A typology of board designs for highly effective monitoring in intergovernmental organizations under the United Nations system

ABSTRACT

The United Nations (UN) system comprises several intergovernmental organizations (IGOs) that are established to contribute to the functioning of the overall transnational system of delivering global public goods. However, many IGOs under the UN system are criticized for their failure to accomplish their mandates. Research argues that IGO boards serve as a governance mechanism that should be designed in order to effectively perform the monitoring function to ensure fulfillment of IGO mandates. Hence, this study explores 13 IGO boards under the UN system to identify, using an inductive fuzzy-set qualitative comparative analysis, the board designs that are associated with highly effective monitoring in IGOs. Our findings reveal a board design typology reflecting the interplay of the level of organizational complexity and the extent of distribution problem in IGOs. This research contributes to our understanding of IGO governance by underscoring the relationship between board designs and highly effective monitoring to help researchers and practitioners improve IGO performance.

Keywords:

Board designs, Governance, Intergovernmental organizations, Monitoring, Qualitative comparative analysis

1. Introduction

Sovereign nations founded the United Nations (UN) system to promote international cooperation to deliver global public goods. There are currently 34 intergovernmental organizations (IGOs) that were established or incorporated under the UN system to pursue different mandates. These IGOs govern and shape the institutional environments where firms, national governments, public entities, and nonprofit organizations operate (e.g., Bach & Newman 2014; Shaffer 2015). However, many IGOs under the UN system barely meet or fail to meet minimum performance thresholds (Federo & Saz-Carranza 2017). Scholars argue that IGOs underperform because of governance problems, particularly related to agency slack (Nielson & Tierney 2003). Agency slack is directly related to the tension in global governance between technocratic policy making and democratic accountability (Barnett 2016; Halliday et al. 2013). It occurs when senior managers of IGO secretariats, acting as agents of the member states, make decisions that deviate from organizational mandates (Barnett & Finnemore 1999). It also happens when IGO secretariats eschew accountability by exploiting conflicts between their member states who act as multiple principals (Nielson & Tierney 2003; Hawkins et al. 2006). In both instances, information asymmetry arises that necessitates proper monitoring to reduce the agency problem (Westphal 1999).

Several mechanisms can be used to monitor the agents, such as direct control of the member states, institutional checks and balances, and third-party whistleblowing channels (Hawkins et al. 2006). However, these monitoring and control mechanisms may generate bureaucratic drift that counters effectiveness (Shepsle & Bonchek 1997). They also become costly (Hawkins et al. 2006) and generate negative perceptions among the IGO's stakeholders (Graham 2017). In addition, as member states impose more constraints upon the actions of the

secretariats, the latter often respond by attempting to overcome these restrictions, thus aggravating the agency problem (Schemeil 2013).

Research argues that the board of directors —referred to hereinafter as the board— serves as a governance mechanism to effectively monitor and control senior management, thereby reducing the agency problem (Fama & Jensen 1983). The board aligns managerial decisions with the expectations of their principals (John & Senbet 1998). IGOs typically have boards that are expected to perform this monitoring function (Martinez-Diaz 2009). Moreover, as public-sector organizations, part of IGO boards' monitoring function is to serve as important deliberative arenas where different interests play out (e.g., Blair & Stout 1999; Hinna & Scarozza 2015). The boards also become a tool to balance out and resolve varying and conflicting stakeholder expectations (Jehn 1997). Therefore, to be effective in monitoring, IGO boards need to be constantly and independently assessing the performance of the organization to ensure that the IGOs pursue their mandates and they address their stakeholder expectations.

However, the boards are sometimes designed in a way that prevents them from executing their duty to monitor (Boivie et al. 2016). Particularly in IGOs, the boards are argued to have insufficient incentives to monitor because the directors are typically constrained by the member states that appointed them, and board composition periodically undergoes dramatic changes as a result of changes in domestic politics (Vaubel 2006). And the level of representativeness and decision-making transparency of the boards are argued to impact their input and throughput legitimacy (Take 2012). Therefore, it is important to understand how to appropriately design the board to ensure effective monitoring (Boivie et al. 2016). This study then aims to answer the research question: "What are the board designs associated with highly effective monitoring in IGOs under the UN system?"

We carry out a configurational approach to reveal a board design typology that is associated with highly effective monitoring in IGOs under the UN system. We have identified four board designs reflecting the interplay of two governance constraints arising from IGO characteristics: the level of organizational complexity and the extent of distribution problem. Organizational complexity in IGOs refers to the diversity of mandates driving information asymmetry, whereas the distribution problem arises from the difference in preferences among IGO member states when they act as multiple principals (Koremenos et al. 2001). For IGO boards to be effective in monitoring, results suggest that different board features should be combined to address governance constraints.

The main contributions of this research are threefold. First, this study tackles one important aspect of global governance: the IGOs (e.g., Bernstein & Cashore 2007; Pattberg 2005). Scholars argue that IGOs co-construct global norms that shape international policies and program designs (Berliner & Prakash 2012). IGOs also arguably serve a regulatory function that strengthens inter-state activities and shapes the institutional arrangements where public and private actors interact (Abbott & Snidal 2010). And in some instances, they are used by state actors to network among themselves for mutual benefit to develop economic and political relations (Ingram & Torfason 2010; Torfason & Ingram 2010). Although global governance cannot be exclusively reduced to the workings of IGOs under the UN system, understanding their governance holds a key for the effective functioning of the overall transnational system of delivering global public goods.

Second, this research enhances our understanding of IGO governance by focusing on IGO boards (e.g., Federo & Saz-Carranza 2018). Examining the IGO board is important because this body plays a significant role in organizational decision making (Hexner 1964) and is also an

arena where member states try to ensure benefits for themselves, such as securing developmental programs and funding (Kaja & Werker 2010). Apart from being involved in the strategic process (Federo & Saz-Carranza 2018), IGO boards also perform a "performance police" function by overseeing managers through constant performance monitoring, which ensures that managerial decisions and actions are aligned with organizational mandates (Martinez-Diaz 2009). As we identify the board designs that are associated with effective monitoring, we help IGOs —and other public and nonprofit organizations— prevent or mitigate the agency problem, thereby helping to improve their performance.

Third, our analysis also undertakes the rational design choices of IGOs. Scholars argue that IGO governance structures are made through a rational process of selecting the appropriate design to pursue both individual and collective interests of the member states that established the IGOs (Koremenos et al. 2001). We suggest that IGO board designs are also not made randomly. Building on the notion that IGO boards comprise direct representatives of the member states (Vaubel 2006), we argue that board designs are intentionally crafted not only to meet organizational requirements but also to balance the expectations of those member states. In this study, we empirically identify which board designs are associated with highly effective board monitoring. We propose a framework suggesting that IGOs should consider the interplay of their level of organizational complexity and extent of distribution problem when designing their boards to be highly effective in monitoring.

In the next section, we elucidate the importance of monitoring in IGOs and describe how IGO boards can fulfill this function. We then examine board designs by identifying different factors that potentially become barriers to effective board monitoring in IGOs. Subsequently, we describe our data and the methodology that we will use to explore which board designs are

associated with highly effective and less effective monitoring in IGOs under the UN system. Thereafter, we present our proposed typology and discuss our results. We conclude by enumerating the contributions of our study, acknowledging its limitations, and suggesting avenues for future research.

2. Theoretical Background

Monitoring in intergovernmental organizations

The need for monitoring is a central issue in IGOs because sovereign states delegate to different IGOs several functions such as collective decision making, dispute resolution, and collaboration aimed at achieving common interests among countries (Hawkins et al. 2006). IGOs are vested with a certain degree of power and authority that nurtures their autonomy (Barnett & Finnemore 2004). As IGOs are delegated with more tasks over time, they also begin to specialize and develop specific competencies related to coordinating collective actions. Specialization exacerbates information asymmetry that incites self-interests, resulting in an agency problem (Kiewiet & McCubbins 1991). IGO secretariats, thereby, might tend to deviate from organizational mandates while seeking greater autonomy from the member states that created them (Schemeil 2013).

To prevent or mitigate the agency problem, member states monitor the IGO secretariat using several mechanisms used by public-sector organizations, such as direct oversight (e.g., police patrol), establishment of extensive well-defined rules, fire alarm mechanisms to reveal evidence of malfeasance, institutional checks and balances to limit managerial opportunistic behavior, and sanctions to deter undesirable actions (Hawkins et al. 2006). Although these mechanisms may control the agency problem, they may also backfire by producing bureaucratic drift (e.g., Shepsle & Bonchek 1997), restricting innovation (e.g., Holmstrom 1989), and

increasing agency costs (e.g., Zajac & Westphal 1994). For instance, pre-defined rules are often too rigid yet difficult to change by member states; as another example, too many checks and balances might dissuade managerial initiatives (Nielson & Tierney 2003).

The role of IGO board monitoring

One alternative governance mechanism that is argued to be efficient and effective in monitoring and controlling the agency problem in public and nonprofit organizations, such as the IGOs, is the board (e.g., Herman & Renz 2000; Martinez-Diaz 2009; Stone & Ostrower 2007). The IGO board sits between the plenary of member states (which are the IGO principals comparable to corporate shareholders) and the top management team of the secretariat (acting as the agent) headed by a chief executive officer (CEO). For example, the World Bank has a plenary (called Board of Governors) where one representative (usually an official of the member state's Ministry of Economy) for each of the 189 member states attends an annual meeting. Twenty four of these 189 representatives are elected to the Board of Directors by the plenary via a weighted voting system. Additionally, the Board is chaired by the Bank's chief executive (called President), meets twice a week and is in charge of approving the strategy, the budget, major loans and disbursements, and selects the President serving as the CEO. Importantly, IGO boards are known by various names such as the Executive Board (e.g., WHO), Administrative Council (e.g., International Telecommunications Union), and Governing Council (e.g., United Nations Environmental Program–UNEP).

The founding documents of many IGOs confer upon their boards the authority to make strategic and operational decisions on behalf of the member states (Federo & Saz-Carranza 2018). Research argues that IGO boards provide various strategic, political, and democratic functions to give member states representation and voice in the decision-making processes (Kaja

& Werker 2010; Martinez-Diaz 2009). More importantly, IGO boards serve a "performance police" function by regularly evaluating[1] organizational performance aimed at monitoring managerial actions and decisions to align them with organizational mandates set by the member states (Martinez-Diaz 2009).

Being a subset of public and nonprofit organizations, board monitoring is also particularly important in IGOs because it helps to gain support from their stakeholders by enhancing their public image (e.g., Brown 2005; Miller 2002) and by projecting better accountability, which in turn signals safeguarding of diverse stakeholders' varying interests (Hinna & Monteduro 2016). Thus, in IGOs, the board is also designed to pursue and balance the goals of an organization's stakeholders, rather than focusing solely on financial performance and holding the chief executives to account (Ellwood & García-Lacalle 2015).

The effectiveness of policing performance rests on the ability of the board to process information during the monitoring process. The boards should have the instruments and channels to regularly assess the policies and programs effected by the secretariat. And they should have established monitoring structures and procedures that meet a certain degree of objectivity, have sufficient coverage, and follow relevant standards (Martinez-Diaz 2009).

IGO board designs for effective monitoring

The literature on board monitoring suggests that boards should be designed so that their directors are capable of performing monitoring, and they are incentivized by being independent (Hillman & Dalziel 2003). For instance, corporate governance research highlights the benefits of independent (Dalton et al. 2007) and skilled directors (Withers et al. 2012). The public and nonprofit governance literature also encourages a similar design (e.g., Fernández-i-Marin et al. 2016; Miller 2002; Stone & Ostrower 2007).

However, board designs showing acceptable levels of independence and abilities do not necessarily result in effective board monitoring. Different structural features of board designs are related to several individual (e.g., outside job demands), group (e.g., board size, diversity, and frequency of meetings), and organizational (e.g., size and complexity) factors that produce barriers to information processing while performing the monitoring function (Boivie et al. 2016). Scholars argue that it is important to understand these features in bundles because they could be functionally equivalent with each other (Desender et al. 2013; Garcia-Castro et al. 2013). Moreover, board designs vary among different organizations depending on their information-processing needs for board functions (Boivie et al. 2016).

Individual factors. Board interlocks and director busyness are some of the board features that could intensify outside job demands. They occur when directors occupy multiple directorate positions. However, a barrier arising from outside job demands is less of a concern in IGOs, since their directors do not have other board appointments.

Group factors. Board size, committees, and independence are the prevalent structural features of board designs that affect the monitoring function (Carter & Lorsch 2013; Gillan et al. 2011; John & Senbet 1998). *Board size* refers to the number of directors. A small board may be preferred because it streamlines board processes and decision making (Eisenberg et al. 1998; Yermack 1996). Yet, a large board may also be desirable because it can encompass diversity, as well as increasing available knowledge and expertise important for processing information (Dalton et al. 1999). In IGOs, larger boards could also mean more representation of the member states. The question, then, would be whether IGOs would prefer an efficient board for information processing or a well-represented board.

Board committees are subgroups of the board performing specific functions such as audit,

finance, budgeting, top management compensation, and CEO selection (John & Senbet 1998; Klein 1998). Committees build expertise and specialization to process information (Callen et al. 2003; Klein 1998), and the more committees a board has, the more functional diversity could be suggested (Boivie et al. 2016). Because committees typically meet frequently, committee participation allows the directors to process information more effectively. For instance, audit and executive committees comprise fewer directors who regularly convene to share information among themselves. In IGOs, this is important because directors are typically from different parts of the globe, and this distance could inhibit them from building cohesion. Directors working in committees can benefit from more frequent and focused contact to contribute to better information processing.

Importantly, board independence —as measured by outside director composition and CEO duality— does not differentiate IGO boards because of two reasons. First, outside directors are those who do not have any affiliations with the management or the principals. Since IGO board directors are direct appointees of member states, they are all considered to be inside directors. Second, CEO duality occurs if the CEO also serves as the board chair. All CEOs of IGOs are expected to sit on the board as meeting facilitators. Hence, the CEOs possess a certain degree of power relative to the board and may foster a norm of deference as they can easily influence board agenda.

In addition, a *board secretary* may influence board monitoring. The board secretary is the body in charge of providing information for monitoring and transparency (Lin 2004). Research has shown that board secretaries improve information disclosures (Gao & Kling 2002) and governance (Chen & Aguilera 2016). Some IGOs have board secretaries that transfer information from senior managers to the board. For instance, the Executive Board of the United

Nations Development Program (UNDP) has a secretary that serves as the focal point for all board matters, including board processes and information processing.

Organizational factors. The size and complexity of the organization may become governance constraints that can produce barriers to information processing (Boivie et al. 2016). Although these organizational-level factors do not constitute board designs, they determine organizational information-processing needs. Larger and more complex organizations require greater monitoring requirements because of higher cognitive load to understand internal structures, bureaucracies, systems, and activities (Coles et al. 2008; Henderson & Fredrickson 1996). Size may not be an issue in comparing IGOs under the UN system because they are all large IGOs that operate with a budget of at least €100 million, which amply exceeds the €50 million threshold set by the European Commission in order to be classified as a large organization.

With regard to *organizational complexity*, it is determined by an organization's diversity of goals, which are related to geography and product. Geographic diversity is less of a concern when differentiating IGOs under the UN system because all of them operate in all continents, making them all geographically diverse (Federo & Saz-Carranza 2018). However, product diversity for IGOs may be an important factor. This is defined by the number of scopes the IGO is mandated to pursue. More scopes translate to greater monitoring requirements because of the broader range of information technologies entailed (Boivie et al. 2016). For instance, the WB is complex and requires greater monitoring because it covers various scopes related to different financial, developmental, and environmental issues. Meanwhile, UNICEF is less complex and requires lower monitoring because it only focuses on developmental and humanitarian efforts for children and mothers.

However, apart from size and complexity, one factor that is unique to IGOs is the existence of a distribution problem. IGOs suffer from a *distribution problem* because of the difference in preferences among member states (Koremenos et al. 2001). IGOs are typically caught between competing interests of their member states. This is why members strive for representation in the board room to influence decision making aimed at acquiring programs and funding targeted to their respective home countries (Kaja & Werker 2010). IGOs with fewer target countries have low distribution problem as compared to IGOs with more target countries, since there are fewer alternatives when deciding to whom programs and projects shall be awarded. For instance, some IGOs focus only on developing countries (e.g., UNDP and UNICEF), whereas other IGOs focus on both developed and developing countries (e.g., WHO and UNEP). The higher the distribution problem, the greater will be the information-processing requirements to address the needs and expectations of the target states.

Identifying board designs

This study develops a framework regarding the relationship between board designs and the board monitoring function in IGOs. We follow prior research that suggests combining several structural features to identify board designs (Desender et al. 2013; Garcia-Castro et al. 2013; Misangyi & Acharya 2014). Scholars suggest that IGO board designs affect the effectiveness of boards to perform their functions (Federo & Saz-Carranza 2018). Currently, there is no research that systematically analyzes how different board designs in IGOs are associated with effective board monitoring. Hence, we explore board designs of IGOs under the UN system to identify which board designs yield highly effective monitoring.

In this study, we particularly focus on board design using its structural features that are applicable to IGOs. We use the governance constraints of organizational complexity and

distribution problem to explain why certain board designs are chosen by different IGOs. Our argument rests on the concept of equifinality, which contends that there is a possibility of different board designs resulting in effective monitoring (Boivie et al. 2016). We refrain from advancing *a priori* propositions, since our analysis is inductive and exploratory in nature (e.g., Haxhi & Aguilera 2016).

3. Methodology

Configurational approach to board designs

We systematically explore the combinations of structural features to identify the configurations of board design, and we analyze how they facilitate highly effective monitoring in IGOs. We use qualitative comparative analysis (QCA) aided by the fs/QCA software to identify the configurations. QCA relies on set-theoretic relations rather than correlations when analyzing causal conditions to determine the configurations that lead to an outcome (Fiss 2007; Ragin 2008). It is the prevalent research technique for configurational analyses in various social science disciplines such as political science, international relations, public administration, sociology, and management (e.g., Marx et al. 2014; Misangyi et al. 2017; Rihoux et al. 2011; Rihoux et al. 2013).

There are numerous benefits of using QCA as opposed to correlation-based analysis. First, QCA integrates the best features of case-oriented and variable-oriented approaches (Ragin 2008). In QCA, we preserve the richness of the dataset by enabling ourselves to return to the cases for more substantive analysis. Particularly with our small sample size, QCA allows us to explore the cases further for any latent attributes that may provide more information about the relationship studied (Maggetti 2007). Second, a key feature of QCA is conjunctural causation, which means that we evaluate cases as configurations of conditions —rather than individual net

effects— that jointly produce an outcome (Schneider & Wagemann 2012). In this study, we look at the effects upon board monitoring when we analyze the combination of different structural features constituting board designs. Third, QCA has an advantage over regression analysis in analyzing multiple interactions leading to an outcome because of its ability to explore equifinality rather than a single path (Fiss 2007). We argue that there is a possibility of different configurations of board designs that are associated with highly effective monitoring in IGOs. Lastly, QCA allows us to explore causal asymmetry in which the reverse of the conditions that yield the outcome does not necessarily yield the opposite of such outcome (Berg-Schlosser et al. 2009). To sum up, QCA enables us to analyze complex relationships by capturing all three features of causal complexity: conjunctural causation, equifinality, and causal asymmetry (Misangyi et al. 2017).

Sample and data

Our sample consists of all 13 global IGOs under the UN system assessed by the Multilateral Organization Performance Assessment Network (MOPAN) (See Table 1). The current sample represents more than 38 percent of the IGOs comprising the UN system. Two of the IGOs are international financial institutions (IFI) comprising one development bank (WB) and one international fund (International Fund for Agricultural Development, IFAD). The remaining 11 IGOs are specialized agencies and funds/programs pursuing specific mandates such as overseeing food supply (Food and Agricultural Organization of the UN, FAO), addressing environmental challenges (UNEP), and protecting refugee welfare (UN High Commissioner for Refugees, UNHCR). The dataset in Table 1 is divided into an outcome (monitoring effectiveness) and conditions (structural features of board design).

Insert Table 1 about here

Conditions: Structural features of board design

The conditions for the analysis come from ESADEgeo's IGO database coded by three independent and experienced researchers in the field of management and international relations (Federo & Saz-Carranza 2018). Any inconsistencies were eliminated in a second round of coding. The sources of the data are the IGOs' public documents (e.g., statutes, terms of reference, procedural rules, and annual reports) for the year before the external evaluator (i.e. MOPAN, see below) assessed the IGOs' monitoring effectiveness. For instance, the WHO and WFP were assessed in 2013, thus the data for the conditions were taken from their 2012 annual reports. This approach mitigates the reverse direction of the relationship being studied.

The conditions that we have used are: board size (operationalized in absolute and relative terms), number of board committees, presence of an executive committee, and presence of a board secretary. Other board features that potentially affect board monitoring were excluded because they were not relevant in the configurations (i.e., board independence, voting rights, and director busyness). Five conditions are acceptable for our relatively small sample size (Marx & Dusa 2011).

Board size. We operationalize board size using two conditions: absolute and relative. Absolute board size refers to the total number of directors, while relative board size refers to the ratio of total number of directors to the total number of member states. Both conditions are continuous, and they are converted to fuzzy sets using the direct calibration feature of the fs/QCA software. We set the crossover point of *absolute board size* at 21, which is the

recommended maximum number of directors for IGO boards to be effective in monitoring (Martinez-Diaz 2009). Full membership threshold is 40, which is the upper quartile for board size of all global IGOs. Full non-membership threshold is eight, which is the maximum recommended number of directors for corporate boards.

We also include *relative board size* as a condition because of two reasons. First, relative board size shows the reduction of decision makers from the plenary, since the directors are direct representatives of the member states. Hence, a lower percentage could suggest more streamlined decision making. Second, it also determines the extent of principal representation on boards. A higher percentage could represent diversity and difference in preferences among member states. Prior research argues that a reduction to 20% is ideal for information processing in IGO boards (Martinez-Diaz 2009). Hence, we use this as the crossover point for high/low percentage. Full membership threshold is pegged at 0.50, which is reducing the plenary into half. Full non-membership threshold is at 0.07, which is the ratio of the recommended maximum number of directors in corporate governance research (8 directors) over the average number of member states for the whole population of global IGOs (118 countries).

Board committees. We use the *number of board committees* as another condition by identifying different committees that are related to the monitoring function such as audit, finance, budget, administration, program, compensation, and nominating committees (Callen et al. 2003). Prior research argues that three to five committees within the board would be ideal to perform its duties effectively (Kesner 1988). Taking this into consideration, we converted the condition into fuzzy sets, as used in prior research on IGO boards (Federo & Saz-Carranza 2018): the presence of at least 5 committees is coded as 1 (full membership); the presence of 3-4 committees is coded as 0.67 (more in); the presence of 1-2 committees is coded as 0.33 (more

out); and the absence of any committees is coded as 0 (non-membership).

Following Callen et al. (2003) and Federo and Saz-Carranza (2018), the *existence of an executive committee* was coded separately. Executive committees are subgroups of the board consisting only of directors that handle major issues when a full board cannot be assembled (Kesner 1988). They can also provide valuable monitoring for organizations such as controlling financial reporting and disclosures and overseeing the actions and decisions of other board committees (Xie et al. 2003). The presence of the condition is coded as 1 and its absence is coded as 0.

Board secretary. The IGO documents are explicit on the presence of a board secretary. For instance, Article VII-Rule 11 of the Rules and Procedures of UN Women states: "(1) The Executive Board [secretary] is the focal point of UN-Women for Executive board matters. (2) The Executive Board [secretary] shall be responsible for the arrangements for meetings of the Executive Board…for the preparation of reports of the sessions of the Board." The presence of the condition is coded as 1 and its absence is coded as 0.

Outcome: Board monitoring effectiveness

The outcome for the analysis is board monitoring effectiveness, which is taken from the most recent assessment reports of MOPAN published from 2011 to 2014 (e.g., Federo & Saz-Carranza 2018). The MOPAN's assessments are one of the references used by its member governments — OECD countries that support and provide a huge percentage of funding of the assessed IGOs— when reviewing contributions to these IGOs. MOPAN evaluates the effectiveness of four to six IGOs annually using a common analytic framework that allows uniform assessment of IGOs regardless of their scope and coverage. This method enables users of the assessment reports to compare the effectiveness of a given IGO with that of others. Importantly, evaluations are carried

out by external independent experts.

MOPAN assesses monitoring effectiveness by examining the board's "performance police" function. Three indicators are used: (1) the board is involved in an evaluation[2] unit that carries out ongoing performance assessments; (2) this unit maintains an acceptable degree of independence and sufficiently covers IGO programs; and (3) the unit follows generally accepted standards and practices. High assessment scores on these indicators show that constant policing of performance is effective, thus, there is an effective board monitoring function. In conducting the assessment, MOPAN gives a scaled score from 1 to 6 on whether the IGO has met the three indicators of monitoring effectiveness. The scores of each indicator are then aggregated to form the overall scores.

We then transformed the overall scores into fuzzy set using also the direct calibration feature of the fs/QCA software. The calibration of the outcome distinguishes which scores are highly effective as opposed to those that are not, which are referred here as "less" effective. MOPAN established theoretical division of highly effective scores based on its substantial knowledge in practice. We used the same thresholds to calibrate the fuzzy set (e.g., Federo & Saz-Carranza 2018). Full membership is at 5.50, which is the threshold score for "very high" effectiveness. Full non-membership is at 2.50, which is the ceiling for low effectiveness. The crossover point is 4.50, which is the threshold separating high and adequate effectiveness.

Fuzzy set analysis

We performed a fuzzy set QCA to identify the configurations. We evaluated the results by selecting those configurations that meet our consistency and frequency thresholds. Consistency refers to the degree of empirical evidence showing how conditions fit with each other within a configuration (Ragin 2006). The acceptable raw consistency threshold is 0.80 (Fiss 2011; Ragin

2006). Meanwhile, frequency threshold refers to the number of cases that must be observed for each configuration to be considered (Greckhamer et al. 2013). Our frequency threshold is one, which is acceptable for small N analysis (e.g., Federo & Saz-Carranza 2018; Haxhi & Aguilera 2016). Only those configurations that meet our consistency and frequency thresholds are presented with their respective coverage in a configuration table. Coverage is the measure of empirical relevance that presents the way in which cases are distributed over the configurations (Ragin 2006).

We report the intermediate solutions in a configuration table showing the presence or absence of each condition. Intermediate solutions are preferred as basis in interpreting QCA results (Ragin 2008). These solutions only consider easy counterfactuals, which are the redundant conditions added to a set of causal conditions that by itself already leads to an outcome (Fiss 2011). The counterfactual analysis addresses the limited diversity of the observed cases in relation to the possible configurations from the combination of conditions (9 configurations with observed cases over 32 possible configurations).

The configuration table uses the following notations: "●" shows presence of the condition, "⊗" shows absence of the condition, and blank spaces are "don't care" conditions that may be either present or absent in the configurations. We also present the core and peripheral conditions (Fiss 2011). Core conditions are definitive elements in the configuration, while peripheral conditions are merely contributing to the effect of the configuration.

4. Results

We also explored for any necessary or individual sufficient conditions. A condition is considered necessary if the outcome cannot be produced without its presence or absence, whereas a condition is considered sufficient if its presence or absence can produce the outcome by itself

(Ragin 2008). Necessary conditions should meet a consistency score of 0.90, whereas sufficient conditions should meet a consistency score of 0.80 (Ragin 2006). The preliminary exploration shows no necessary conditions that are associated with highly effective monitoring. Also, in line with conjunctural causation, there is no sufficient condition that produces the outcome by itself.

Board designs associated with highly effective monitoring

Table 2 presents the three configurations of IGO board designs that are associated with highly effective monitoring. The solutions have an overall consistency score of 0.94 and overall coverage score of 0.59.

Insert Table 2 about here

Solution 1 (with a consistency score of 0.95 and unique coverage of 0.26) has small relative board size and presence of a board secretary as core conditions, and large absolute board size, fewer committees, and absence of an executive committee as peripheral conditions. Solution 2 (with a consistency score of 0.90 and unique coverage of 0.19) shows large relative board size, absence of an executive committee, and absence of a board secretary as core conditions, and large absolute board size and fewer committees as peripheral conditions. Solution 3 (consistency score of 1.00 and unique coverage of 0.10) has small absolute board size as a core condition, and small relative board size, fewer committees, absence of an executive committee, and absence of a board secretary as peripheral conditions.

Board designs associated with less effective monitoring

Although our focus is on board designs associated with highly effective monitoring, we also present those board designs associated with less effective monitoring (See Table 3). In line with

the concept of causal asymmetry, the board designs associated with less effective monitoring do not show the reverse conditions of the board designs associated with highly effective monitoring.

Insert Table 3 about here

There are three IGO board designs associated with less effective monitoring (Solutions 4, 5, & 6 in Table 3), with an overall consistency score of 0.82 and overall coverage score of 0.70. Solutions 4 and 5 are neutral permutations that share one core condition: presence of an executive committee. On the one hand, Solution 4 (with consistency score of 0.81 and unique coverage of 0.24) adds two peripheral conditions: large absolute board size and absence of a board secretary. Relative board size and number of committees are "don't care" conditions. On the other hand, Solution 5 (with consistency score of 0.90 and unique coverage of 0.13) adds three peripheral conditions: large board size in both absolute and relative terms, and fewer committees. Presence of a board secretary is a "don't care" condition.

Solution 6 (with consistency score of 0.91 and unique coverage of 0.12) has large absolute board size, small relative board size, and absence of a board secretary as core conditions, and fewer committees as a peripheral condition. Presence of an executive committee is a "don't care" condition.

5. A typology of board designs associated with highly effective monitoring

Using QCA has enabled us to systematically identify configurations of board designs associated with highly effective monitoring. Our qualitative knowledge of our small number of cases allowed us to further classify and explain the board designs that emerged from the analysis. Four board designs appear to neatly correspond to different archetypes of IGOs under the UN system

(See Figure 1). The archetypes follow the interplay of the level of organizational complexity and extent of distribution problem in IGOs.

Insert Figure 1 about here

Archetype I. Less complex IGO with low distribution problem

The first archetype (A-I) is exemplified by UNICEF (Solution 1 in Table 2). UNICEF has low organizational complexity because its focus is narrow in scope, which concentrates only on the developmental needs of children and mothers, and it has a low distribution problem because it only executes programs for developing countries.

UNICEF has a *reinforced board* design that fits with its low complexity and low distribution problem. It has a large pool of directors selected on the basis of their expertise and regional experience. Yet despite the large board size, the number of UNICEF's directors is relatively low compared to total membership. There is a significant reduction of member-state representation on the board, which fits with the organization's low distribution problem.

Because of UNICEF's low complexity, board committees that provide functional diversity may not be needed. Instead, the large board has its own secretary to provide support for board processes. Larger boards are prone to less cohesion and coordinating problems. Thus, the secretary of UNICEF's board is given the responsibility of coordinating agendas, gathering information, and facilitating efficient decision-making to reinforce the board in its monitoring role.

To sum up, our example of a less complex IGO with low distribution problem suggests that its reinforced board leans toward an efficiency orientation, rather than representation, to be

highly effective in monitoring. Similar less complex IGOs with low distribution problem (e.g., UNHCR and UNRWA) that have boards emphasizing both efficiency and representation appear to be less effective in monitoring (e.g., see Solution 5).

Archetype II. Less complex IGO with high distribution problem

The second archetype (A-II) is exhibited by UNEP (Solution 2 in Table 2). UNEP is less complex because of its narrow scope focusing only on environmental programs. However, it has a high distribution problem, since it targets both developing and developed countries for its programs and policies.

UNEP's board design combines absence of various conditions, in which their presence would be typically associated with high organizational complexity. For instance, it is surprising to observe that neither any committees nor a secretary is present to support the board. As a less complex organization, UNEP is likely to have lower information processing needs that perhaps could already be addressed by its higher number of directors.

Furthermore, the board size is proportionately high as compared to the total number of member states. The presence of more representation on the board fits with UNEP's high distribution problem. UNEP focuses on the environment, which transcends national boundaries. Hence, member states can be expected to strive for more voice in the decision-making body to ensure that their concerns are also addressed during deliberations. As observed, the directors are elected by the entire plenary through a voting scheme giving each member state one vote. This selection process creates an *egalitarian board* exhibiting a reduced version of the plenary.

In short, our example of a less complex IGO with high distribution problem suggests that its egalitarian board is more inclined to representation, rather than efficiency, to be highly effective in monitoring. This argument is corroborated by the examples of other similar IGOs

(e.g., FAO, UNAIDS, and WHO) that are less effective in monitoring because their board designs show a combination of both efficiency and representation orientation (See Solutions 4 and 6 in Table 2).

Archetype III. Complex IGO with low distribution problem

The third archetype (A-III) is exhibited by IFAD (Solution 3 in Table 2). As an IFI providing developmental and financial assistance, IFAD has high organizational complexity. However, it has low distribution problem because it only caters to rural areas in developing countries.

On the one hand, as a complex organization, IFAD's board design focuses on efficiency by having a lower number of directors, establishing just two highly specialized committees precisely for the purpose of monitoring (i.e., the audit and evaluation committees), and minimizing the possibility of redundant work by not having a board secretary. The combination of these conditions seems to facilitate streamlined information processing for board processes.

On the other hand, its small absolute and relative board size fits with its low distribution problem. Interestingly, though, IFAD's official documents show that non-directors serve on its highly specialized committees. This feature probably compensates for the deficiency of having limited resources due to a small number of directors and low representation on the board. And such board committee composition is likely facilitating effective monitoring on behalf of a rather *symbolic board*.

Therefore, our example of a complex IGO with low distribution problem suggests that its symbolic board prioritizes efficiency above representation to be highly effective in monitoring.

Archetype IV. Complex IGO with high distribution problem

The fourth archetype (A-IV) is exhibited by the WB. The board design configuration of the WB scored high in monitoring effectiveness (4.66) but it does not meet the consistency threshold. We

also discuss the board design of the WB —as an illustrative case— because it demonstrates how the configuration fits with this archetype. The WB is highly complex for two reasons. First, it is a financial institution, which tends to be more complex than ordinary organizations (John et al. 2016). Second, it has a broad scope encompassing multiple missions. Further, it has a high distribution problem because it serves both developing and developed countries.

The WB's board design combines several conditions that suit its high complexity. For instance, it has a large board and several specialized committees that provide skills, knowledge, and expertise. It also has an executive committee that oversees the performance of all committees and administrative policies adopted by the board. And it seems that having an executive committee is enough to assist the board, so that a board secretary is no longer necessary.

The higher number of directors on the WB board also addresses the organization's high distribution problem. There are more board seats, giving more member states the opportunity to be represented on the board. However, the board is still small relative to the total number of member states. Thus, it seems that the WB has a *bureaucratic board* who ensures efficiency by reducing the potential barriers to information processing.

With the WB as an example of a complex IGO with high distribution problem, its bureaucratic board favors both efficiency and representation to be highly effective in monitoring.

6. Discussion and conclusion

This research tackles the governance of IGOs by examining an alternative mechanism to efficiently monitor their actions. We study the boards of 13 IGOs under the UN system to systematically identify their board designs, and we analyze how these board designs facilitate highly effective monitoring.

Our findings contribute to the key debates in global governance literature, particularly the normative debates between input and throughput legitimacy and between democratic and technocratic accountability (Take 2012). On the one hand, input legitimacy and democratic accountability are related to the distribution problem and the issue of representativeness. On the other hand, throughput legitimacy and technocratic accountability relate to the complexity dimension and efficiency. Irrespective of these debates, our study highlights specific organizational designs that improve accountability and reduce capture in global governance (Halliday et al. 2013), given that we focus on board structures associated with agency slack reduction through effective monitoring.

In essence, board designs that are associated with highly effective monitoring in IGOs are contingent upon the interplay between the complexity and distribution problems of the organizations. The former is related to the information-processing requirements for the board to be efficient, whereas the latter is related to the diverging interests of multiple principals that need representation on the board. It seems that the underlying question in IGO boards when it comes to the monitoring function could be whether they should be efficient or whether they should be well-represented. In relation to the efficiency/representativeness tension in global governance, we make two contributions. First, we show that an efficiency rationale seems necessary for effective monitoring boards in all cases except for those IGOs that have low complexity but have a greater distribution issue (our Archetype II). Second, we propose that efficiency and representativeness may not be mutually excluding priorities, as our Archetype IV suggests.

In corporate governance research, the primary objective points to designing an efficient board to be effective in performing its duties (Boivie et al. 2016; Fama & Jensen 1983; John & Senbet 1998). Similarly, public governance research follows an efficiency orientation (e.g.,

Carver 2011; Edwards & Cornforth 2003; Stone & Ostrower 2007). However, an efficiency logic is not only the path that IGOs pursue. Our study reveals that a representation logic may also drive IGO governance designs. This finding parallels the notion of symbolic effects of governance to promote diversity in the board (e.g., Westphal & Zajac 1998; Zattoni & Cuomo 2008), and in the case of IGOs, it is the diversity of representation in the board.

Our configurational approach nuances our understanding of board designs by showing how board features reinforce each other to highlight whether the board leans toward an efficiency or representation logic. For instance, large boards typically would require some support mechanisms such as an executive committee or a board secretary to overcome coordination problems to be efficient (see the examples of reinforced and bureaucratic boards). However, a board may still be highly effective because it is well represented by having a large board without its support mechanisms to be efficient (see the example of an egalitarian board). Therefore, our findings support arguments regarding conjunctural causation and equifinality when it comes to board designs (e.g., Boivie et al. 2016; Misangyi et al. 2017).

Moreover, this paper tackles a current debate in the literature regarding board size. Prior research diverges on whether boards should have more directors or should be kept small (e.g., Dalton et al. 1999; Eisenberg et al. 1998; Yermack 1996). On the one hand, we found that smaller boards —either in absolute or relative terms— complement more complex IGOs. Although previous studies argue for larger boards to help provide more resources in complex organizations (Daily & Dalton 1993; Provan 1980), our results contradict this. Perhaps the interorganizational nature of IGOs requiring more representatives on the board generates more coordination problems rather than contributing to their boards' resourcefulness. Thus, a small board seems more appropriate.

On the other hand, we also found that larger boards concur with IGOs that have a high level of distribution problem. Perhaps the public nature of IGOs concurs with the public governance literature regarding the democratic forum function of IGO boards to promulgate better representation of stakeholders (e.g., Hinna & Scarozza 2015; Martinez-Diaz 2009). There is a greater will for member states to be represented on the board if there are more member states that can benefit from the IGO's work (Kaja & Werker 2010). Also, since larger boards will involve more members, their decisions will be considered more legitimate by their respective IGO's membership (Koremenos et al. 2001).

Our study offers several implications to the global governance and IGO governance literatures. First, we focused on IGOs under the UN system that has proven to be a key player in promoting international cooperation to address several global challenges. With the rampant increase in criticisms berating the UN system on its ineffectiveness to deliver on its promises, the need to govern it has also proliferated over time. The introduction of the new sustainable development goals of the UN has activated advocates, as well as skeptics, to be vigilant of the UN system's pursuit of attaining those long-term goals. Thus, our research suggests expanding our understanding of how to govern IGOs through monitoring to ensure effective execution of different programs toward attainment of such goals.

Second, we conducted a systematic empirical study of IGO boards to highlight their importance in mitigating and controlling the agency problem. There is limited research on IGO boards and there are no empirical studies investigating their role in the monitoring of IGO secretariats. Hence, following the tenets of corporate, public, and nonprofit governance research, our study underscores the role of IGO boards as an efficient governance mechanism to perform the monitoring function.

Third, our configurational analysis complements the current trend in board research that embarked toward understanding board designs as combinations of board features because of the logic of equifinality (e.g., Boivie et al. 2016; Federo & Saz-Carranza 2018; Garcia-Castro et al. 2013; Misangyi & Acharya 2014). Indeed, our findings support this argument as we uncovered different paths to achieve highly effective board monitoring in IGOs under the UN system.

Fourth, we nuance our understanding of IGO board designs as we find that certain board features are less relevant in IGOs because they are consistently present across different IGOs. For instance, a higher degree of board independence —as one of the features of "good governance" in corporate governance research (e.g., Aguilera & Cuervo-Cazurra 2009; John & Senbet 1998)— seems to be less of a concern in IGOs because all directors are insiders and the CEO chairs the board. Our research then addresses the generalizability of applying corporate governance research to other types of organizations because it seems that there are specificities in IGOs that complicate the transfer of knowledge when studying IGO governance (e.g., Federo & Saz-Carranza 2018).

Fifth, our analysis produced a typology of board designs in IGOs under the UN system. Our framework builds on the rational design perspective, in which we argue that IGO board designs are not made randomly, but rather are products of a strategic choice to establish fit between the IGO's capabilities and environmental expectations. Our findings reveal that IGOs may follow an efficiency logic and/or a representation logic for their boards to be highly effective. This paper complements a previous study by Federo and Saz-Carranza (2018) who explained the effect of board designs to strategy formulation. Their results suggest that organizational complexity determines the appropriate board designs in order to be effective in strategy formulation. However, to be effective in monitoring, IGOs need to consider the interplay

of the level of their organizational complexity and the extent of their distribution problem. These findings could be particularly helpful for academics and practitioners in understanding the design choices of IGOs. It seems that IGO boards can be designed to pursue an effective strategy formulation and/or monitoring within the organization. Efficiency could be the logic behind both strategy formulation and monitoring, whereas representation only matters in monitoring. Nevertheless, it would be interesting to explore whether the efficiency-representation logic divide may be applicable not only to board designs but also to overall IGO governance designs.

In addition, our exploration of IGO boards under the UN system has its limitations. First, we conducted our study on 13 cases, and this small sample size may limit the generalizability of our findings. However, all studied cases belong to the UN system in order to improve comparability. This sampling approach mitigates the effect of other possible factors that can affect the relationship studied and thus enhancing the internal validity of our findings. Moreover, our in-depth knowledge of the cases allowed us to understand and nuance the configurations that emerged from the analysis. Nevertheless, we encourage future research to expand the generalizability of our findings and to test whether our proposed framework holds for other IGOs under the UN system, for other global IGOs, and for regional IGOs.

Second, our measure of board monitoring effectiveness refers to the board's "performance police" function. It can be argued that monitoring can also be operationalized using different measures. Alternative proxies include board director incentives to monitor or reporting mechanisms to the board. However, our operationalization of our outcome condition follows recommendations in prior research to keep the same level of analysis by linking board designs directly to board actions (e.g., Forbes & Milliken 1999).

Finally, it is likely that beyond board designs, other endogenous (e.g., team dynamics and

strategies) and exogenous factors (e.g., culture, media, power dynamics, and political elements) affect how boards process information to perform the monitoring function. However, in QCA, the number of cases limits the number of explanatory conditions that can be included in the analysis (Greckhamer et al. 2013). Future studies using a larger sample might be able to include more explanatory conditions to conduct a more comprehensive configurational analysis to further nuance our understanding of the relationship between board designs and the monitoring function.

In conclusion, understanding how to monitor the UN system is important because its IGOs have an extensive impact upon a wide array of stakeholders spanning across transnational borders. The UN system governs the institutional arrangements responsible for policy making where different organizations and actors operate and interact with each other (e.g., Shaffer 2015). Monitoring is crucial to help ensure that IGOs perform according to the mandates vested by the member states that created them. As we explored IGO board designs, we found that there seems to be no one-size-fits-all approach to IGO governance. There are multiple ways to achieve highly effective monitoring. However, there are also multiple ways that can go wrong in governance design choices. Ultimately, IGO governance designs should address governance constraints to mitigate barriers that could inhibit the effective functioning of the organization.

Notes

1. While Martinez-Diaz (2009) uses the term "constant" and "regular" "evaluation" we use the term "monitoring" to distinguish this oversight activity from the concept of "impact" and "ex-post" "evaluation."
2. As was the case with Martinez-Diaz (2009), despite MOPAN uses the term "evaluation unit", we consider this a monitoring function given that it executes "ongoing performance

assessment" and thus we distinguish this oversight activity from "impact" and "ex-post" "evaluation" units.

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Table 1 Dataset

			Conditions (Structural features of board design)					Outcome (Monitoring effectiveness)
	Acronym	**IGOs**	**(1)**	**(2)**	**(3)**	**(4)**	**(5)**	
1	FAO	Food and Agriculture Organization of the United Nations	0.99	0.65	1	1	0	0.44
2	IFAD	International Fund for Agricultural Development	0.33	0.09	0.33	0	0	0.82
3	UNAIDS	Joint United Nations Programme on HIV/AIDS	0.54	0.14	0.33	1	0	0.06
4	UNDP	United Nations Development Programme	0.91	0.51	0	0	1	0.51
5	UNEP	United Nations Environment Programme	1.00	0.83	0	0	0	0.82
6	UNFPA	United Nations Population Fund	0.91	0.51	0	0	1	0.41
7	UNHCR	United Nations High Commissioner for Refugees	1.00	1.00	0.33	1	0	0.07
8	UNICEF	United Nations Children's Fund	0.91	0.44	0	0	1	0.62
9	UNRWA	United Nations Relief and Works Agency for Palestinian Refugees in the Near East	0.72	1.00	0.33	1	1	0.10
10	UNWomen	The United Nations Entity for Gender Equality and the Empowerment of Women	0.96	0.52	0.33	1	1	0.68
11	WFP	World Food Programme	0.91	0.44	0.33	0	0	0.32
12	WHO	World Health Organization	0.89	0.39	1	1	0	0.10
13	WB	World Bank	0.65	0.17	1	1	0	0.62

Notes:
(1) High absolute board size
(2) High relative board size
(3) High number of committees
(4) Presence of an executive committee
(5) Presence of a board secretary

Table 2 Board Designs Sufficient for Highly Effective Monitoring

	Solutions		
Configurations	**1**	**2**	**3**
(1) High absolute board size	●	●	⊗
(2) High relative board size	⊗	●	⊗
(3) High number of committees	⊗	⊗	⊗
(4) Presence of an executive committee	⊗	⊗	⊗
(5) Presence of a board secretary	●	⊗	⊗
Consistency	0.95	0.90	1.00
Raw coverage	0.26	0.22	0.14
Unique coverage	0.26	0.19	0.10
Solution consistency		0.94	
Solution coverage		0.59	
Cases†	UNICEF	UNEP	IFAD

Notes:
a) ● = present (core); ● = present (peripheral)
b) ⊗ = absent (core); ⊗ = absent (peripheral)
c) Blank spaces are "don't care" conditions
†See Table 1 for the full titles of IGOs.

Table 3 Board Designs Sufficient for Less Effective Monitoring

	Solutions		
Configurations	**4**	**5**	**6**
(1) High absolute board size	●	●	⬤
(2) High relative board size		●	⊗
(3) High number of committees		⊗	⊗
(4) Presence of an executive committee	⬤	⬤	
(5) Presence of a board secretary	⊗		⊗
Consistency	0.81	0.90	0.91
Raw coverage	0.44	0.24	0.20
Unique coverage	0.24	0.13	0.12
Solution consistency		0.82	
Solution coverage		0.70	
Cases†	UNHCR FAO WHO UNAIDS	UNHCR UNRWA	WFP UNAIDS

Notes:
a) ⬤ = present (core); ● = present (peripheral)
b) ⊗ = absent (core); ⊗ = absent (peripheral)
c) Blank spaces are "don't care" conditions
†See Table 1 for the full titles of IGOs.

Figure 1 Typology of board designs in IGOs