictated a static allocation of votes in which each of the OECD, OPEC, and developing countries maintained one third of the institution's voting power. A change to the voting rules required a four-fifths majority of votes, effectively

⁵³ Article 6, Section 3, stipulated that "The total number of votes in the Governing Council shall be 1 800, distributed equally among Categories I, II and III. The votes of each Category shall be distributed among its members in accordance with the formula set out for that Category in Schedule II, which forms an integral part of this Agreement." According to Schedule II of the Agreement (prior to amendment), within each category, the 600 votes were divided among individual Members as per the 3 voting blocs mentioned earlier in the paper.

necessitating consensus among the three voting blocs. Hence, IFAD was an institution characterized by attractive outside options but rigid internal rules governing redistribution.

As predicted by the model, this led to the effective exit of dissatisfied OECD states from the institution. In the mid-1980s, OECD states sharply curtailed their funding of IFAD, reducing the resources available to the institution by about 45%.⁵⁴ OECD countries continued to demand a greater share of voting rights as a condition for further contribution of funds to the institution.

The controversy raged on until 1995, when the IFAD member countries agreed, by consensus, to amend Article 6, Section Three⁵⁵ of the original 1977 Agreement establishing IFAD, which governed the institution's voting structure. During negotiations in February 1994 for IFAD's Fourth Replenishment, the Governing Council decided to begin a review process with the following seven new proposals in mind:

- “(i) There should be a link between individual contributions and voting rights so as to provide an incentive to all Member Countries to increase their contributions to IFAD's resources;
- (ii) The total votes should be divided into two parts: membership votes, which would be distributed equally among Members, irrespective of the level of their contributions; and contribution votes, which would be distributed in accordance with cumulative payment of contributions;
- (iii) All Member Countries of IFAD should have equal access to both membership and contribution votes;
- (iv) The important role of developing countries in the governance of IFAD should be preserved. This was to be done by dividing the total votes between membership and contribution votes in such a way as to ensure that those Members of the current Category III always receive one-third of the total votes as membership votes;
- (v) To create sufficient incentive, it was agreed by the Members that there has to be a balance between the weight given to past and future contributions;
- (vi) The application of these principles would produce outcomes that are category or country-group neutral; and

⁵⁴ Dionne, E.J., U.N. Farm Agency Settles a Dispute, *New York Times*, March 2, 1985.

⁵⁵ Article 6, Section 3, stipulated that “The total number of votes in the Governing Council shall be 1 800, distributed equally among Categories I, II and III. The votes of each Category shall be distributed among its members in accordance with the formula set out for that Category in Schedule II, which forms an integral part of this Agreement.” According to Schedule II of the Agreement (prior to amendment), within each category, the 600 votes were divided among individual Members as per the 3 voting blocs mentioned earlier in the paper.

(vii) On the question of arrears in making payments against contributions, for the purpose of calculating voting rights, Members' contributions should continue to be adjusted to take into account the non-payment of contributions and non-payment against drawdown calls of the promissory notes."⁵⁶

These proposals were adopted by the IFAD Governing Council in January 1995. This led to a sharp increase in the voting share of OECD countries from 33.3% to about 50%, a level roughly commensurate to the OECD share of world GDP. Financial contributions to the institution increased considerably as a result of the rule change, a point underscored in IFAD's Annual Report:

"The Fund's formal governance structure of three Categories with fixed membership was eliminated and Member States can now choose to align themselves in informal constituencies of flexible composition. This has important implications for future replenishments of the Fund by eliminating the whole question of "burden-sharing" among Categories of Membership, previously a hindering element in replenishment negotiations."⁵⁷

Prior to 1995, replenishments occurred at a pace of one every six years. Subsequently, the pace has accelerated to one every 2.5 years. During the decade of 1985-1995, when the voting controversy was at its peak, there was only one replenishment of IFAD resources, totaling \$550 million. This compares to four replenishments totaling about \$2 billion during the subsequent decade.

In effect, the 1995 rule change shifted IFAD from the upper left quadrant of Table 1 to the lower left quadrant. Under the rigid voting rules established in 1977, dissatisfied OECD states chose exit by withholding and redirecting resources from the institution. After the rule change made representation more malleable, voting shares converged towards levels commensurate with underlying economic capabilities, and cooperation through the institution resumed.

⁵⁶ <http://www.ifad.org/gbdocs/repl/7/iii/e/REPL-VII-3-R-6.pdf>, IFAD Consultation on the Seventh Replenishment of IFAD's Resources- Third Session: Voting Rights of Member States and Membership of the Executive Board, Report No. REPL.VII//3/R.6, 15 June 2005, p. 3

⁵⁷ IFAD Annual Report, 1997, p. 120.

V. Conclusion

In this article, I have proposed a formal model of institutional renegotiation and applied the predictions to several prominent cases of ex post redistributive efforts. In doing so, I have also developed a theoretical framework of institutional change based on rationalist principles. Some forms of institutional change can be explained without reference to ideational change, the promulgation of norms, or unintended consequences. Such factors are undoubtedly important in some institutional contexts. However, a generalizable theory based on policy area characteristics and bargaining dynamics accounts for a significant degree of the observed empirical variation.

Institutional renegotiation will likely remain a salient feature of international relations for years to come. Much of the contemporary international organizational architecture remains skewed towards developed states and the United States in particular. The rapid growth of developing countries such as China and India will continue to shift underlying power away from states advantaged by the status quo in major international organizations. How will institutional bargains play out amidst such shifts? Will existing international organizations successfully adjust? Will the international system fragment as dissatisfied rising states choose to opt out and establish competing institutions?

While I cannot provide full answers to these questions, several observations are in order. First, power transitions in policy areas with high costs of challenge are likely to be most problematic. If states have attractive outside options, cooperation in such policy areas will likely fragment and move away from existing universalistic institutions. The proliferation of preferential trade agreements in response to gridlock at the WTO may be one manifestation of this. On the other hand, if states have unattractive outside options, international organizations will likely be sustainable

despite glaring disparities in representation and influence. Nonetheless, such conditions are likely to foster resentment and potentially delegitimize cooperative arrangements over the long-term. Such policy areas will likely require the greatest degree of creative compromise and diplomatic initiative in coming years.

The insights in this paper could be fruitfully extended both theoretically and empirically. The formal model could incorporate additional features to more closely approximate real-life bargaining, for example, by incorporating incomplete information in order to model the possibility of failed challenges or coalition dynamics in the large- n case (Chatterjee et al, 1993). These changes will not affect the basic propositions of this article – the constraining effects of outside options on redistributive outcomes – but may provide additional predictions about the factors affecting institutional change. From an empirical standpoint, much work remains to be done on institutional change, particularly in terms of less easily quantifiable measures such as influence over outcomes and ideational influence. Given the high priority placed on institutional renegotiation by government officials and policy experts in rising states, this issue will likely remain an important area of research well into the future.

Figure 1



Note: Allies include Canada, France, United Kingdom and United States. Axis includes Germany, Italy, and Japan. GDP is nominal. Data from IMF, Economics Intelligence Unit, and Rapkin et al (1997).

Figure 2

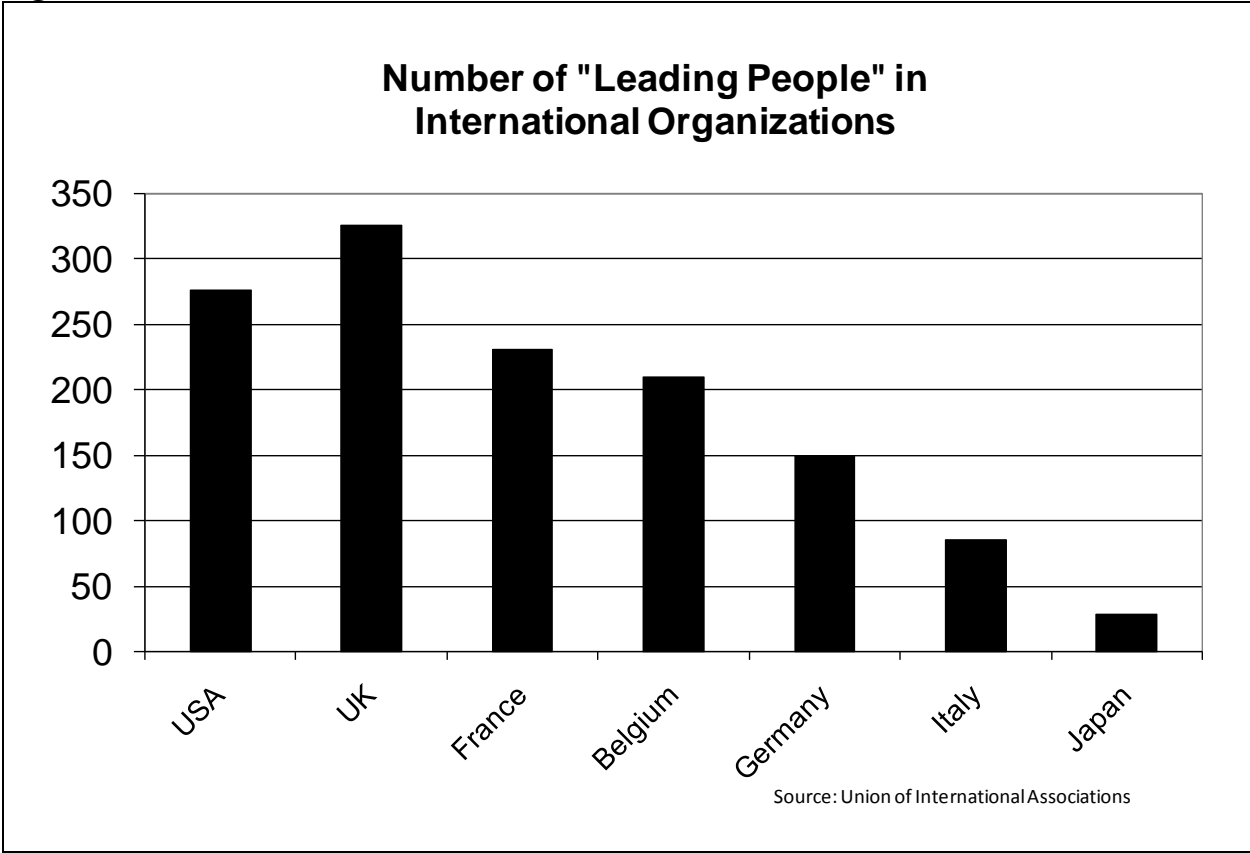


Figure 3

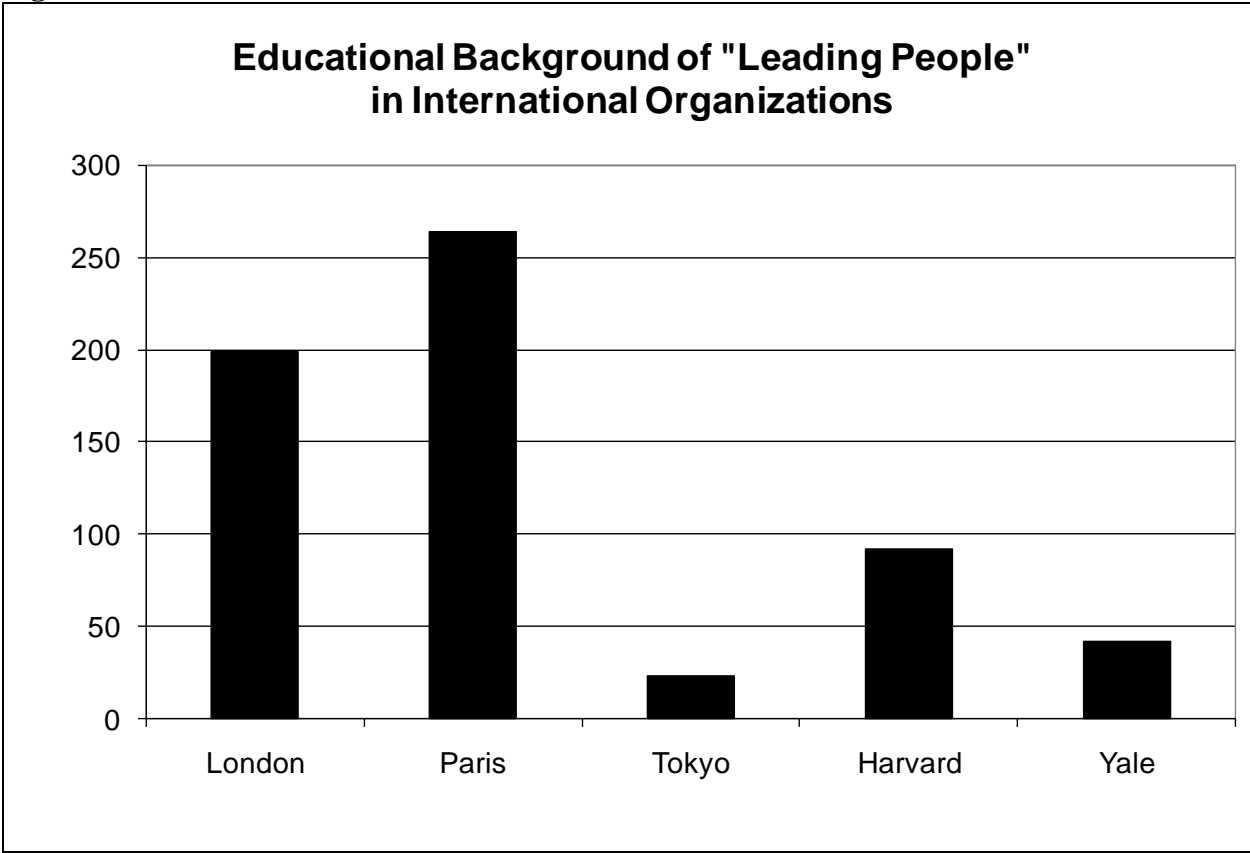


Figure 4: Game Tree

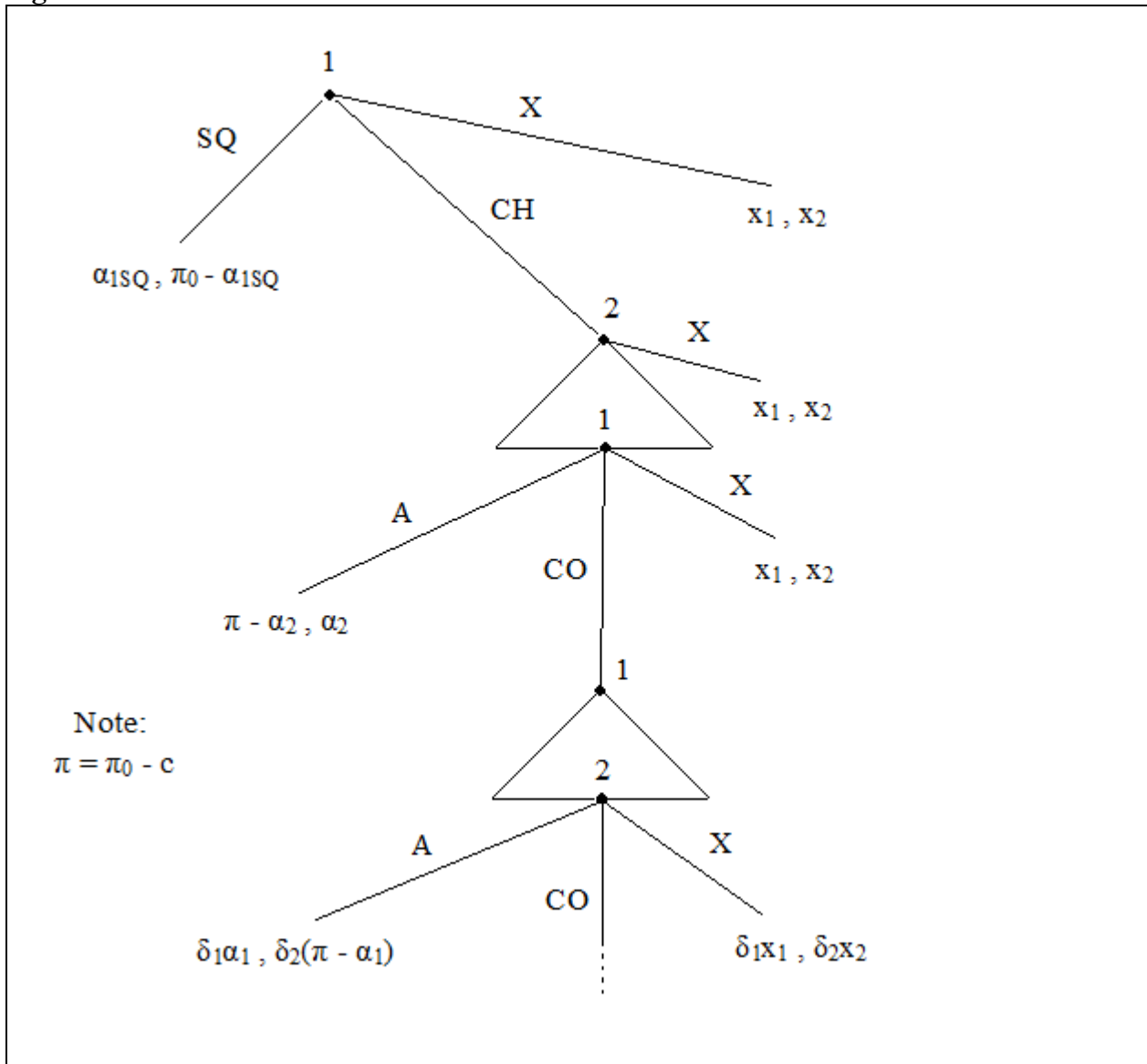
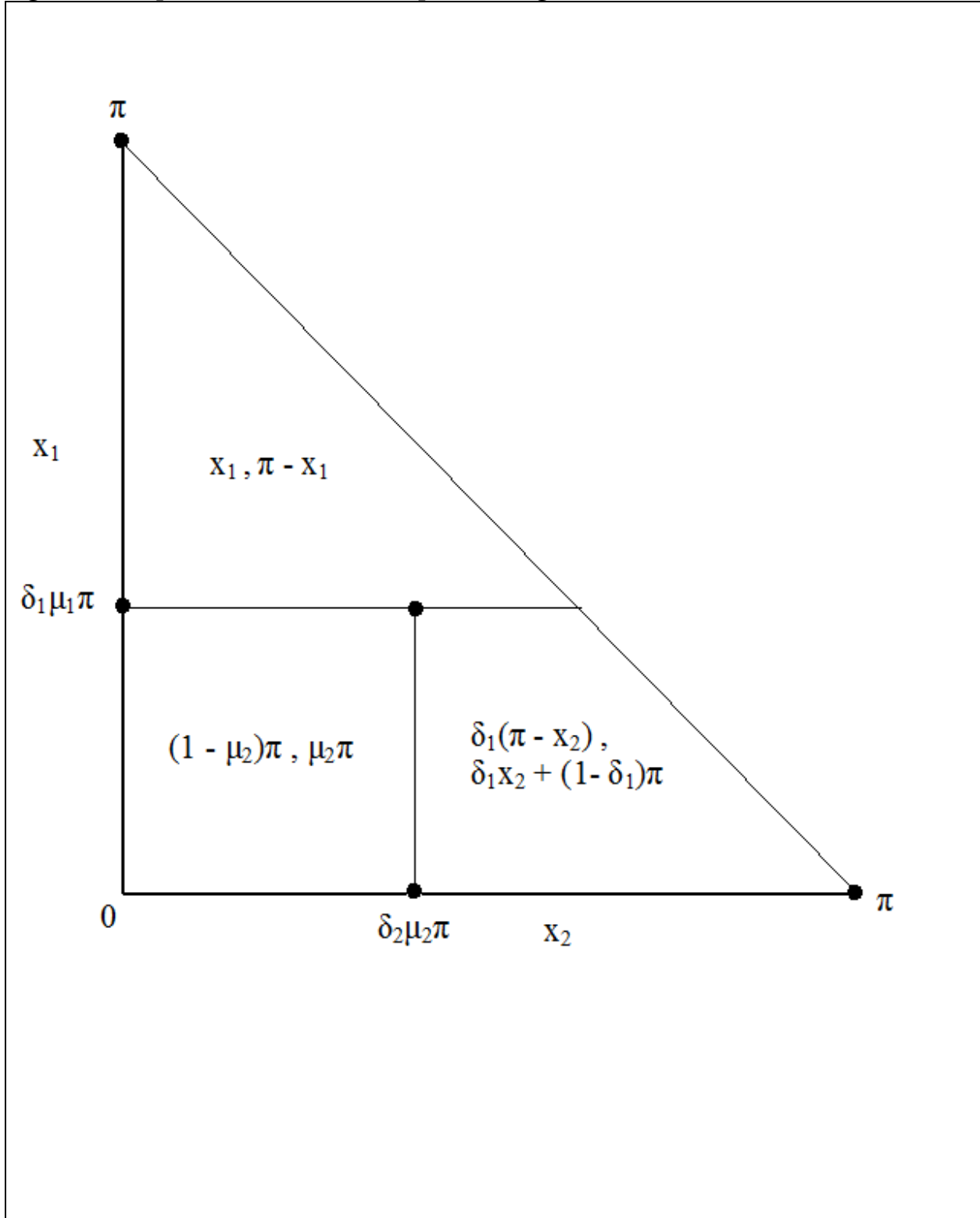


Figure 5: Comparative Statics of the Repeated Subgame



Note: Payoffs to each player are depicted within the large triangle.

Figure 6

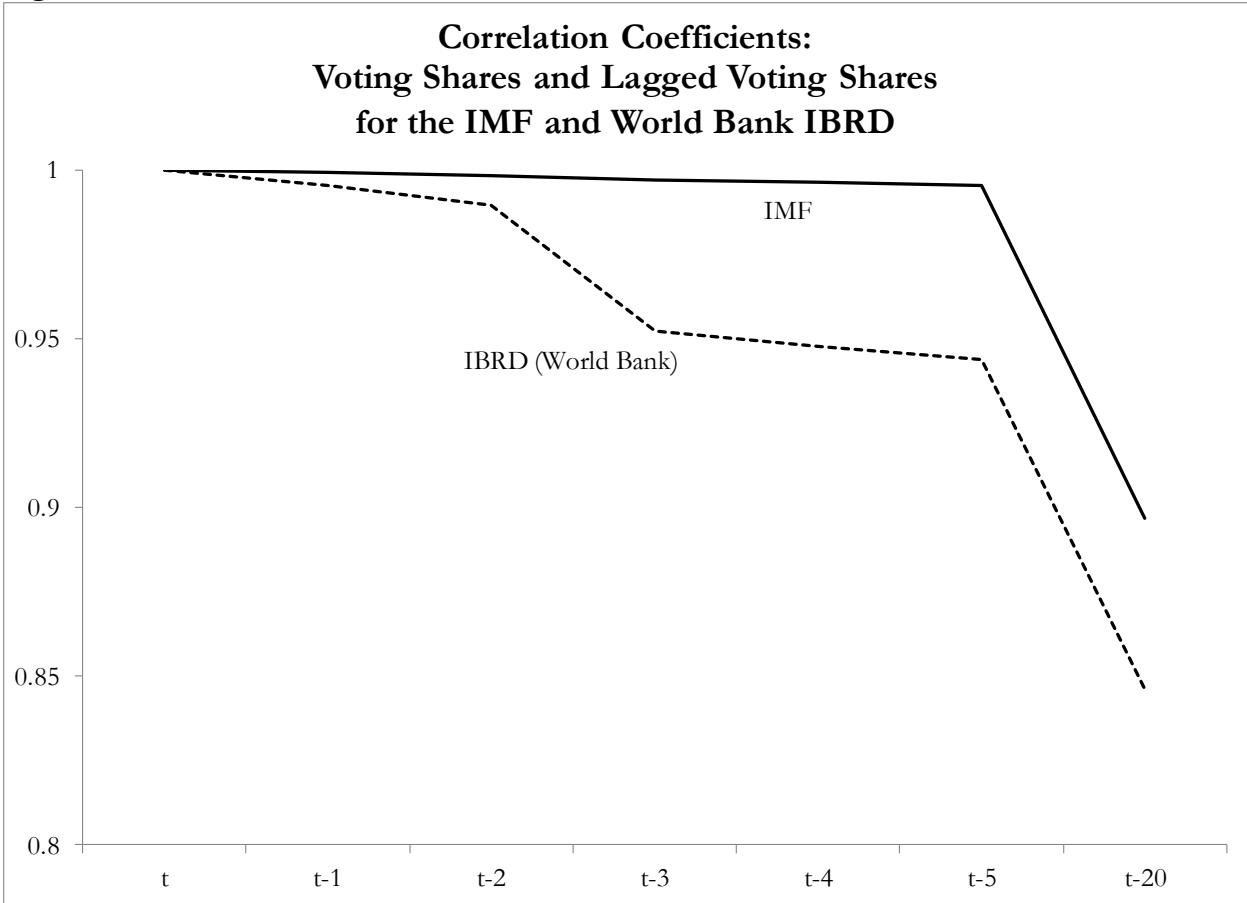


Table 1: Effects of Outside Options and Costs of Renegotiation on Institutional Change

	Attractive Outside Options	Unattractive Outside Options
High Cost of Challenge	Exit	Path Dependence of Status Quo
Low Cost of Challenge	Frequent Renegotiation, Outcomes Correspond to Relative Power	Frequent Renegotiation, Outcomes Do Not Necessarily Correspond to Relative Power

Appendix

I use subgame perfection and stationarity to derive the equilibrium conditions. I start with the subgame after 1 has initiated a challenge. The equilibrium conditions are akin to those found in Binmore, Shaked and Suttten (1989) and Muthoo (1999). Let 1 and 2's optimal offers in equilibrium at any stage of the game be denoted respectively by α_1^* and α_2^* . Given stationarity, 1 (2) chooses an optimal offer in any subgame that makes 2 (1) indifferent between accepting 1 (2)'s offer and the greater of exiting or receiving the discounted payoff from making its optimal offer in the following stage. Hence, 1's optimal offer $\alpha_1^* = \pi - \max\{\delta_2\alpha_2^*, x_2\}$. Likewise, $\alpha_2^* = \pi - \max\{\delta_1\alpha_1^*, x_1\}$. Solving for these conditions yields the following equilibrium offers:

$$\alpha_1^* = \begin{cases} \mu_1\pi & \text{if } x_2 \leq \delta_2\mu_2\pi \text{ and } x_1 \leq \delta_1\mu_1\pi \\ \delta_2x_1 + (1-\delta_2)\pi & \text{if } x_2 \leq \delta_2(\pi-x_1) \text{ and } x_1 > \delta_1\mu_1\pi \\ \pi - x_2 & \text{if } x_2 > \delta_2\mu_2\pi \text{ and } x_1 \leq \delta_1(\pi-x_2) \\ \pi - x_2 & \text{if } x_2 > \delta_2(\pi-x_1) \text{ and } x_1 > \delta_1(\pi-x_2) \end{cases}$$

$$\alpha_2^* = \begin{cases} \mu_2\pi & \text{if } x_1 \leq \delta_1\mu_1\pi \text{ and } x_2 \leq \delta_2\mu_2\pi \\ \delta_1x_2 + (1-\delta_1)\pi & \text{if } x_1 \leq \delta_1(\pi-x_2) \text{ and } x_2 > \delta_2\mu_2\pi \\ \pi - x_1 & \text{if } x_1 > \delta_1\mu_1\pi \text{ and } x_2 \leq \delta_2(\pi-x_1) \\ \pi - x_1 & \text{if } x_1 > \delta_1(\pi-x_2) \text{ and } x_2 > \delta_2(\pi-x_1), \end{cases}$$

where each player i always make the optimal offer, always accepts offer x_j ($i \neq j$) iff $x_j^* \geq x_j$, and exits iff $x_j^* < x_j$ and $\delta_i x_i^* \leq x_i$. $\mu_i = (1 - \delta_j)/(1 - \delta_i\delta_j)$. Since player 2 moves first in the repeated subgame, 2's optimal offer is accepted in equilibrium, assuming no exit. The associated payoffs are depicted in Figure Y. The first two conditions of Proposition 1 follow immediately from the equilibrium conditions.

The proof of Condition 3 of Proposition 1: As $g \rightarrow 0$, $x_1 + x_2 \rightarrow \pi_0$. If $c = 0$, $\pi_0 = \pi$. Hence, $x_1 + x_2 \rightarrow \pi$, $\pi - x_2 \rightarrow x_1$ and $\pi - x_1 \rightarrow x_2$. Since $\delta_i < 1$ for $i = (1, 2)$, $x_1 > \delta_1(\pi - x_2)$ and $x_2 > \delta_2(\pi - x_1)$. Therefore, in equilibrium $\alpha_2 \rightarrow x_2$ and $\alpha_1 \rightarrow x_1$. Hence, $\alpha_1/\alpha_2 \rightarrow x_1/x_2$.

By backward induction, 1 will challenge when the payoffs obtained in the repeated subgame are equivalent to or exceed the payoffs obtained from abiding by the status quo or existing, i.e. $\pi - \alpha_2^* \geq \max\{\alpha_{1SQ}, x_1\}$. In addition, for 2 to make an offer rather than pursue exit, $\alpha_2^* \geq x_2$. Hence, a successful redistribution will occur in equilibrium when:

$$\begin{array}{ll} \max\{\alpha_{1SQ}, x_1\} \leq (\pi_0 - c)(1 - \mu_2) \text{ and } \pi_0 - c \geq x_2/\mu_2 & \text{if } x_1 \leq \delta_1\mu_1\pi \text{ and } x_2 \leq \delta_2\mu_2\pi \\ \max\{\alpha_{1SQ}, x_1\} \leq \delta_1(\pi_0 - c - x_2) \text{ and } \pi_0 - c \geq x_2 & \text{if } x_1 \leq \delta_1(\pi - x_2) \text{ and } x_2 > \delta_2\mu_2\pi \\ \alpha_{1SQ} \leq x_1 \text{ and } \pi_0 - c \geq x_1 + x_2 & \text{if } x_1 > \delta_1\mu_1\pi \text{ and } x_2 \leq \delta_2(\pi - x_1) \\ \alpha_{1SQ} \leq x_1 \text{ and } \pi_0 - c \geq x_1 + x_2 & \text{if } x_2 > \delta_2(\pi - x_1) \text{ and } x_1 > \delta_1(\pi - x_2) \end{array}$$

Proof of Proposition 2: Note that a higher cost of challenge (c) makes a successful challenge in equilibrium less likely under all conditions. When c is prohibitively high, e.g. $\pi_0 < c$, the only possible equilibria are maintenance of the status quo or exit. If $\alpha_{1SQ} \geq x_1$, 1 will accept the status quo. If $\alpha_{1SQ} < x_1$, 1 will exit. Hence, small outside option payoffs will tend to make maintenance of the status quo more likely in equilibrium, and high outside option payoffs will make exit more likely in equilibrium.

n-player game

Assume an n player game similar to the two player game described in this paper. The players bargain over potential agreements, each contributing $x_i > 0$, $i \in \{1, 2, 3, \dots, n\}$, where the total payoff from cooperation is $x_1 + x_2 + x_3 + \dots + x_n + g = \pi_0$, $g > 0$. Also assume the existence of a status quo partition $\mathbf{a}_{SQ} = (a_{1SQ}, \dots, a_{nSQ})$ of π_0 . By some procedure, a new partition $\mathbf{a} = (a_1, \dots, a_n)$ of $\pi = \pi_0 - c$, $c > 0$, will be offered.

In any extensive form of the game, assume each player has the opportunity to exercise its outside option before accepting \mathbf{a} . If so, in any subgame perfect equilibrium resulting in redistribution, $a_i \geq x_i$ and $a_i \leq \pi - \sum_{j \neq i} x_j$, for all i .

Assume $c = 0$. As $\sum x_i \rightarrow \pi_0$, i.e., $g \rightarrow 0$, for any subgame perfect equilibrium resulting in redistribution, $a_i \rightarrow x_i$ for all i . In the extreme, as outside options become maximally attractive, the only partition that can be supported redistributes cooperative payoffs according to each player's outside option. Any exogenous shift in a player's outside option will result in a redistribution of cooperative payoffs. On the other hand, as $x_i \rightarrow 0$ for all i , i.e., $g \rightarrow \pi_0$, then for any $q > 0$, since $x_k \rightarrow 0$ then at some point $x_k < q$ so theoretically a_k can equal q and still satisfy the constraint $a_k \geq x_k$. Hence, as outside options become maximally unattractive, bargaining procedures producing any new partition \mathbf{a} can be theoretically supported. In the intermediate range, the feasible range for \mathbf{a} , $x_i \leq a_i \leq \pi_0 - \sum_{j \neq i} x_j$, expands as each x_i strictly decreases and contracts as each x_i strictly increases. Hence, a greater theoretical range of partitions can be supported as the attractiveness of outside options diminishes.

Now assume $c > 0$, such that bargaining entails some cost. As $c \rightarrow \pi_0$, no challenges are likely to occur regardless of the status quo distribution of payoffs. However, the equilibrium outcome will vary according the attractiveness of outside options. As $\sum x_i \rightarrow \pi_0$, $a_i \rightarrow x_i$. However, since $\pi < \pi_0$, $a_i < x_i$ for at least one i . Hence, unless the status quo distribution perfectly reflects the distribution of outside options, only exit can be supported as a subgame perfect equilibrium. On the other hand, as $x_i \rightarrow 0$ for all i and $c \rightarrow \pi_0$, only the status quo can be supported in equilibrium.

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