

## Balancing design objectives: Analyzing new data on voting rules in intergovernmental organizations

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**Abstract** This article presents a new data set on one of the most visible features of institutional design - voting rules. The data set covers 266 intergovernmental organizations (IGOs) that vary in size and substantive scope and includes data on IGO issue area and founding membership characteristics that complement the measures on voting rules. The article outlines the characteristics and categorization of voting rules in the data set and establishes the broader importance of voting rules by illustrating how they help states achieve four core institutional design objectives: control, compliance, responsiveness, and effective membership. The utility of the data set and patterns in the relationships between its variables are identified through the evaluation of preliminary propositions connecting institutional context and voting rule selection. The preliminary findings emerging from this analysis establish a platform for further analyses of voting rules in IGOs, as well as other dimensions of the design and function of IGOs.

**Keywords** Voting · Institutional design · International organizations · Data

In March 2011, a coalition of states led by France, the United Kingdom, and the United States commenced enforcement of a no-fly zone over Libya and the aerial bombardment of Libyan security forces in response to the Gaddafi regime's attempts to violently suppress a popular uprising. Within days, the North Atlantic Treaty Organization (NATO), which headed *operational* planning of the campaign, became embroiled in an internal conflict over who should control military operations in Libya. France, taking what many viewed as an overeager role in the bombing campaign, preferred that *political* leadership of the mission be kept out of NATO and under the control of the coalition. Meanwhile, Turkey,

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a NATO member but not part of the coalition, pushed for NATO to take full political and operational control, seeing it as a means of restricting France's ambitions and the scope of the military campaign. France's continued insistence that political control stay outside of NATO eventually led Turkey to block NATO's operational planning over Libya.<sup>1</sup>

How was Turkey able to block NATO planning and why did it believe that France's ambitions could be limited if political control shifted to NATO? The answer lies in NATO's consensus decision-making rule whereby decisions can only be taken with the full support or acceptance of NATO's membership. This requirement enabled Turkey to block operational planning, and to reject French proposals under NATO if it so desired.

This episode illustrates vividly how decision-making rules can shape the effect that intergovernmental organizations (IGOs), such as NATO, have on the course of international politics and the ability of states to further their interests through international organizations. Therefore, it is unsurprising that when states are designing new institutions, the choice of decision-making processes, and of voting rules in particular, is often an area of intense debate and contestation (Bennett 1991). The limited availability of data on voting rules across a broad range of IGOs, however, has restricted scholarly endeavors to investigate fully the determinants of voting rule design and their effects on global politics. Indeed, some notable exceptions notwithstanding (Koremenos 2012; Haftel and Thompson 2006), the general availability of data on IGO design across a variety of organizations has not kept pace with theoretical advances in the study of institutional design, with many researchers favoring studies that focus on single organizations. This trend has prompted calls for scholars to subject propositions regarding the functioning and design of IGOs to rigorous empirical testing in large-sample environments (Hafner-Burton, von Stein, and Gartzke 2008). Taking a step towards helping scholars meet this objective, this article introduces and analyzes a new data set on voting rules and several other features of intergovernmental organizations that are likely to be relevant to any study engaging voting rules in IGOs (e.g., issue area, number of founding members). The data set of 266 IGOs covers the range of IGOs in the international system today in terms of geography and issue area, allowing scholars interested in questions regarding the causes and effects of institutional design to gain considerable analytical and empirical leverage across a wide range of organizations.

In presenting the data set, this article fulfills a number of important objectives. First, it explains the data set's categorization of voting rules into three types: unanimity, majoritarian and weighted. Second, the article describes the new data and illustrates the variation across IGOs that exists in voting rules and other IGO characteristics that are also included in the data set. Third, it explains the core characteristics of each type of voting procedure and outlines the implications of each rule for states' abilities to achieve four core IGO design objectives: maintaining control over outcomes, ensuring effective membership of the IGO, promoting compliance with IGO decisions, and enabling the IGO to be responsive to its members' demands. This discussion illustrates the political and institutional significance of voting rules in IGOs and the potential utility of data on voting rules for scholars studying core issues of interest in the literature on IGOs such as control, membership and compliance. The article goes further to examine patterns in the data and illustrate the utility of the data set by using

<sup>1</sup> "Libya no-fly zone leadership squabbles continue within Nato", *The Guardian*, March 23, 2011; "Turkey and France clash over Libya air campaign", *The Guardian*, March 24, 2011.

it to explore some preliminary propositions regarding when states will be more likely to select different voting rules. These preliminary analyses reveal clear patterns in the selection of voting rules and indicate that different IGO design objectives are prioritized in different institutional contexts. That voting rule selection reflects states' broader IGO design goals strongly suggests that the data on voting rules presented here are of considerable potential utility to scholars studying institutional design more broadly, and not just those focused on decision making in international organizations.

The article is structured as follows. In the next section, we outline the motivation for collecting a data set focused on voting rules, lay out the different types of voting rules found in IGOs, and explain the connection between our classification of different voting rules and the attainment of core design objectives. In the second section, we present and describe the new data set. In the third section, we further explore patterns in the data and demonstrate how the data set can be used by evaluating several preliminary propositions regarding institutional context, design objectives and voting rule selection that emerge from the literature on institutional design. In the conclusion, we reemphasize the article and data set's contribution to scholarship on international organizations.

## 1 Voting rules

### 1.1 Why a data set on voting rules?

Voting rules are one of the most important dimensions of international organizations and this is reflected in the interest they have attracted from a wide a range of scholars studying various dimensions of the operation and design of IGOs (e.g., O'Neill 1996; Strand and Rapkin 2005; Zamora 1980; Koremenos, Lipson, and Snidal 2001; König and Bräuningner 1998; Maggi and Morelli 2006; Dixon 1983; Steinberg 2002). What lends voting rules their importance is that by directly shaping the formal decision-making process, and the distribution of power within that process, they shape the extent to which states are able to achieve their objectives vis-à-vis their membership and participation in an IGO. Indeed, as we discuss below, voting rules influence the ability of states to: a) retain control over IGO decisions and outcomes as well as the distribution of gains and burdens among the IGO's membership;<sup>2</sup> b) ensure that IGOs attract the members necessary to function effectively (e.g., major powers); c) ensure compliance with IGO decisions that require states to deviate from their most preferred policies and actions;<sup>3</sup> d) enable an IGO to respond promptly and effectively to the demands of its membership, particularly as circumstances and conditions evolve.<sup>4</sup> It

<sup>2</sup> Joining an IGO involves a limitation of sovereignty because decisions taken by the IGO that affect state interests and welfare are made by a collective decision-making body of which each state is but only one member (Hawkins et al. 2006). Therefore, states have an incentive to maximize their influence in the decision-making process and thus their control of the IGO.

<sup>3</sup> IGOs are often portrayed as promoting greater inter-state cooperation, which, by its very nature, entails the mutual adjustment of behavior by cooperating partners (Keohane 1984; Koremenos, Lipson, and Snidal 2001).

<sup>4</sup> While *not* an exhaustive list of the aims that states pursue in the design of IGOs, the four goals identified here are primary objectives driving state design preferences and they represent the conceptual core of many other objectives that states pursue that are more specific to particular issue areas and contexts within which IGOs operate.

is through their ability to affect these core state objectives—control, effective membership, compliance, responsiveness—that voting rules are elevated from a procedural detail to a defining feature of how an IGO operates and furthers its members' individual and common interests.

The broad relevance of voting rules makes the development and publication of data on their selection collected from a wide range of IGOs a significant contribution to empirical research on the design and operation of international organizations. Moreover, voting rules in the data set are coded and grouped into one of three categories based on features that shape how they affect the core design objectives outlined above. Thus, the data set provides information on voting rules that will enable users to draw inferences from the data about the likely attainment of these primary design objectives.<sup>5</sup> For this reason we expect the data to be relevant to scholars studying a broad range of IGO related questions. For example, data on voting rules that sheds light on IGOs' responsiveness to changing circumstances or the likelihood that an IGO's members will comply with its decisions will be relevant to scholars studying issues of IGO effectiveness and performance, an area of research that has recently gained prominence in IO scholarship (Gutner and Thompson 2010). Similarly, as the data set on voting rules provides insights about the ease with which governments can attain various objectives such as control over IGO policy, it is likely to be informative for scholars studying "forum shopping" and seeking to explain why states choose to work through some IGOs instead of others (e.g., Alter and Meunier 2009; Gehring and Faude 2013). More generally, there is a rich and ongoing program of research that seeks to identify and explain differences in the design of international institutions (e.g., Goldstein et al. 2000; Koremenos, Lipson, and Snidal 2001, hereafter KLS). While this literature has acknowledged that decision-making procedures are an important area of IGO design, a wide-ranging analysis of the determinants of voting rule design across a broad range of IGOs has yet to be conducted and the data set presented here will facilitate this analysis. Another stream of research has begun to examine the relationship between transnational actors, such as NGOs, and IGOs (e.g., Steffek, Kissling, and Nanz 2008; Tallberg et al. 2013) and the data set can potentially shed light on the relative openness of IGOs to these transnational actors, as different voting rules may be more or less associated with greater access to IGOs. Finally, the coding approach employed will enable scholars to use data on voting rules to investigate when and how states pursue broader design objectives and how they manage trade-offs between those objectives. Our preliminary analysis below provides an indication of how this can be done using the data.

Some readers may wonder about the depth of importance of voting rules in all IGOs given that in some organizations formal voting is relatively rare with decisions reached through informal consensus. However, even in the absence of formal voting, voting rules still play a critical role in shaping IGO policy and decision making. States are aware of the distribution of voting power and the likely outcomes of a formal vote and this casts a shadow over negotiations where states know that they will either be

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<sup>5</sup> We acknowledge that multiple IGO design features can help states manage these core objectives. For example, enforcement mechanisms such as formal dispute settlement procedures can encourage compliance with institutional commitments (e.g., Smith 2000). However, perhaps more than any other feature, voting rules directly affect the attainment of all four and are present in nearly all IGOs.

disadvantaged or favored by a decision that reverts to the default rule in the absence of an informal consensus (O'Neill 1996; Steinberg 2002; Ferguson 1988). Furthermore, it is not uncommon for states to eschew a formal vote if it is evident that under an IGO's voting procedures sufficient support for a proposed measure exists (Footer 1996/7; Tsebelis 1996). Decisions taken by consensus in IGOs do not always reflect genuine unanimous support by all states. Rather, they indicate an awareness among member states that under the IGO's voting procedures sufficient support for a proposed measure exists to pass it and therefore opponents see little value in forcing a formal vote and/or officially noting their opposition to the measure. Footer (1996/7, 688) notes that in the International Monetary Fund (IMF), decision by consensus does not mean "that weighted votes are irrelevant. On the contrary, such consensus indicates that a position adopted at a Board meeting is supported by the executive directors, who have sufficient votes to carry the issue, if it were put to a vote."<sup>6</sup> This phenomenon is echoed across IGOs, such as in the Inter-American Development Bank, where even though most decisions are made by consensus, loan proposals have been rescinded because of a failure to achieve sufficient support if a formal vote were to be taken (Tussie 1995, 30). Thus, even in the absence of voting, voting rules still shape decision making within IGOs.

## 1.2 Voting rules

Intergovernmental organizations are an important subset of international institutions. They can be formally defined as those international organizations that have three or more member states, host regular plenary sessions, and possess a secretariat and headquarters (Pevehouse, Nordstrom, and Warnke 2004). Nearly all IGOs maintain some voting rule through which decisions are taken by member states on behalf of the IGO. While these rules can take many different forms, they can be grouped into three broad categories – unanimity, majoritarian, and weighted – based on two core traits: how egalitarian they are and the ability they afford individual states to block undesirable outcomes (Steinberg 2002). Equality relates to the evenness of the distribution of voting power among member states (König and Bräuninger 1998; Feld, Jordan, and Hurwitz 1994). When votes are distributed equally, each member state has the same voting power, whereas an unequal distribution of votes provides some states with greater voting power than others. The ability to block refers to whether the voting power allocated to states primarily enables them to push the IGO towards a decision, in which case the capacity to block is restrained, or the voting rule gives states greater ability to prevent the IGO from reaching decisions and taking action, in which case blocking power is advanced.<sup>7</sup>

A *unanimity* voting rule is present in an IGO when votes are distributed equally and each state has the power to individually block a proposal (veto power). As a result, decisions can only be taken with unanimous approval or consent. Under *majoritarian* voting procedures, voting power is also distributed equally, as each state has one vote or each state's vote carries the same weight (Steinberg 2002). However, the ability to block is more limited as no single state has the capacity to block or prevent institutional

<sup>6</sup> See Tsebelis (1996) and Tsebelis and Garrett (2001) for a similar argument regarding voting in the Council of the EU.

<sup>7</sup> For similar perspectives see Coleman (1971) and Dixon (1983).

decisions. If a state wishes to prevent a decision, it must form a sizable blocking coalition with other states. Majoritarian decision rules may use a range of thresholds for policy adoption, which include simple and super majorities. However, in most IGO cases, the decision rule is simple majority, and the blocking coalition must therefore exceed the size of the coalition in favor of a measure in order to successfully prevent its passage.

*Weighted* voting refers to those voting practices where some members of the institution have greater voting power than others, giving the former greater influence over IGO decisions. The uneven distribution of influence that emerges from weighted voting means that it is necessarily unequal, although the extent to which voting power is asymmetric varies across IGOs. In terms of the capacity to block, weighted voting procedures have the potential to foster or prevent outcomes. Weighting can expedite decision making because no state has formal veto power and it affords certain states greater voting influence, thus enabling them to push through decisions more easily, often without having to gather the support of a large number of states. Conversely, weighted voting is associated with blocking power as those states whose votes are most heavily weighted may be in a position to obstruct decisions, or at the very least, make passing measures with which they disagree very difficult by forcing those in favor of the policy to build a large coalition to counterbalance their voting power. Thus, blocking power is distributed unevenly with those states maintaining a larger share of the votes possessing a greater capacity to block.

We acknowledge that other attributes of voting rules exist but we choose to focus on equality and blocking capacity in our categorization of voting rules because, as we illustrate below, these attributes directly affect how voting rules shape the attainment of core IGO design objectives. We further acknowledge that there is variation with respect to the precise degree of equality and blocking capacity across voting rules *within* each of our three categories, however, at a general level these attributes are broadly consistent across voting rules within each category. For example, voting thresholds can vary across weighted systems shaping states' relative influence and their ability to block. However, what our categorization captures is the more general characteristic that regardless of the threshold, voting power is unequal in all weighted systems and greater votes almost always correspond to more influence and an enhanced capacity to block as compared to majoritarian systems (Brams and Affuso 1985; Dixon 1983; Lucas 1983). Moreover, our approach enables us to capture states' broader, long-term voting rule design choices and objectives with respect to equality and blocking capacity, which, once established, typically endure even while the precise distribution of voting power across individual states may exhibit variations over time due to factors such as changes in the membership of the IGO.<sup>8</sup>

<sup>8</sup> We note that there is a rich literature dedicated to the analysis of voting rules (e.g., Shapley and Shubik 1954; Banzhaf 1965, 1966) and while a number of studies seek to uncover the precise influence of individual member states when voting in unequal systems, they are often limited to single prominent organizations (e.g., O'Neill 1996; Strand and Rapkin 2005). Our more general classification of attributes of voting rules enables us to identify what states decide with respect to the general principles of blocking capacity and equality in their voting rules and to compare those decisions across a large number of IGOs.

### 1.3 How voting rules affect state objectives in IGOs

Unanimity voting affords states considerable individual control over an IGO by allowing each state to veto any decision or action by the organization that it deems contrary to its interests. This preserves individual states' sovereignty to a great degree as no state can be forced to accept an unfavorable policy because the median voter prefers it or because a more powerful state does. Unanimity voting also makes membership in an IGO more attractive because states can rely on their veto to ensure that the IGO only takes decisions that further their interests.

With respect to compliance, Zamora (1980, 566) argues that, "the way in which decisions are made [in IGOs] will have a direct and immediate effect on the members' observance of them." In this regard, a strength of unanimity voting is that it is the optimal rule for achieving compliance when third-party enforcement is absent or weak, as is typically the case in the anarchic international system (Maggi and Morelli 2006). This is because decisions taken under such procedures are self-enforcing. Once states agree upon a particular policy, there is little incentive for noncompliance, for if such an incentive did exist it is assumed that the state would have used its veto to block the passage of the policy.<sup>9</sup> However, unanimity voting often hinders IGO responsiveness. The need to find a universally acceptable outcome means that unanimity voting is often associated with gridlock, hindering the ability of IGOs to respond quickly and effectively to the shifting demands of their members. This is particularly so if those demands require "deep" cooperation involving significant adjustments in states' behavior as the need for full approval leads to lowest common denominator outcomes and "shallower" cooperation (Zamora 1980, see also Downs, Rocke, and Barsboom 1996).

The low level of responsiveness associated with unanimity can potentially lead to lower compliance rates in the *long run* if preferences shift considerably over time for a significant number of states such that they no longer wish to comply with past policies agreed by the IGO and other members are sufficiently satisfied with the status quo that they are willing to use their veto to prevent any attempt by the dissatisfied states to reshape past policy commitments to better meet their current preferences. While this may occur, it is unlikely to be very prevalent for two reasons. First, those dissatisfied states can strategically threaten to veto future proposals before the IGO if the satisfied members refuse to renegotiate past policy commitments with which the former are no longer willing to comply. Second, many policies are not set in stone, but contain provisions for expiration, renewal and revision, which provide dissatisfied states with an opportunity to reshape those policies. Thus, while unanimity voting's positive impact on compliance may diminish over time, it is unlikely to diminish so frequently and to such an extent that other voting rules represent better alternatives to promote compliance.

When compared to unanimity voting, majoritarian rules present a much greater potential loss of control over institutional decisions to other states (Haftel and Thompson 2006; Moravcsik 1998). Members run the risk of facing the tyranny of the majority and if they anticipate being in the minority this can act as a deterrent to

<sup>9</sup> We note that unanimity voting does not completely solve compliance problems and situations exist in which states have incentives to defect—especially when free-riding on others' compliance is profitable—but unanimity offers the best option of the three voting rule types to promote compliance.

membership. The potential for such a dynamic was evident during the creation of global institutions such as the United Nations (UN) Convention on the Law of the Sea (Zamora 1980), and smaller organizations such as the International Bauxite Association (IBA) (Pollard 1984), where developed countries protested actively against the use of majority voting which would put them in a minority position against developing countries. In the case of the IBA, its fellow founding members consented to the wishes of Australia (the only developed founding member) for unanimity voting in order to ensure its membership (Pollard 1984).

Compliance is potentially problematic under majoritarian voting because those states in the (losing) minority, or whose preferences diverge considerably from the median state, are prevented from exerting significant influence on institutional decisions. Faced with outcomes that are far from their ideal points, these states will be tempted to not comply with decisions taken by the institution. However, under majoritarian voting, the equal distribution of votes means that many states may anticipate that they have a chance of being in the winning coalition part of the time and will therefore have a greater incentive to abide by decisions of the IGO so as not to undermine the organization as whole (KLS). A strength of majoritarian voting is its capacity to promote IGO responsiveness as no state, and often no coalition of a small subset of the IGO's membership, has the ability to block decisions. Thus, decisions can be taken more quickly and they can be more far-reaching in terms of what they call upon states to do to further the IGO's objectives.

The asymmetry of voting power under weighted voting translates into an asymmetry of control with states whose votes are heavily weighted maintaining greater control over institutional outcomes than those states whose votes carry little formal weight. Institutional responsiveness under weighted voting can be high or low depending on how closely aligned the preferences of those states with the greatest voting power are. For instance, during the Cold War, the UN Security Council was often rendered ineffective by disagreements between the US and the Soviet Union, both of which benefited from the privilege of possessing one of only five rights of veto awarded to members of the Security Council. However, the IMF has been very active since its creation following the Second World War as developed states, possessing the majority of votes, have consistently agreed over the broad framework of goals that the IMF should pursue (Zamora 1980), allowing the IMF to adapt and deepen its involvement in members' economies over time.

KLS argue that "important" states whose institutional contributions are significant will not concede to equal voting power and control with other less important states. This suggests that majoritarian voting procedures work against securing the membership of particularly important states. However, weighted voting makes effective membership more likely as those states whose role and contributions to the IGO are essential to the organization's success are typically given greater voting power and are thus more willing to join and actively participate in the IGO. A weakness of weighted voting is that the probability of compliance is lower than under other voting rules because those states with little voting power are unlikely to be able to exert significant influence on decisions in most instances, giving them little incentive to comply with decisions that they oppose (see McIntyre 1954).

This discussion, summarized in Table 1, illustrates that voting rules are central to the attainment of states' overall institutional design objectives and help shape the



**Table 1** Voting rules and IGO design objectives

Design objective	Unanimity	Majoritarian	Weighted
Control	+	-	+/-
Effective membership	o	-	+
Responsiveness	-	+	+/-
Compliance	+	o	-

(+) - Voting rule helps attain design objective

(-) - Voting rule hinders the attainment of design objective

(o) - Voting rule has a neutral effect on design objective

(+/-) - Effect varies across IGO members and circumstances

functioning and membership of IGOs. Moreover, it is apparent that no voting rule enables states to attain all four design objectives and therefore the selection of voting rules will play a major role in determining the ease and extent to which an IGO's membership will be able to meet each objective. Until now, there has been a dearth of data available on voting rules across IGOs to enable scholars to investigate fully the trade-off between objectives entailed in voting rule selection, as well as other questions pertaining to: a) the determinants of voting rule design in IGOs; b) how voting rules shape the operation and functioning of IGOs; c) how voting rules affect an IGO's impact on international politics and global security, economic, social and environmental issues. It is to enable scholars to address such questions across a wide range of IGOs that we have developed a data set on voting rules and other IGO features, which we describe below.

## **2 Data set: "Voting rules, founding membership and issue area in intergovernmental organizations, 1944-2005"**

The data set contains cross-sectional information on the original voting rules, issue area, and founding membership for IGOs created between 1944 and 2005. The observations in the data set were drawn from the Correlates of War (COW) IGO membership data set (Pevehouse, Nordstrom and Warnke v.2.3). To qualify as an IGO in the COW data set an organization must have a minimum of three members, possess a permanent secretariat and hold regular plenary sessions at least once every 10 years. There are a total of 338 IGOs established after 1943. The COW IGO data set identifies 348 IGOs established post-1943; however, our data collection efforts reveal that 10 of these IGOs do not meet the definitional criteria laid out above at their founding (e.g., the Inter-American Tropical Tuna Commission had only two members at its inception in 1949 although its membership later grew). Given our focus on the original design of voting rules in the IGO when founded, we exclude these ten organizations from our data set. Our data set also excludes four IGOs, which were not founded by independent states but by colonial powers acting on the behalf of multiple colonial territories that would later become independent members of the

organizations.<sup>10</sup> This leaves a universe of 334 IGOs; however, the unavailability of voting rule data for some of the 334 organizations restricts the number of IGOs with voting rule data to 266, or 80 % of post-1943 IGOs. We address the issue of missing data further below, but now turn to describing each of the variables in the data set.

## 2.1 Voting rules in IGOs

Information on voting rules was gathered from primary and secondary sources. Article 102 of the United Nations Charter requires that all international treaties which are entered into by a UN member state be registered with the UN Secretariat and should thus appear in the United Nations Treaty Series (UNTS). Despite this requirement, large numbers of international agreements establishing IGOs have not been filed with the UNTS, and therefore we turned to a number of alternative sources, including constitutional documents, declarations and statements made publicly available by the institutions themselves, or printed in international law journals and international legal compendia such as *International Governmental Organizations Constitutional Documents* (Peaslee 1974) and *Basic Documents of African Regional Organizations* (Sohn 1972). Through analysis of these documents and sources and their articles and statements on voting, IGOs were coded as having either unanimity (0), majoritarian (1), or weighted (2) voting rules, in accordance with the definitions of these categories outlined above. We also have a fourth category, no rule (9), which applies when an IGO, at its founding, does not specify a voting rule for its supreme decision-making body. In such cases, the founders specify that the body will determine its own rules of procedure or the organization as a whole will determine those rules at a later date. Such instances are relatively rare and account for only nine of the 266 IGOs for which we found clear information on voting rules and thus, while we include them in the data set, we don't include them in our analysis of the data below.

The distribution of voting rules across IGOs in the data set is presented in Table 2, while Fig. 1 displays the distribution over time. Figure 1, in particular, reveals that states have not shown a clear preference for one voting system over another, as there has been consistent variation in voting rules across IGOs over time. However, there is a notable drop in the number of new organizations adopting weighted voting rules compared to the number of new IGOs selecting majoritarian and unanimity procedures since the late 1970s.

It is important to note that the data set contains information only on the initial design decision over voting rules in each institution. Depending on one's research objectives, this may be regarded as a limitation. However, while organizations and their rules may evolve over time, voting systems are one of the basic foundational characteristics of IGOs, typically enshrined in IGOs' constitutional documents, and therefore they are very difficult to change.<sup>11</sup> Thus, it is very rare that members of an IGO will exchange one voting system for another, often preferring instead to make smaller changes within

<sup>10</sup> These excluded IGOs are identified in the codebook accompanying the data set. Codebook and data can be found at this journal's web page.

<sup>11</sup> Measures amending an organization's charter and/or its core rules of procedure often require at least a supermajority and many times unanimous agreement for passage.

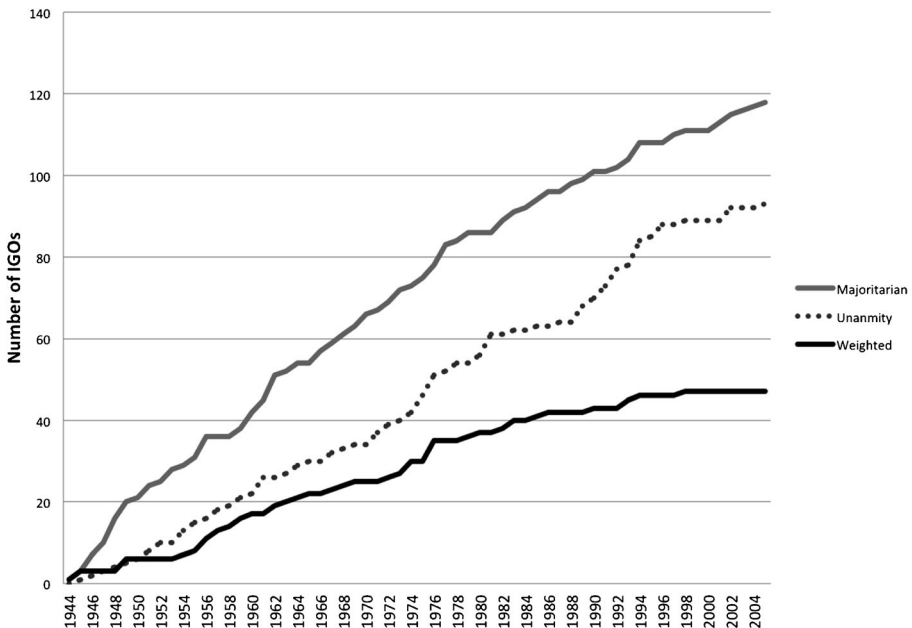
**Table 2** Distribution of voting rules in 266 IGOs

Voting rule	Number of IGOs	Percentage of sample (%)
Unanimity	92	35
Majoritarian	118	44
Weighted	47	18
No rule	9	3

the existing system (e.g., re-allocating weights within a weighted voting system). Indeed, many of the oldest and most prominent IGOs have not changed their voting rules since they were founded. Examples include the IMF, World Bank, World Trade Organization (WTO), Gulf Cooperation Council, Organization of Petroleum Exporting Countries (OPEC), and the International Atomic Energy Agency. It follows that the voting rule the founders of an IGO select when an organization is first created is likely to be the most important design decision with respect to determining how decisions are taken within an IGO by its member states.

### 2.1.1 Complexity vs. general applicability

Scholars with detailed knowledge of decision making in particular institutions, particularly structurally complex IGOs such as the European Union (EU), may be concerned that the coding approach adopted—by identifying a single voting rule per IGO—masks important areas of complexity and variation in how decisions are made within IGOs. For example, several organizations in the data set provide for two or more voting rules for different types of issues and

**Fig. 1** Distribution of voting rules over time

procedures. Furthermore, many IGOs consist of multiple decision-making bodies or organs and different bodies may adopt different voting rules.

The coding rule we adopt to address the issue of multiple decision-making bodies within IGOs is to focus on a single body: the institutional organ that commands greatest authority over the IGO and the main substantive issues before the organization. This is typically the supreme decision-making body as defined by the IGO's founding charter.<sup>12</sup> Examples of supreme decision-making bodies include the Council in the EU, the Ministerial Conference in the WTO, the Council in the League of Arab States, and the Assembly of Heads of State and Government in the Organization for African Unity/African Union. There are two reasons for focusing on the supreme decision-making organ. First, while IGOs vary greatly in their organs and structure, they almost always possess an executive body that has *full* representation of the IGOs' membership. The widespread presence of such a body makes it a point of comparison across IGOs and increases the validity of the data collected because we can be confident that we are collecting the data on IGO organs that perform largely similar roles within their institutions. Moreover, the full representation on the supreme decision-making body means that the impact of restrictive membership on the operation of voting rules that can apply to other IGO bodies is not an issue. Second, while decisions are delegated by the supreme body to other organs and bodies, the supreme body typically establishes the core policy direction of the IGO, sets the agenda for other organs to pursue, and those other organs are accountable to the supreme body. Thus, for member states, the supreme body is the source of influence and control over the organization and decisions taken within that body are likely to have the greatest effect on states' interests and the attainment of design objectives. For example, the Economic Community of West African States (ECOWAS) is one such IGO where multiple bodies are tasked with decision-making responsibilities. Yet, it is the Authority—ECOWAS' supreme decision-making body—that maintains the ultimate responsibility for policy in the organization, and while ECOWAS' Council of Ministers may make binding policy decisions, it is ultimately accountable to the Authority.

With respect to instances where decision rules within the supreme decision-making body vary by subject or issue, we code the voting rule that is applied for standard policy decisions and regular substantive issues that appear before the body. We believe that most scholars will be interested in substantive as opposed to procedural decisions, as the former typically require states to adjust their behavior and affect state interests; in other words, the substantive issues are those that most directly address the cooperation and coordination problems in international relations for which the IGO was established. We also focus on "regular" business because we believe most scholars will be interested in how IGOs make decisions about matters of policy and action, and how they carry out their regular functions. Thus, we do not code voting rules for extraordinary measures such as deciding the accession of new members.<sup>13</sup> Finally, an advantage of coding the voting rule used for normal decisions on policy and substantive matters is that it makes no assumptions about the specific content of the issues and

<sup>12</sup> The data set contains the name of this body for each IGO.

<sup>13</sup> For example, in the Southern African Development Community, all policy decisions are taken by unanimity; however, the voting rule shifts to a majoritarian one (with a threshold of three-quarters) when voting over amendments to the treaty. Since treaty amendments are not the regular business of IGOs, we code the unanimity rule.

subjects addressed by the IGO and thus enables scholars to compare how decisions are made on policy and substance across a very diverse group of IGOs that engage a wide variety of subjects.

By following these coding rules regarding multiple voting rules and voting bodies, we are able to capture the voting rule in each IGO that governs decisions that have the greatest influence on member states' policies and conduct. We acknowledge that the coding approach does not capture the full complexity of decision making within IGOs. However, it is a scheme which can be consistently applied to a diverse group of organizations and yield valid measures that are comparable across IGOs, for ultimately this data set seeks to provide scholars with a resource that allows them to compare decision-making rules across a wide variety of organizations. A more nuanced or detailed coding scheme would be difficult to apply reliably to all IGOs in the data set given the differences in how their non-supreme decision making bodies are structured and the issues and subjects they undertake. Accurate measurement of greater nuance and complexity regarding voting rules is better achieved through detailed investigations of single IGOs or small groups of similar organizations. Analyses employing our data, we believe, would greatly complement such small-N investigations

## 2.2 Other variables

Although the primary objective of the data collection effort was to build a data set with new information about voting rules in IGOs, original data was also collected on a number of other foundational characteristics of IGOs that we anticipate will be theoretically relevant to the study of voting rules and will be of interest to scholars of IGO design and creation in their own right. These variables, included in the data set, capture various characteristics regarding IGOs' founding memberships as well as their issue areas.

*Founding membership* The COW IGO data set tracks IGO membership over time; however, it does not have data on the founding membership for many of the IGOs in its data set. One reason for this is that data on IGOs founded before 1965 are collected at five-year intervals and IGOs can be established and acquire new members after being founded in between data collection points. In such cases, when an IGO first appears in the COW data set it has both founding and new members. Similarly, for some IGOs, a temporal lag exists between the founding of an IGO and its coming into formal existence following ratification by the member states and during this lag the IGO may acquire new members that were not founding members. This is not captured in the COW IGO data, which collects data on membership for most IGOs only once the IGO has formally come into operation. An IGO's founding membership is potentially important for scholars wishing to study the determinants of an IGO's initial design, and thus the new data on founding membership should complement the COW data on membership over time.

The variable *founding membership size* is a simple count of the number of founding members. To qualify as a founding member, a state must have signed the treaty establishing the IGO at its inception and fulfilled any requirements with respect to ratification. The data set also contains the identities of the members of each IGO as individual country dummy variables coded 1 when the country is a founding member.

In addition to size, there is also a dummy variable that records whether or not a *major power* was among an IGO's founding members and the *number of major powers* that were founding members (see Mansfield and Pevehouse 2006). Major power status was determined using the COW project's (Correlates of War Project 2008) classification of major powers.

Figure 2 depicts the distribution in founding membership size for IGOs in the data set. What stands out is the preponderance of IGOs that start out small, with 29 % being founded by 3 to 5 states, and 50 % founded by fewer than 10 countries. This illustrates that while a great deal of scholarly attention is directed towards larger IGOs such as the UN and WTO, these represent a small subset of the universe of IGOs created since 1944. The introduction of a data set such as this one on voting rules is an important step towards providing scholars with the data necessary to empirically analyze the design and operation of those understudied and often smaller IGOs.

*Date founded* For each IGO, we define foundation date as the year when the IGO was formally constituted. Foundation typically occurs via a formal, legal founding agreement, charter, or treaty between founding members. It is important to note that the year of foundation does not always equate to the first year of an IGO's operation, as ratification procedures can sometimes take a few years to execute after the IGO has been founded. This is one reason why the year of foundation in the data set may differ from the first year in which the IGO appears in the COW IGO membership data. A second reason is that some IGOs have informal or non-institutional antecedents, i.e. gatherings or agreements between countries that only after some years transform into formal IGOs. For some of these IGOs, the COW data set has data on membership during these early phases. However, the foundation date in the data set presented here only reflects when the IGO and its rules were first formally constituted.

*Issue area* Each IGO was classified into one of 10 broad issue categories according to its primary purpose as established by the organization's founding charter and the IGO's main activities. These 10 issue categories include international security, economics, health, transportation, labor, environment, human rights, science and education, telecommunications and multi-issue (for organizations whose main activities focus on

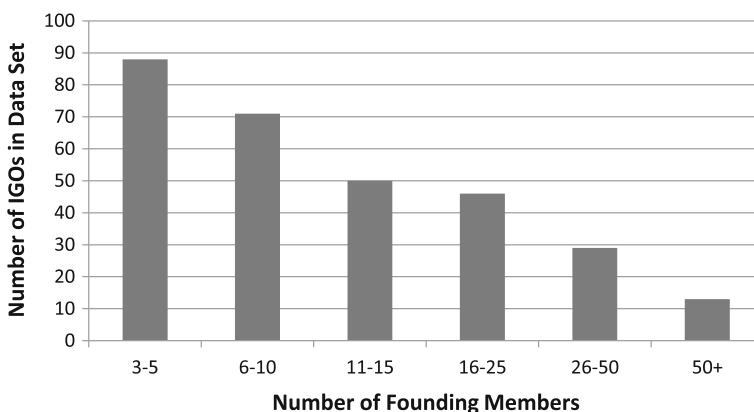


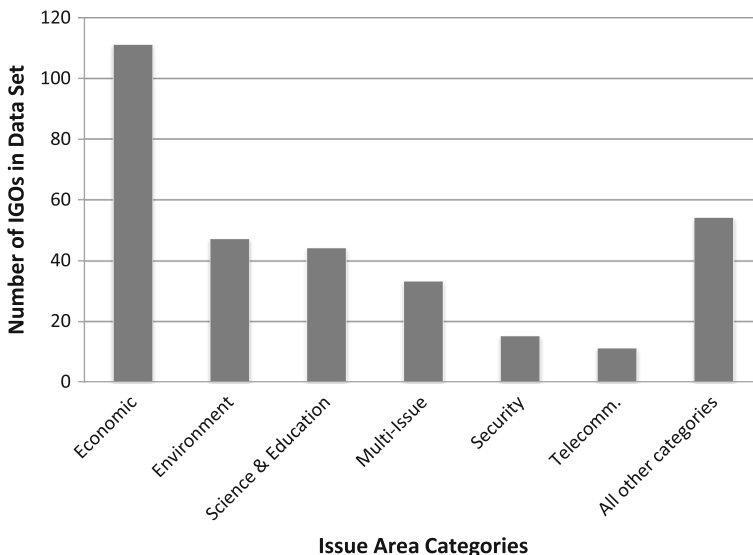
Fig. 2 Founding membership size

more than one issue area). All IGOs that do not fit into one of these 10 categories are coded as belonging to an eleventh, residual category, “other.” A separate dummy variable exists for each issue area and takes the value of 1 for any IGO whose primary activities are concentrated in that issue area. These categories are mutually exclusive with all IGOs involved in more than one core issue area categorized as multi-issue IGOs.

Figure 3 indicates that economic IGOs are the most popular type of IGO with more than twice as many economic IGOs created since 1944 than the next most popular issue area, the environment. To facilitate more detailed study of this important category of IGO, we identified two important subcategories of economic IGOs: commodity IGOs and banks/funds. We then classified economic IGOs into one of three new mutually exclusive dummy variables. The first variable, *commodity*, is coded 1 for economic IGOs that regulate the production, distribution or consumption of a single commodity (e.g., OPEC). The second, *bank or fund*, is coded 1 for all IGOs that use contributions for lending and investment purposes (e.g., Islamic Development Bank). The third dummy variable is a residual category coded 1 for all economic IGOs that are neither banks, funds, nor commodity IGOs labeled *non-commodity, non-bank economic IGOs*. We find that of the 112 economic IGOs in the data set, 26 are commodity organizations and 25 are banks or funds.

### 2.3 Missing data

Missing observations are unavoidable in most ambitious data collection efforts, especially one such as this that seeks to identify voting rules across the universe of IGOs created since 1944. However, the IGOs for which voting rule data was obtained represent 80 % of post-1943 IGOs and should enable scholars to tackle a variety of research questions because they vary



**Fig. 3** Distribution of IGO issue areas in the data set

considerably in their scope, membership, and substantive focus and thus represent the breadth and variety of IGOs in the post-war era.<sup>14</sup> Ultimately, the challenge posed by missing data will depend on how scholars wish to use the data on voting rules, and methods to manage missing data, such as multiple imputation, depend on the assumptions and variables employed in particular studies. Therefore, to enable scholars to identify those IGOs for which voting rule data was not found and to account for missing data as they deem appropriate, the data set includes all post-1943 IGOs for which voting rule data is missing and information on the issue area and founding membership of these IGOs when available.<sup>15</sup>

While the challenge and appropriate response to missing data depends on how one wishes to use the data, as a first step towards understanding the nature of the missing data, we conducted a number of difference of means tests (difference of proportions tests for dummy variables) to identify the extent to which the subsample with missing voting rule data is distinct in terms of the other variables in the data set from the subsample of IGOs for which voting rule data was available. Difference of proportions z-tests reveal that, with a 95 % level of confidence, we are able to reject the null hypothesis -that the difference in the proportions between the missing and non-missing subsamples is equal to zero- for the dummy variables major power membership ( $z=2.33, p=0.020$ , two-tailed) and economic IGO ( $z=2.66, p=0.008$ , two-tailed). The tests indicate that the proportion of organizations with major power founding members and the proportion of IGOs that focus particularly on economic issues is greater in the subsample of IGOs for which data on voting rules is available than in the subsample of IGOs for which voting rules could not be found. Thus, we can observe that voting rule information is less likely to be missing for economic organizations and IGOs in which at least one major power is a founding member. However, the tests do not lead us to reject the null hypothesis that the difference between the sample means (or sample proportions) is equal to zero with respect to all other variables in the data set. In particular, difference of means t-tests for the number of founding members ( $t(295)=1.396, p=0.164$ , two-tailed) and the year in which the IGO was founded ( $t(311)=-0.819, p=0.413$ , two-tailed) indicate that there is not a statistically significant difference between the two subsamples with respect to these two variables' means. Consequently, while we might expect voting rule information to be more readily available for larger and more recently created IGOs, there is no statistical evidence to suggest that such organizations are more or less likely to be missing information on voting rules in our data set. Thus, our preliminary analysis of the nature of the missing data in our data set indicates that users should be aware that major power membership and economic IGOs are potentially overrepresented in the data on voting rules and scholars should bear this in mind when drawing inferences from the data and seeking to correct or account for the missing information on voting rules in the data set. However,

<sup>14</sup> See codebook, located at this journal's web page, for a full list of IGOs included in the data set and for a list of IGOs for which voting rule data is missing.

<sup>15</sup> There are 21 IGOs in the COW data set for which we were unable to find any formal information at all regarding their structure and functions in printed or online sources. While this is a concern, it is not unreasonable to assume that the overwhelming lack of information for these IGOs indicates they are among the least influential IGOs in the international system.



we find no evidence of a systematic relationship between the other variables in the data set and the likelihood that voting rule data will be missing.

### 3 Exploring patterns in the data: Institutional context and voting rule choice

To better identify and explore patterns in the data on voting rules, in this section we combine variables from the data set to examine the relationship between institutional contextual factors and voting rules. Building on extant research in International Relations and our earlier discussion of voting rules and design objectives, we introduce and evaluate several propositions regarding how and why voting rule selection should be influenced by an IGO's issue area and membership characteristics. Specifically, we focus on how different contexts will lead states to prioritize some design objectives over others and thus settle on a particular voting rule. The analysis in this section also helps to illustrate the utility of the data set in evaluating propositions regarding voting rules and IGO design objectives more broadly across a wide range of organizations.

We expect issue area to shape voting rule choice such that when the issues taken up by an IGO impact states' or their leaders' core interests, they will prioritize control and thus will be more likely to select unanimity voting as the rule of choice.<sup>16</sup> We expect this is most likely to be the case when states' core interests are engaged by an organization. The suggestion that states' core interests are invoked in the "high" politics of security matters (in which state survival is implicated) and less so in the "low" politics of economics, the environment, and health is common (Carr 1946). However, while security issues undoubtedly strike at the crux of state interests, we suggest that economic issues do so as well for, as several scholars have noted, matters of survival and security are not easily divorced from economic exchange (e.g., Hirschman 1945; Brooks 2005; Gowa 1994). Moreover, economic issues can directly affect leaders' individual political interests because economic outcomes are often critical to leaders' success in promoting their own political survival as they are often rewarded for economic success and punished for economic failure (Duch and Stevenson 2008; Lewis-Beck 1990; Wright 2008). As such, they will have a strong interest in establishing voting rules that enable them to effectively influence and control the policy positions taken by economic IGOs. Accordingly, we expect unanimity voting to be more closely associated with economic and security IGOs than weighted and majoritarian voting rules.<sup>17</sup>

Following KLS, our second expectation is that when institutional membership is expected to be large, states are more likely to create IGOs with majoritarian voting procedures. As the size of institutional membership grows, the diversity of preferences

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<sup>16</sup> While weighted voting does give some states considerable control, it requires others to accept weaker voting power and a correspondingly low level of control, which they are unlikely to do when control is a priority.

<sup>17</sup> We do not suggest that states and leaders do not care about controlling IGOs in other issue areas such as health, education, and the environment; however, there is comparatively little scholarly evidence that leaders, on a large scale, associate international outcomes in these areas with state or leadership survival, and thus IGOs that focus on these issue areas do not engage states' core interests to the same extent as economic and security IGOs. Thus, we expect states to be more willing to sacrifice control and forsake unanimity voting in these other areas.

also increases (De Melo, Panagariya and Rodrik 1995; Downs, Rocke, and Barsboom 1998; Haggard 1997). This makes the blocking facility under unanimity voting highly problematic because the potential that one member will be sufficiently dissatisfied with a proposal and will threaten to use its veto to prevent the proposal from passing is greater for IGOs with larger memberships, which weakens the organization's level of responsiveness. Thus, states are more likely to favor majoritarian voting when membership is large in order to ensure the IGO maintains a minimum level of responsiveness.

Weighted voting procedures are more likely to be preferred to unanimity and majoritarian rules in IGOs where the membership of certain states is critical to an organization's effectiveness and thus securing their membership is the foremost priority for states. This is particularly the case for two common types of economic organizations: commodity organizations and banks/funds. Commodity organizations can only be effective if they have members that form a large percentage of total world supply and/or consumption of the commodity in question and particularly the largest producers and consumers that have the economic power to shape market trends. Meanwhile, banks must attract states that are able to make significant financial deposits in order to function effectively. In addition, we also expect weighted voting to be more likely when major powers are founding members of an IGO because, like principal producers in commodity organizations and key financial contributors in international banks, major powers often play a key role in the success of an IGO. This is because they often bear the brunt of financially supporting the organization and the costs of enforcing decisions taken by the IGO (Martin 1992; Martin and Simmons 2001; Olson and Zeckhauser 1966).

In the cases of commodity organizations, banks, and IGOs with major powers, there are certain states whose membership and contributions are particularly valuable. These states will be aware of their own importance to the IGO and will therefore vie for greater voting power as a condition of membership in order to exert greater control over the IGO. These states can credibly threaten not to join the IGO as their superior endowments (be they a commodity, money, or overall power) make them relatively more able to pursue their objectives successfully outside of the IGO (Stone 2011). Thus, other states whose membership is less central to the IGO will concede to weighted voting to ensure these key states are members of the organization.<sup>18</sup> Moreover, compliance concerns associated with weighted voting are mitigated in commodity IGOs, banks and IGOs with major power membership because those states with greatest voting influence and thus those most likely to shape IGO decisions, possess the necessary leverage to induce compliance from other member states through mechanisms such as side payments and threats.<sup>19</sup> Major powers have extensive military and economic capabilities and interests in multiple areas allowing them to link issues, make credible threats, and fulfill promises of rewards for compliance. Leading commodity producers, on the other hand, can threaten to manipulate market prices by unilaterally modifying their output in order to punish other states that do not comply

<sup>18</sup> Several scholars have noted that when states contribute a large amount of funds they will expect to have greater control over the institution and how those funds are managed (e.g., Barnett and Finnemore 2004; Lister and Frederick 1980).

<sup>19</sup> Institutions are well-equipped to facilitate compliance in this manner because they offer opportunities for credible issue linkages (Martin 1992; Keohane 1984).

with IGO decisions, such as adhering to production quotas. Alternatively, leading states whose participation in the IGO is essential can credibly threaten to leave the IGO or pursue their interests outside of the organization if other states fail to consistently comply with IGO decisions.

Recent IO scholarship has begun to explore the link between international institutions and democracy, with some positing that IGOs that are more democratic are also more accountable, transparent, or equitable.<sup>20</sup> This literature has two major strands; one asks how democratic an IGO is by assessing its internal institutions and procedures and the other focuses on role of the level of democracy among an IGO's members (Pevehouse 2002). To explore the relationship between aggregate IGO democracy and voting rules, a variable from outside of our data set that captures the mean level of democracy among the founding members is included in our analysis. Operationally, this variable is the *mean Polity IV* score of an IGO's founding members in the year the IGO was founded (Marshall and Jaggers 2010).

### 3.1 Evaluating the propositions

We evaluate our propositions employing a multinomial logistic regression estimation technique in which the dependent variable is an IGO's voting rule, which, as noted earlier, can assume one of three mutually exclusive outcomes: unanimity, weighted and majoritarian. In total, we estimate four simple models in which majoritarian voting — the most common outcome — is the baseline alternative and the coefficients for unanimity and weighted outcomes should therefore be interpreted in comparison to this voting method. In addition to variables already mentioned, a time trend is included in some models to control for any secular trends over time in voting rule selection. Results are presented in Table 3.<sup>21</sup>

In the first model the single dummy variable for all economic organizations is included. In models 2–4, economic IGOs enter the model via one of the three more fine-grained dummy variables used to categorize economic IGOs: commodity, bank/fund, or non-commodity, non-bank economic IGOs. The results support splitting up economic IGOs in this manner and illustrate that different types of economic IGOs will be associated with different types of voting rules. We find that economic IGOs as a whole are statistically significantly more likely to have unanimity or weighted voting rules than majoritarian voting. However, banks and commodity IGOs are significantly more likely to have weighted voting rules than majoritarian voting, but are not more likely to have unanimity voting. In contrast, non-commodity, non-bank economic IGOs are significantly more likely to exhibit unanimity voting, (at the 0.05 level of statistical significance). This supports our contention that economic IGOs will be more likely to adopt unanimity voting as they engage core interests, but the membership and contribution imperatives associated with banks and commodity IGOs will cause these organizations to be more likely to adopt weighted voting. However, we note that model (4) reports a greater likelihood of weighted voting than majoritarian (at the 0.05 level of

<sup>20</sup> See, for example, Zweifel (2006) or for a contrasting view, Dahl (1999).

<sup>21</sup> Table 3 reports 254 observations in the sample for models 1–3 and 242 for model 4. From the original 266, nine cases were omitted because their charters did not contain voting provisions (“no rule”), three cases in the analysis were dropped through listwise deletion because founding membership could not be ascertained and in model 4 a further 12 cases were dropped due to missing *Polity IV* data.

**Table 3** Multinomial logit model of voting rule selection

	(1)	(2)	(3)	(4)	Weighted	(1)	(2)	(3)	(4)
Unanimity									
Major power participation	-0.112 (0.327)	-0.226 (0.326)	-0.054 (0.344)	-0.159 (0.436)		0.950** (0.446)	1.237** (0.584)	1.210** (0.594)	2.032*** (0.676)
Membership size	-0.083*** (0.026)	-0.071*** (0.023)	-0.077*** (0.024)	-0.081*** (0.026)		0.004 (0.014)	0.011 (0.010)	0.011 (0.011)	0.006 (0.013)
Security IGO	1.966*** (0.745)	1.940*** (0.739)	2.100*** (0.695)	2.196*** (0.706)		1.716* (0.986)	1.669 (1.024)	1.674* (1.018)	1.943* (1.040)
Economic IGO	1.307*** (0.365)					2.922*** (0.469)			
NCNB <sup>†</sup> economic IGO		1.608*** (0.435)	1.575*** (0.468)	1.625*** (0.481)			1.239* (0.726)	1.212* (0.730)	1.565** (0.763)
Commodity IGO		0.390 (0.622)	0.505 (0.636)	0.268 (0.676)			3.288*** (0.661)	3.282*** (0.659)	3.694*** (0.695)
Bank or Fund		0.301 (0.968)	0.246 (0.969)	1.384 (1.256)			4.632*** (0.746)	4.630*** (0.745)	6.169*** (1.106)
Time			0.027** (0.011)	0.026** (0.011)				-0.003 (0.015)	0.006 (0.018)
Mean polity score				0.007 (0.035)					-0.046 (0.054)
Constant	0.256 (0.317)	0.204 (0.314)	-0.578 (0.450)	-0.544 (0.459)		-3.055*** (0.512)	-3.433*** (0.632)	-3.355*** (0.722)	-4.278*** (0.767)
N	254	254	254	242		254	254	254	242

Robust standard errors in parentheses

<sup>†</sup> Non-commodity, non-bank

\*  $p < 0.10$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$  Baseline alternative is majoritarian voting

statistical significance) for non-commodity, non-bank economic IGOs, which is not in line with our expectations.

In all models, major power participation is positively and significantly associated with weighted voting, lending support to the proposition that major powers will insist on and receive greater voting power in the IGOs in which they participate. The models predict that larger memberships make the adoption of a unanimity rule less likely than a majoritarian one, which supports the argument that as membership size grows, states will eschew unanimity procedures and prefer majoritarian voting to avoid problems of gridlock that can arise under the former voting system. As expected, security IGOs are statistically significantly more likely to display unanimity procedures as they engage states' core interests, making the ability to veto undesirable proposals more attractive. With respect to the other variables, we find that over time, unanimity voting has become more prevalent when compared to majoritarian voting, all else equal. The mean level of democracy among founding members is introduced in model 4 and it fails to achieve statistical significance. Bayesian information criteria (BIC) figures indicate that the third model provides a superior fit to the data compared to the fourth model and therefore we use the estimates from the third model to generate predicted probabilities and relative odds ratios.<sup>22</sup>

Table 4 reports the change in predicted probabilities in response to a one unit change in the independent variable for all of the dichotomous independent variables in model 3 (in each case holding all other dichotomous variables at zero and membership size and time at their mean values). The predicted probabilities indicate that major power participation, being a commodity IGO, or being a bank/fund all significantly increase the predicted probability of weighted voting being the voting rule of choice. If the IGO is a bank or fund the probability of obtaining weighted voting increases by .76 or 76 percentage points. Commodity IGOs also greatly increase the probability of weighted voting by 30 percentage points. Major power participation exerts a smaller—eight-percentage point—yet, statistically significant, increase in the probability of weighted voting. Taken together, these results firmly support the view that in situations where the membership of certain states is critical to an institution's effectiveness and success, states are much more likely to create IGOs that employ weighted voting procedures.

Security and non-commodity, non-bank economic IGOs are associated with a greater likelihood of unanimity voting. If an IGO focuses on issues of international security then the increase in the probability of obtaining unanimity voting is predicted to be 48 percentage points, while being an economic IGO that is not a bank or commodity organization increases the likelihood of unanimity voting by 36 percentage points. Both types of IGO are associated with a statistically significant decrease in the probability of obtaining a majoritarian voting rule; however, there is no significant increase in the probability of obtaining weighted voting for either type of IGO. These results suggest that when IGOs engage states and leaders' core interests, states will seek unanimity procedures to maintain blocking power.

Figure 4 depicts the predicted probability with 95 % confidence bands of each type of voting rule being selected for varying levels of founding membership size (with all dichotomous variables in the model set to zero and time to its mean value). Each voting

<sup>22</sup> Relative odds ratios, which are useful for demonstrating the substantive effects of coefficients without relying on specific variable values, are available in supporting material at this journal's web page.

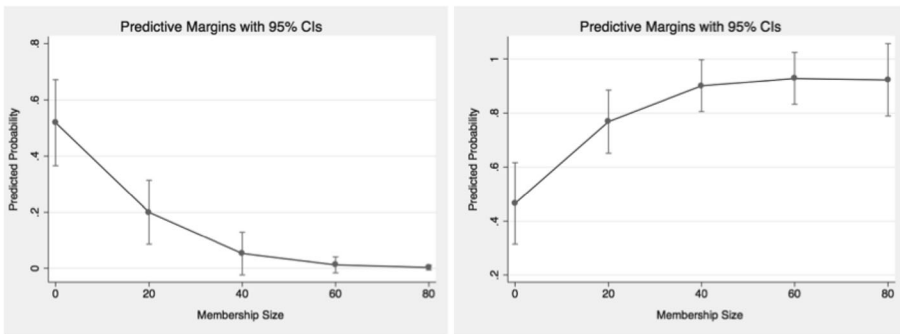
**Table 4** Change in predicted probabilities of voting rule selection for discrete changes in independent variables

Independent Variable	Change	Unanimity	Weighted	Majoritarian
Non-Bank, Non-Commodity Economic IGO	0→1	<b>+0.36</b>	+0.02	<b>-0.38</b>
Security IGO	0→1	<b>+0.48</b>	+0.02	<b>-0.50</b>
Bank	0→1	-0.12	<b>+0.76</b>	<b>-0.64</b>
Commodity IGO	0→1	-0.04	<b>+0.30</b>	-0.26
Major Power Membership	0→1	-0.05	<b>+0.08</b>	-0.03

Bold values indicate change is statistically significant at the 0.05 level

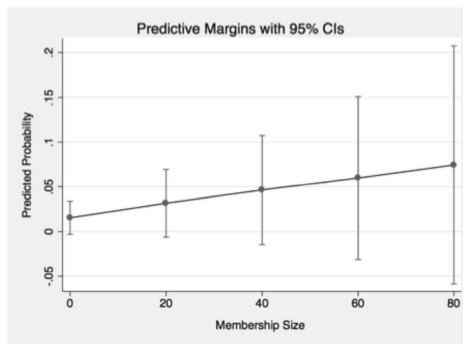
Baseline: All above variables set to zero; membership size and time set to their mean values

rule displays a notably different pattern. In the first subfigure, 4 (a), the predicted probability of obtaining unanimity decreases sharply with increasing numbers of founding members. When membership is very small, approximately five states, the likelihood of unanimity voting is approximately 50 %. However, when membership nears its mean of 15 states, the predicted probability of unanimity voting decreases to approximately 25 %. As membership size exceeds 40 states, the probability of



**(a) Unanimity Voting**

**(b) Majority Voting**



**(c) Weighted Voting**

**Fig. 4** Predicted probabilities of voting rule selection by size of founding membership

unanimity voting is close to zero. Compare this with subfigure 4 (b), where the predicted probability of obtaining majoritarian voting climbs sharply with the number of founding members, exceeding 90 % when membership size is above 40. These patterns lend support to the propositions that unanimity voting under large memberships is undesirable because it has considerable potential to generate gridlock and limit IGO responsiveness and, further, that majoritarian voting may be a viable solution for avoiding gridlock and enhancing IGO responsiveness under conditions of large memberships. The pattern for weighted voting in 4(c) may appear unusual at first glance, with very low predicted probabilities ranging from about .02 to .07. However, this is not surprising given that the predicted probabilities in Fig. 4 have been calculated with the dummy variables for commodity, bank, and major power membership set to zero and it is in banks, commodity organizations and IGOs with a major power founding member that we expect weighted voting to be prevalent (an expectation supported by the findings in Table 4). Therefore, 4(c) reveals that regardless of membership size, if an IGO is not a bank/fund, commodity organization, or does not have a major power as a founding member, it is very unlikely to select a weighted voting procedure.

This preliminary analysis of the voting rule data reveals clear patterns in the selection of voting rules that support the contention that voting rule selection in IGOs is context specific and that in different institutional contexts some design objectives are prioritized over others.

## 4 Conclusion

This article presents a new data set on voting rules, issue areas, and founding memberships in 266 intergovernmental organizations. The aim of the data set is to afford scholars a new tool with which to gain leverage on questions of institutional design in IGOs. Empirical studies of IGO design and operation have focused traditionally on a small number of organizations (often single case studies), which have typically clustered around a handful of prominent institutions such as the European Union, World Bank, and World Trade Organization. While such small-N research allows for very fine-grained coding and analysis of IGO design features, including voting rules, the universe of IGOs is large and diverse and much theoretical work on international organizational design is general, implying broad applicability across a range of IGOs. The data set introduced here is based on a coding scheme that allows for data on voting rules and other features to be reliably gathered across a broad variety of organizations that vary considerably in geographic scope, substantive focus, and size. This broad diversity of IGOs makes the data set a valuable resource for scholars wishing to test and further develop general propositions regarding the design and operation of IGOs and to consider how their arguments apply to less prominent organizations. Thus, studies employing this large sample of data should serve as an important complement to existing and ongoing research that targets specific organizations for in-depth investigation.

A second contribution of this article is to demonstrate that a data set on voting rules is relevant to scholars of IOs beyond those only interested in voting and decision making procedures. This is because voting rules shape the ease and extent to which states can achieve four core design objectives: control over outcomes, effective state

membership, compliance with IGO decisions, and IGO responsiveness. These objectives and their attendant issues have been at the heart of much recent IO scholarship (e.g., Stone 2011; Mitchell and Hensel 2007; Hawkins et al. 2006). One of the key insights emerging from the article is that no single voting rule enables states to attain all four objectives. This raises interesting questions about when, how and why different voting rules and broader design objectives are pursued.

The third contribution of this article is to provide a first cut at exploring such questions by using the new data to analyze preliminary propositions about when we should expect states to prioritize different design objectives in their selection of voting rules. Our analysis reveals interesting patterns in the data on voting rules and particularly how voting rule selection varies across institutional contexts. Specifically, we find that when states' core interests are at stake, as in the case of security and economic matters, they are more likely to prioritize control, resulting in the selection of unanimity over majoritarian rules. We also find that states are more likely to settle on weighted voting when securing the membership of important actors such as major powers is central to an institution's effectiveness. Finally, in order to encourage institutional responsiveness, states are more likely to avoid unanimity voting rules when membership of an IGO is large.

While these findings are only preliminary, they do illustrate the utility of the data set in being able to provide scholars with a tool to identify general patterns in voting rule design and, given the link between voting rules and design objectives, to evaluate broader arguments about IGO design that engage issues such as state control and compliance. It is also hoped that these findings will stimulate further theoretical and empirical analyses of voting rules in IGOs as well as the core objectives to which they are closely connected. The propositions developed in this article set aside important complicating factors future research must consider such as the sources and effects of possible heterogeneity of preferences over voting rules across states and the processes by which states bargain over voting rules. Studies that seek to develop theoretical insights regarding these and other factors that apply across a broad range of IGOs will be able to lean on the new data presented here for empirical verification.

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