

# FROM NEXUS OF CONTRACTS TO NEXUS OF INSTITUTIONS: THE DETERMINANTS OF ANGLO-AMERICAN CORPORATE GOVERNANCE MIGRATION INTO EMERGING ECONOMIES

## 1. INTRODUCTION

Prior research in emerging markets has attributed corporate governance deficiencies to the inadequacies in the *nexus of contracts* (Jensen & Meckling, 1976; Kim & Mahoney, 2010). With this view the frail aggregate national institutional framework explains the corporate governance of emerging market firms. To address this deficiency in the contracting environment, Coffee (2001) argues that elements of the market-orientated Anglo-American system of corporate governance should be introduced. Another strand of literature emphasizes the *rival institutional view* on national corporate governance regimes (see Aguilera & Jackson, 2003), classifying different stakeholder-orientated systems as being either “bank” or “state”-led capitalist models, where firms’ corporate governance need to be adopted accordingly. As our point of departure, we argue that both the contracting view and the rival institutional view of corporate governance fail to capture the visible *firm-level* heterogeneity of emerging market firms.

We see a lack of theory-based rationalization for the heterogeneity in emerging market firms’ corporate governance practices, despite the simultaneous international diffusion of a dominant corporate governance regime – the Anglo-American model. The prevailing corporate governance heterogeneity among indigenous emerging market firms is intriguing, considering that such firms may reduce their liability of foreignness and enhance foreign investment through greater adherence to Anglo-American corporate governance (Bell *et al.*, 2012). We claim that the antecedents of emerging market firms’ corporate governance should be of interest to a wider set of international business scholars, which is supported by Filatotchev *et al.* (2007), for example, who report that the corporate governance of emerging market firms impacts their foreign direct investment decisions and entry-mode choices.

We contribute to the nascent comparative corporate governance literature of Aguilera & Jackson (2003, 2010) in considering how the firm's boundaries are transcended by stakeholder groups. Aguilera & Jackson's actor-centered model assumes three stakeholder groups, each possessing very different socially constructed preferences that contribute to dynamic coalitions and potential conflicts. The fundamental governance structure of the firm then strives to accommodate these differences in providing stability to the institutionalized tensions. Rather than adopting Aguilera & Jackson's unity stakeholder perspective, we build on the notion of multiple entities within a given stakeholder category (such as various block ownership groups). Thus, we integrate into our model Hoskisson (2002)'s perspective of institutionalized "conflicting voices" between rival shareholders that influence executive decision-making and strategy. We also build on Desender *et al.* (2014), who address block shareholders in their role of introducing rival corporate governance logics within firms. These different shareholders are notable in being drawn from and shaped by different realms within society.<sup>1</sup>

We view the emerging market firm as a nexus, or bundle, of institutional relationships embedded in the indigenous context. By adopting the "institutional logics"<sup>2</sup> perspective (e.g. Thornton & Ocasio, 2008), we assume that firms' decision-making is driven by multilevel and inter-institutional systems. Specifically, we posit that indigenous institutional factors, such as the nature of a firm's indigenous ownership, moderate the way the emerging market firm behaves, in relation, for example as discussed in this paper, to the adoption of foreign corporate governance norms.

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<sup>1</sup> The firm is viewed as a corporate bureaucracy with hierarchies and roles determined by a combination of formal and informal rules and routines (Ocasio, 1999), while the broader bundle of institutions holding this together are concepts such as joint-stock firms, limited liability, double-entry book keeping and accounting and the Berle & Means (1932) notion of separation of ownership from control by diversification. We also consider the Weberian notion of the firm as a bundle of institutions that evolved uniquely in a Western European institutional context (Lepsius, 1990), prior to its transplantation into indigenous societal matrices worldwide.

<sup>2</sup> It should be noted that our institutional logics approach and consideration of firms as organizational structures susceptible to the logics emanating from the societal realms within which they are embedded, in effect supersedes notional differences between hard and soft governance based on contrasting formally legally codified rules and informal non-binding recommendations. This is due to the same interplay between logics within a society giving rise to notions of ethics, legal accountability, institutional decoupling of firms' structure and more rigidly defined formal and informal institutional frameworks that are central to more traditional institutional approaches but, in the logics approach, are deemed as secondary to consideration of the logics that give rise to them.

With this perspective in mind, we study how a firm's corporate governance is shaped by prevailing *logics* rather than being deterministically formed *a priori*. Logics are defined as the set of broad, institutionalized and socially constructed cultural beliefs and rules that structure cognition and fundamentally shape decision-making and action (see Thornton, 2002, 2004, for example). The logics are in effect institutionalized world views, providing meaning and value to rules and routines associated with certain activities while being wholly internally consistent with the institutional *realms* or *orders* – typically religion, tribe, and family (e.g. Friedland & Alford, 1991) – within the society from which they emanate.

Logics can endogenously evolve from the formation of social communities by groups of individuals – under the influence of existing logics – whose actions and behaviors (March & Olsen, 1989; Kelman, 2006) within the community constitute a unique identity and become institutionalized (Tajfel & Turner, 1979; White, 1992). Thornton (2004) argues that the market-orientated logic was originally formed within an Anglo-American institutional context, but has since then exerted considerable influence at an international level through portfolio investments, foreign direct investment and professional associations amongst other means. In turn, these market-orientated or Anglo-American logics are assimilated into indigenous societal matrices worldwide, and particularly across emerging economies – highlighting the multilevel nature of the institutional logics approach. The assimilation – or rather migration process – is in itself subject to the size, scope and identity of the institutional orders within the indigenous society. The process is also critically dependent on the strategic positioning of the firm within the indigenous society and on which realms are most influencing the firms' stakeholders.

Our study addresses the call for further theoretical development in the diffusion of corporate governance practices, as expressed by Haxhi & van Ees (2010) for example, while also addressing Thornton & Ocasio's (2008) call for further research based on the institutional logics perspective. Specifically, we seek to address the dynamic inter-linkages between different institutional levels

within society, and organizational structures as expressed by our choice of corporate governance measures.

In this study we empirically consider how five categories of indigenous block owners influence firms' adoption of Anglo-American corporate governance measures into their organizational structure at the initial public offering (IPO) juncture. The focus is on five categories of block owners: nonexecutive directors, corporate blocks, business groups, private equity and state ownership. We argue that these owner groups are all drawn from and shaped by distinct institutional logics within society. We assume the presence of *market-orientated* institutions in all societies – albeit with differing degrees of focus and intensity – which in turn underscores our study's focus on the IPO event as an institutional transition for focal firms. Our approach sheds light on the relative conflicts and complementarities between the institutional logics governing block shareholders' strategic preferences and those of the (opposing) market-orientated logic. These conflicts and complementarities delineate the degree of adoption of Anglo-American governance tenets by the firm. Uniquely, our approach considers the tempering of this conflictual or consensus-driven interaction with respect to a higher-order societal framework and context.

The empirical part of this paper focuses on the emerging economies of Africa, implicitly addressing financial markets in transition. We argue that corporate Africa provides a unique laboratory for an empirical assessment of the impact of corporate governance practices' diffusion into emerging economies, with its rich cross-country variation in institutional settings. The nascent African state apparatus is subject to considerable external influence, which primarily arises as market-orientated institutional logics at a transnational level. These typically emanate from macroeconomic structural adjustment programs, conditionality of aid receipts, and institutionalized macroeconomic trading arrangements. By this means, a majority of African nations have established stock exchanges or substantially reformed pre-existing markets during the last twenty years (Hearn & Piesse, 2013). However, the proliferation of the market-orientated logic and associated organizational form – based on the Western notion of separation of ownership from

control through diversification – is at odds with sub-national logics emphasizing extended organizational forms based on family or clan kinship. This multilevel contestation between rival logics is ubiquitous across emerging economies – with Africa exemplifying these dynamic issues.

Our focus on firms undertaking IPOs facilitates the study of the institutionalized influences on firms rooted in an underlying societal realm, when adopting foreign corporate governance practice tenets in their IPO prospectuses. In effect, the IPO event represents a transition, from having one's basis in an indigenous institutional context, towards the Anglo-American financial market logic associated with an organized securities market. The IPO prospectus reflects a firm's deep consideration of what it should disclose when “marketing” itself to prospective investors.

Our empirical findings are based on 190 out of a total population of 201 IPOs undertaken over the period 2000-2016 on the African continent. The analysis, using an ordered probit model, reveals positive associations between corporate block shareholders and private equity retained ownership on the one hand, and the likelihood of an adoption of Anglo-American governance measures on the other. However, for PE entities the high level of adoption of Anglo-American governance measures is found less likely in societies characterized by high institutional standards and more likely in societies characterized by tribal or patriarchal informal institutions. No moderating effect is found for corporate block holders. A negative association is found between business group retained ownership and the probability of adopting Anglo-American corporate governance measures. The association is negatively moderated by institutional quality and positively moderated by tribal informal institutions. For non-executive and state ownership we find no significance of an association between ownership and adoption of Anglo-American corporate governance measures, *per se*, but significant moderating effects from institutional quality and tribalism.

Our control variables indicate that adoption of Anglo-American governance is much more likely in common law (as opposed to civil code law) jurisdictions and in wealthier economies as measured by GDP per capita. Moreover, firms with high ratios of nonexecutives on the boards of

directors, with a foreign lead manager, with longer-serving (tenured) executives and with high turnover – being a proxy for extensive and complex operations – are found more likely to become compliant with Anglo-American corporate governance.

The rest of the paper is organized as follows. In the next section, we discuss the theory and formulate our hypotheses. Section 3 outlines the Anglo-American Governance Adoption Index while Section 4 covers the sample construction, methodology and definitions of all variables used in the analysis. Section 5 contains our empirical results, while we summarize our findings and provide our policy conclusions in Section 6.

## **2. THEORY AND HYPOTHESES**

Our institution-theoretic approach builds on two premises: the first is based on the organizational structure of the firm, the second on the wider societal institutional configuration and how this configuration impacts the diffusion of corporate governance “best practice” based on the Anglo-American model.

For the first premise we fundamentally depart from the agency-theoretic view of the firm as a “nexus of contracts” (see Fama, 1980) and resource dependence, the notion of the firm being a “nexus of claims on resources” (e.g. Pfeffer & Salancik, 1978). Here, institutions are considered a thin veil used to define and enforce contracting (Aguilera & Jackson, 2008). Instead, we propose the idea of the firm as a “nexus of institutions” that support, or oppose, the Anglo-American corporate bureaucratic structure. The institutional nexus includes the concept of the separation of ownership from control through diversification, a joint-stock company, double-entry bookkeeping, limited-liability contracts and residual-risk claims, as well as distinct executive and nonexecutive director roles, as a non-exhaustive list. All have uniquely and endogenously evolved within an Anglo-American institutional framework and as such have been subject to the rival co-influence of prevailing institutional logics within that framework. Furthermore, they all support the Anglo-American corporate bureaucratic structure – which facilitates internal control alongside external

fiduciary responsibilities. Within this structure the roles, and the routines associated with them, alongside norms of appropriate behavior and ethics, are shaped entirely by both informal and formal institutions. This in itself is a departure from traditional institutionalist approaches (see Williamson, 2000, 2002 for example), which rely on the concept of bounded rationality. Equally, the socialized nature of rules, routines and normative appropriateness underscores the historically contingent nature of institutional constructs and their reliance on prevailing societal logics acting on the firm.

We draw on the institutional logics perspective (Ocasio, 1999; Thornton & Ocasio, 2008) and argue that a firm's selection of corporate governance measures is subject to the contestation between rival logics influencing the firm – with these themselves subject to dynamic intertemporal conflicts and complementarities. We posit that corporate governance transformation in emerging market firms is the outcome of a contested transition in the redefining of socialized, historically contingent rules and roles within any given bureaucratic organizational structure. Thus, organizations may be susceptible to the influences of several distinct institutionalized logics – with the resulting organizational structure being contingent on the contest for dominance between those logics. The contest would typically take place through the logics' infusion and shaping of managerial culture, which then redefines power-dependencies and embedded agency relationships within the organization. This process in turn defines the strategic orientation of the leadership of the firm.

Our second premise, associated with our perspective, is that the societal fabric is part of an extended multilevel institutional system. Furthermore, this implies an erosion of traditional institutional dichotomous distinctions between the formal and informal institutional spheres (e.g. North, 1991, 1994), or Scott (1995)'s three regulatory, normative and cognitive “pillars of institutionalized legitimacy”.<sup>34</sup> In their place, we propose a continuum of levels – ranging from the

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<sup>3</sup> Regulatory pressure accounts for state-level architecture, while normative pressure reflects industry-level professional structures. Cognitive pressure is defined in terms of deeper sociological acceptability within society – such as cultural, religious and broad societal norms. Regulatory and normative, on the one hand, are closely related to North (1993) and Williamson (2002)'s definition of “formal” institutions, while cognitive equates to their “informal” counterparts.

<sup>4</sup> Institutions themselves are redefined – following Thornton & Ocasio (1999) – in having three complementary and inseparable dimensions, these being structural, normative and symbolic or cognitive. These allow for more powerful

international through to the regional, national and finally sub-national level. Institutionalized orders or realms are present within each of the levels and extend their reach, through their respective logics, across levels. Logics themselves are formed from social groups with distinct collective identities, the latter defined as “...the cognitive, normative, and emotional connection experienced by members of a social group because of their perceived common stats with other members of the social group” (Thornton & Ocasio, 2008: 111).

While the institutional logics perspective considers individuals carriers of institutions, and potential members of multiple social groups, they can coalesce either individually or as organizations into social groups. Such groups can then attain a collective identity that binds members together with a common purpose. As collective identities become institutionalized, they develop their own institutional logics that exert influence over populations of individuals and organizations. This is particularly true of the emergence and then dominance of a distinct market-orientated logic – also known as the Anglo-American corporate governance model. The global spread of the market logic is also apparent in its dominance across many other seemingly unrelated realms (in line with the general “logics” arguments of Thornton & Ocasio, 2008). Further, the market logic underscores the intertemporal nature of societal orders – that are subject to change over time due to their combination and recombination of the social preferences of their members. We argue that the market-orientated logic not only embraces a market or finance-orientated emphasis but also supports the Western corporate bureaucratic organizational form and thus Anglo-American corporate governance measures.

Emerging economies worldwide, including those across Africa, owe their formal institutional architecture (such as government, political and legal apparatus) to that inherited from former colonial metropolises (La Porta *et al.*, 2000, 2008). While this architecture was transplanted into individual, national emerging-market settings, simultaneously, more far-reaching

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influences that might arise from a given institution – such as religion’s ability not just to be confined within the cognitive domain in influencing culture, but also to influence the appropriateness of behavior and of organizational structure and operations, and moral legitimacy for the family, as well as the formal structuring of activity.



macroeconomic, trade and international financial and political arrangements were created.<sup>5</sup> In this way, former European colonial architecture gave rise to nascent state and legal institutionalized orders within developing countries at the time of their independence. These logics were supportive of the firm as a Western bureaucratic structure (including Anglo-American corporate governance measures), although conflicting with indigenous logics based on patriarchy, religion and notions of extended family that differ greatly from those prevalent in Western Europe.<sup>6</sup>

While such incongruities between transplanted European institutional orders and their rival indigenous counterparts may exist, the former's longevity over the latter is driven by pressure from institutionalized macroeconomic and trading arrangements at a regional and international level. The legacy of the pre-colonial institutional configuration, as well as national-level aid-receipt policies, structural adjustment programs and reforms, the foreign direct investment and portfolio legacy of the pre-colonial institutional configuration, and national-level investment policies, provides conduits through which the market-orientated Anglo-American governance model is spread.

Our approach builds on Hoskisson *et al.* (2002)'s notion of "conflicting voices" and the shaping of institutionalized preferences of block shareholders within a firm's ownership structure. In particular, the socially constructed preferences amongst indigenous block owners are shaped by their inherent logics that come from the societal realm in which they are embedded (for example state ownership). Following Hoskisson *et al.*, we argue that these block owners exert influence over the firm and its strategy in conjunction with their institutionalized influence, which is related to their formal and informal norms that define roles and routines within the corporate bureaucratic form (Ocasio, 1999).

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<sup>5</sup> These range from economic and monetary unions amongst Francophone African countries with exchange rates pegged to the French Euro, to preferential trade arrangements with former colonial metropolises, and ultimately to truly international financial institutions such as the World Bank and International Monetary Fund (IMF). All are based on essentially European institutional frameworks and all promote the maintenance of these institutional logics at an international and national level.

<sup>6</sup> These incongruities are apparent from the Islamic prohibition of interest and emphasis on risk-sharing partnerships as an organizational form (Kuran, 2004), and the traditional African Ubuntu philosophy's emphasis of communitarian principles and collectives as organizational forms (West, 2014).

## **Hypotheses**

We introduce five hypotheses motivated by the institutional logics perspective. Specifically, we focus on how various block shareholder interactions determine the degree to which the focal firm adopts Anglo-American governance provisions. The first relates to nonexecutive directors, who have explicitly defined roles within the Western corporate bureaucratic organizational form. The next three principals - corporate block shareholders, business groups and private equity - all emanate from distinct realms within the underlying indigenous societal matrix. Our final consideration is of the state, which is considered an important environmental stakeholder that is at the same time influenced by powerful indigenous logics within the society.

Nonexecutive directors have a central role in the agency-theoretic conceptualization of the firm's corporate bureaucratic structure (Ocasio, 1999). The institutional logics perspective views their roles, as well as the rules and routines associated with them that enable the actions of the individual performing the role, as socially defined and therefore underscored by institutions (Ocasio, 1999). In market-orientated capitalistic systems, their role is in a partitioned unitary board of directors, adopting decision monitoring and evaluation oversight of their executive director counterparts. In stakeholder capitalistic systems – notably those centered on banks or the state – their role is again one of monitoring – but now in the context of representing large environmental stakeholder or shareholder interests in an upper-tier supervisory board. Here, a subordinate management board and associated executive committees are supposed to undertake day-to-day management of the firm. Both systems assume nonexecutives to be the direct representatives of shareholder interests – although the former assumes those shareholders to be diversified minorities, while the latter assumes the presence of dominant block shareholders (Aguilera & Jackson, 2003). Thus, nonexecutive directors are an intrinsic part of the Western corporate bureaucratic model of a firm's organizational form, this being central to an agency-theoretic or market-orientated logic. As such, we anticipate that higher retained ownership of nonexecutive directors, in the focal firm, will be associated with increased adoption of Anglo-American governance provisions. We argue that

this effect will be driven by independent directors' motivation to support their own legitimacy, by generally adhering to Anglo-American corporate governance norms.

However, given that the "nexus of contracts" view of the firm originates in a Western European institutional framework (Weber, 1978), the very corporate bureaucratic organizational form it supports is acutely sensitive to the institutional context within which it is embedded (Ocasio, 1999). Therefore, in the context of high aggregate national formal institutional quality and consequentially low tribalism, the national and sub-national governance frameworks are more supportive of arm's length, third-party contracting (Kuran, 2009). Consequently, in such environments, there are greater institutional complementarities between the aggregate indigenous corporate governance framework and the more internationally orientated Anglo-American corporate governance framework. Hence, there is greater legitimacy and contextual support for the nonexecutive role within corporate bureaucracy, with nonexecutives seeking further legitimacy (e.g. Suchman, 1995) by encouraging the firm to become increasingly compliant with the Anglo-American corporate governance model.

Contrastingly, in jurisdictions of low aggregate formal institutional quality with high levels of tribal patriarchy, the logics associated with indigenous extended-familial, religious and patriarchal orders are dominant over rival, and alien, institutions transplanted from Europe. These logics act to delegitimize the effectiveness of the nonexecutive directors' monitoring role, while also reducing their recourse to sanctions against dominant insider appropriation through a lack of support from the institutional architecture for third-party, impartial contracting. In this way, the informal and formal roles and routines associated with nonexecutive directors, alongside norms governing the appropriateness of their actions, alter to fit in with the predominant patriarchal indigenous logics. Thus, nonexecutive directors lack the motivation to either perform a monitoring role or to seek legitimacy for an otherwise alien Anglo-American corporate governance system emphasizing external as opposed to internal relational markets – producing a corporate environment

dominated by a nexus of indigenous institutions. As a consequence of these theoretically driven arguments, we formulate the following hypotheses:

***Hypotheses 1a and 1b.*** *The positive association between nonexecutive-retained ownership and the likelihood of a firm adopting Anglo-American governance measures is (a) positively moderated by formal institutional quality and (b) inversely moderated by tribal informal institutions.*

We next consider the associations between three categories of block shareholder who are external to the management of the firm, and their encouragement of the adoption of Anglo-American governance provisions.

We argue that both corporate block investors and private equity entities are highly influenced by Europe-originated formal institutional architecture that is supportive of the market-orientated external financing model of corporate governance. Corporate investors are especially prevalent in emerging economies, owing to a dearth of institutional investors such as pension funds and actively managed investment schemes. We claim that the lack of institutional investors and limited liquidity of shares ensures they take longer-maturity positions in their investee firms. This necessitates their adoption of block shareholding positions in order to maximize voting power and thus have a greater say against other dominant insiders. The larger cash flow rights associated with these ownership positions underscore their motivation to monitor more effectively (Bruton *et al.*, 2009). As such, block shareholders are more prone to encourage the firm to adopt Anglo-American corporate governance provisions that will enhance their monitoring ability and restrict insiders' potential for appropriation.

In line with Bruton *et al.* (2005), we also make the institutionalist arguments regarding the dominance of US venture capital (VC) industry norms and values. While private equity refers to both informal angel investors and formal venture capitalists, a central consideration in the VC industry is the training and socialization of managers – based on professional communities

dominated by US industry values (Bruton *et al.*, 2005). Thus, the global VC industry is consistently shaped by market-orientated logics. Further reinforcement of these socialized norms of Anglo-American corporate governance is pushed by managers as they seek legitimacy from external investors (Bruton *et al.*, 2010). While these investors are external to private equity entities, they are also socialized within the US-centered global industry. This constitutes a self-reinforcing system of institutionalized norms at an international level that infuses into private equity entities operating at national and sub-national levels. In order for VC providers to attain legitimacy (e.g. Suchman, 1995), they too encourage investee firms to adopt Anglo-American governance tenets.

Finally, we argue that business groups are firmly rooted within the indigenous societal orders and shaped by their logics. This is particularly evident from their “hybrid” organizational form that transcends the boundaries of the nominally independent firms that constitute the group network (e.g. Khanna & Palepu, 2000; Khanna & Rivkin, 2001). While this network is formed through hard control in the form of extensive pyramiding and cross-shareholding, this is supplemented by extensive soft control across constituent firms, taking the form of director interlocks, shared training, club membership and other socialization measures (Khanna & Yafeh, 2007). However, this “hybrid” governance form is based on extended socialization that mirrors deeper sociological constructs within the society – namely clans and extended families (see Bhappu, 2000). Thus, the organizational framework of the firm, and its corporate bureaucracy, are assimilated within the indigenous logics, the latter being centered on relational capital that utilizes the extended networks of firms as an effective internal capital market, and being based on the powerful sociological construct of family and clans. Sub-national governance frameworks based on these tenets promote internal finance and relational finance between business groups, which are largely incongruous with and opposed to the alien Anglo-American notions of governance that emphasize external financing. Thus, we argue that there is a negative association between firms with ownership ties to business groups and Anglo-American governance adoption.

We argue that corporate block-shareholding entities, business groups and private equity investors are all mutually subject to a very different emphasis from indigenous institutional logics than are nonexecutive directors. In the latter case, the very definition of the role and functioning of nonexecutive directors is highly contingent on the combination of the indigenous assimilation of the Western corporate bureaucratic form *and* the dominance of market-orientated logics – the two acting as complements. In the case of corporate entities, business groups and private equity investors, all three are necessarily deeply embedded within the sociological structures that make up the indigenous society. In this way, they are largely compliant with deeper, sociologically based logics drawn from families or clans and religion. Thus, while at a higher societal level the inter-institutional system may coalesce to form a framework that effectively protects third-party contracting and external corporate governance, these are nevertheless incongruous with deeper subsumed clan, familial and religious logics. We draw on the institutional logics notion that organizational fields are contested by several logics and, while the dominant logic subsumes the others, the latter do not simply disappear altogether (Thornton & Ocasio, 2008). As such, corporate entities, business groups and private equity investors all must necessarily fit in with the prevailing deeper logics within the societal matrix. These, in turn, conflict with the market-orientated logic, promoted by high institutional quality and low tribalism. Extending these theoretical arguments, we argue that these three categories of block holder will resist further incongruous institutional encroachments that will reduce their level of control over the focal IPO firm.

The opposite should be true under conditions of low formal institutional quality and high tribalism influencing society-level frameworks. Here, the corporate block owners and private equity investor entities are striving to engage market-orientated logics in order to signal the value of the focal firm and attract external capital market investors as well as human and social capital resources into the firm. Encouraging the focal IPO firm to adopt Anglo-American corporate governance better serves this purpose of attracting external investors and resources (Pfeffer & Salancik, 1978). This is pertinent given the institutionalized emphasis on private equity entities exiting their investments

(Bruton *et al.*, 2005; Wasserman, 2003). It is also apparent in terms of a form of institutional decoupling, whereby the logics governing corporate and private equity entities are decoupled from the more peripheral adoption of market-orientated Anglo-American governance measures in the focal IPO firm. Thus, the IPO firm attains moral and pragmatic legitimacy in the eyes of external investors and hence acquires resources, enabling the private equity to exit. Khanna & Rivkin (2001) and Khanna & Yafeh (2007) argue that a major benefit arising from an individual firm's membership of business groups is that it can effectively leverage the brand and reputation of the wider group in order to preferentially obtain external resources. Given these theoretically based arguments, we put forward the following hypotheses:

***Hypotheses 2a and 2b.*** *The positive association between corporate-block-holder-retained ownership and the likelihood of a firm adopting Anglo-American corporate governance measures is (a) inversely moderated by institutional quality and (b) positively moderated by tribal informal institutions.*

***Hypotheses 3a and 3b.*** *The positive association between private-equity-entity-retained ownership and the likelihood of a firm adopting Anglo-American corporate governance measures is (a) inversely moderated by institutional quality and (b) positively moderated by tribal informal institutions.*

***Hypotheses 4a and 4b.*** *The inverse association between business-group-retained ownership and the likelihood of a firm adopting Anglo-American corporate governance measures is (a) inversely moderated by institutional quality and (b) positively moderated by tribal informal institutions.*

Finally, we examine the role of state-retained ownership in influencing the focal firm's adoption of the Anglo-American governance model. Consideration of the state as a stakeholder was omitted

from Aguilera & Jackson (2003)'s actor-centered model, where it was considered only in its more distant role as regulator of domestic markets and its control over macroeconomic conditions. Drawing on the institutional logics perspective, we develop a different view. While Friedland & Alford (1991) considered state bureaucracy one of the central institutional orders within society, effusing its own distinct logic, we consider the intertemporal nature of socialized interactions and community forming an order – such as the state apparatus. Such an approach builds on the institutional logics view of individual actors (owners as well as executives) as carriers of institutions, and of actors as subject to competing rival logics such as patriarchy, extended family and religion. While state bureaucracy largely owes its presence to transplantation during the colonial era, in many emerging economies its internally consistent institutional logic is subject to significant contestation from prevailing, underlying indigenous logics. State enterprises and entities are themselves largely seen as dominated by these indigenous logics, typically based on patronage to the underlying feudal political economy. We argue that the presence of such strong indigenous logics would be resistant to incongruent market-orientated logics and negatively prevent the focal firm from adopting Anglo-American corporate governance practices.

Given the ability of an institutional order to be permeated and subject to change by rival institutional logics within a society, we argue that societies with high aggregate formal institutional quality are characterized by an interplay between indigenous and transplanted European orders that is supportive of third-party contracting and market-orientated governance. In this way, the state is relatively uninfluenced by potentially incongruous indigenous logics and adopts an impartial character. Thus, this high-institutional-quality context, as demonstrated by Perotti (1995), suggests that state retained ownership is associated with the signaling of value to investors. This is mirrored in state ownership seeking to encourage the firm to attain legitimacy from investors through the further adoption of Anglo-American corporate governance provisions, which would themselves be compatible with the national framework.



However, in environments of low formal institutional quality and those dominated by tribal institutional frameworks, the opposite is expected. The state is largely subsumed under dominant prevailing logics centered on religion and extended family or clans. Therefore, the state is more resistant to what is considered a loss of control through the adoption of incongruous governance measures – namely the adoption of Anglo-American corporate governance. Given these theoretically derived arguments, we propose the following hypotheses:

*Hypotheses 5a and 5b. The inverse association between state-retained ownership and the likelihood of a firm adopting Anglo-American corporate governance measures is (a) positively moderated by institutional quality and (b) inversely moderated by tribal informal institutions.*

### **3. ANGLO-AMERICAN CORPORATE GOVERNANCE ADOPTION INDEX**

The construction of our unique Anglo-American corporate governance adoption index follows the New York Stock Exchange manual (NYSE, 2016) in terms of governance provisions at the firm level. We have adapted this index to an emerging economy context – in which there are typically significant institutional voids. These voids account for deficiencies in managerial labor, product and capital markets (Khanna & Palepu, 2000; Khanna & Rivkin, 2007). We also consider more sophisticated Anglo-American corporate governance provisions in terms of anti-takeover mechanisms such as golden parachutes, greenmail and more detailed provisions for proxy voting.

Our index takes into account a number of firm-level governance provisions – as detailed in Table 1 – that are broadly grouped into provisions based on top management incentives regarding pay, board monitoring and board effectiveness, and on the Berle & Means (1932) concept of separation of ownership from control via diversification. Firm adherence to each provision is represented by a binary (1/0) dummy variable. A final overall or aggregate index is calculated based on an equally weighted arithmetic average of all of a firm's scores for its adopted corporate governance provisions. We have developed two versions of this: the first includes the provision for

a minimum of one independent nonexecutive director, while the second includes the provision for a minimum of 50% of all directors to be independent nonexecutive directors. The aggregate index data type is continuous but bounded between 0 and 1.

**Table 1**

The second step in the construction of our Anglo-American corporate governance adoption index is the division of individual firm-level levels of adoption into four distinct categories or bins. The four categories are defined by ranges of adoption level, namely 0 to 0.25, 0.26 to 0.50, 0.51 to 0.75, and 0.76 to 1. Thus, at this stage our indices are formed into categorical data. Our Anglo-American indices – or “AA<sub>t</sub>” for short – are defined as

$$AA_t = \begin{cases} 1, & \text{if governance value falls between } 0 \text{ and } 0.25 \\ 2, & \text{if governance value falls between } 0.26 \text{ and } 0.50 \\ 3, & \text{if governance value falls between } 0.51 \text{ and } 0.75 \\ 4, & \text{if governance value falls between } 0.76 \text{ and } 1 \end{cases}$$

(1)

Our indices measure the firm-level adoption of Anglo-American corporate governance provisions at the IPO juncture. This is an important event in the firm’s lifecycle and represents a transition from an indigenous institutional environment (from a firm’s unlisted status and thus embeddedness in the indigenous societal matrix) to external-facing market orientation and third-party contracting, which is institutionally central to Anglo-American market-orientated corporate governance. We argue that the factors determining firm-level adoption of Anglo-American corporate governance are clearer at IPO than at any time thereafter when the firm will be merely seeking to maintain a listing and issuing annual reports or financial statements.

#### **4. METHODOLOGY AND DATA**

##### **Sample construction**

The dataset was constructed in three stages. First, a list of IPOs on African markets between January 2000 and August 2016 was drawn up. In North Africa, these markets include Algeria, Egypt, Morocco and Tunisia, and in Sub-Saharan Africa they include the Cape Verde Islands (Bolsa de Valores de Cabo Verde), Cameroon (Bourse de Douala), BRVM (Cote d’Ivoire), Sierra Leone, Malawi, Kenya, Uganda, Rwanda, Tanzania, the Seychelles, Zambia, Namibia, Botswana, Mozambique, Mauritius and Ghana. Our primary sources here were the national stock exchanges and their associated websites, and these were cross-checked with lists sourced from major brokerage houses to ensure accuracy in the case of Nigeria and Zambia. This resulted in an “estimated” population of 380 stock listings.

The second stage ensured that our population actually covered IPOs and not private placements. The IPO prospectuses were obtained. The IPOs included in the sample were the offerings that produced a genuine diversification of ownership amongst a base of minority shareholders (as opposed to private placements involving the preferential allocation of stock to institutional or corporate block holders under pre-arranged quantities and prices). Equally, care was taken to avoid misclassifications of registrations, introductions and seasoned (secondary) offerings, as these are often also officially referred to as IPOs. Furthermore, IPOs were defined as offerings of ordinary shares, with single-class voting rights, that is, excluding preferred stock, convertibles, unit and investment trusts, as well as readmissions, reorganizations and demergers, and transfers of shares between main and development boards. Thanks to these efforts to solely focus on IPOs, the population was reduced to 276 genuine IPO firms.

In the third stage, we focused on domestic private-sector firms, which led to the exclusion of state privatizations and joint ventures – whose governance structures are very different from those of conventional firms. This brought the total number of genuine private-sector IPOs down to 201. Finally, we experienced missing values in terms of published age – or year of IPO firm

establishment – in the prospectuses of 11 firms, resulting in a final sample of 190 IPOs. The 11 missing observations were evenly distributed throughout the sample.<sup>7</sup>

Data on IPOs were collected from the financial market regulator websites for Algeria and Morocco, while a combination of the Thomson Corporation Perfect Information and Al Zawya databases was used for the Egyptian prospectuses. The Al Zawya database, the national stock exchange and direct contact with individual firms were used to source prospectuses for Tunisia. Similarly, in Sub-Saharan Africa, the prospectuses were obtained from the Ghanaian, Tanzanian, Cape Verdean, and Sierra Leone national stock exchanges, and from the exchange websites in the case of the Seychelles and Cameroon. The Thomson Corporation Perfect Information database was used in the first instance to source prospectuses from Nigeria, Malawi and Kenya. Pangea Stockbrokers (Zambia) as well as individual floated firms provided prospectuses for the Zambian stock market. Finally, in Sub-Saharan Africa, the African Financials website (2014) provided information from annual reports relevant to listings. These sources are listed in Appendix Table 1.

Considerable care was taken in the interpretation of information from IPO listings prospectuses, given the considerable variation in size and quality of these filings across the continent. Examples range from inaccuracies in values and units of measurement in Egypt (such as units stipulated as billions in prospectuses, while additional verification confirmed the values to actually be denominated in millions) to balance sheet omissions and inaccuracies in the prospectuses of many smaller Nigerian firms. Attempts to verify data from prospectuses using additional sources such as firm websites, annual reports and mandatory filings of annual accounts were made wherever possible.

## **Dependent variable**

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<sup>7</sup> These unsystematic missing observations are, per se, a motive to draw inferences about the population. However, when tests are carried out we motivate them from the perspective of having our current sample drawn from a “super-population”.

Our dependent variable is the categorical index (outlined earlier in expression 1), which allows us to sort firms into four distinct categories. These are defined by the average proportion of measures adopted out of the 16 Anglo-American measures outlined earlier. In this way, we do not prioritize any measures over others in terms of their relative importance. This leads to our having four defined ranges of Anglo-American corporate governance adoption (0 to 0.25, 0.26 to 0.50, 0.51 to 0.75, and 0.76 to 1). As mentioned earlier, there are two versions of this categorical index – the first including the provision of a minimum of one independent nonexecutive on the board, the second the provision of a minimum of 50% of the board to be independent nonexecutives. These categorical indices are later used in analysis, through a mixed-effects ordered probit methodology. However, the underlying continuous 0-1 bounded indices formed from the raw governance provisions are also used later in OLS regressions as an additional robustness check of the directions and sizes of the marginal effects. Finally, as a further robustness check we also used the four categories in a Poisson count model that has not been included here for reasons of brevity.

### **Explanatory variables**

Our empirical tests of our five hypotheses are based on five explanatory variables tested with and without moderating variables. The five explanatory variables are the percentages of retained ownership, post-IPO, of our five distinct types of block shareholder, or principal: nonexecutive directors, corporate block entities, business groups, private equity entities (including both business angels and venture capitalists), and the state. The levels of ownership are identified from the IPO listing prospectuses.

Some issues related to the underlying identification of shareholder groups, in their being categorized as business groups, or business angel and venture capitalist constituents of private equity, deserve attention. Characterization of IPO firms as belonging to business groups was made through detailed analysis of individual listing prospectuses as well as the body of locally

accumulated background information and sources outlined in Appendix Table 1.<sup>8</sup> The broader scope of our definition follows research by Andersen *et al.* (2003), in which similarly broad variables were employed to capture familial involvement in firms. A serious shortcoming in relying on formal ownership thresholds to define family involvement in firms “...is that some families are able to exert control with minimal fractional ownership, while others require larger stakes for the same level of control due to differences in firm size, industry, business practices, and product placement” (Andersen *et al.*, 2003: 269). Furthermore, there is evidence supporting the extended nature of traditional African notions of family – which are very different from their Western counterparts in being based on a much wider and more inclusive rubric (see Khavul *et al.*, 2009 for a discussion).<sup>9</sup> These constraints underscore our approach in placing emphasis on analysis of soft managerial control mechanisms as well as hard, formal ownership rights.

Business groups’ use of unlisted firms and holding entities that are not subject to internationally recognized reporting standards (such as IFRS) – commonly enforced through formal stock exchange listing – confers considerable opacity. The lack of transparency severely hinders a more accurate analysis of cross-shareholdings and pyramidal structures, and underscores our focus on the softer, group-wide socialization measures that are prevalent, such as director interlocks and individual family (and non-family) group members populating boards across the group. The employment of both formal (through “vertical” pyramidal and “horizontal” cross-shareholdings) and informal (socialization) group affiliation circumvents thorny issues regarding the formal definition of family firms<sup>10</sup>. It also facilitates the tracing of more informal business groups.

In terms of private equity entities, we employed a variety of resources to identify and confirm the VC and business angel investors within the focal IPO firms in our sample. Hence, we looked for further support in internet-based local media, stock exchange descriptions and regulatory filings. These were also supplemented by the analysis of web-based resources of the *Egyptian*

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<sup>8</sup> See Hearn & Piesse (2013) and Hearn (2014) for examples of elaborate, extended African business group structures.

<sup>9</sup> This holds especially true for North African societies, which are feudal and clan-based in nature, with extended familial groups at the core of society. The deeper cultural institutions are incongruous to the more equitable nature of primarily Islamic religious institutions, although they are reinforced by ethical notions of morality.

<sup>10</sup> This is particularly the case where this is commonly based on a minimum ownership threshold.

*Private Equity Association (EPEA), the African Private Equity and Venture Capital Association, and the South African Venture Capital and Private Equity Association (SAVCA).*

The identification of business angel investors is altogether more complex owing to the inherent lack of transparency in these often extremely informal capital markets. As such, we build our identification in line with that undertaken by Bruton *et al.* (2010) in their study of the UK and France. Consequently, we identified BAs, through the prospectus, as those that had invested in the venture as private individuals, other than those associated with the founders, other board members, senior management, or VC. We also supplemented our identification through the extensive use of internet-based access to local indigenous media to provide further verification (see Appendix Table 1). The use of local media and business journals is essential in a region with business angel markets of a notoriously informal nature and with few, if any, organized associations of angel investors.

### **Moderating variables**

We use two institutional metrics to moderate the association between different categories of block ownership and firm-level adoption of Anglo-American corporate governance. The first accounts for formal institutional quality, and is an aggregate variable constructed from an equally weighted average of six World Bank governance metrics (Kaufman *et al.*, 2009). Detailed definitions of the six metrics are provided in Appendix Table 2. These six were rebased to a 0–10 scale prior to aggregation.<sup>11</sup> The second accounts for informal societal institutions taking the form of tribalism. This uses the bespoke tribal index developed at the University of South Florida. Both of the metrics correspond to the moderation of our underlying hypothesized associations. It should be noted that both indices were centered and normalized in order to mitigate concerns over collinearity when they were used together, both as controls and as moderating variables. Furthermore, in order to avoid potential collinearity, we sequentially included each of the two indices, thereby avoiding their joint inclusion in any given model. We follow Acquaah (2007) in moderating with an index.

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<sup>11</sup> We use this variable under the assumption of equi-distance.

## Control variables

We use a number of distinct sets of control variables. The first set consists of *institutional controls*: a binary dummy variable taking the value 1 if the national legal jurisdiction is English common law and 0 otherwise and a country wealth control variable (the natural logarithm of GDP per capita).

Our second set refers to five *board control variables*. The first is the natural logarithm of board size, defined as the total number of directors.<sup>12</sup> These are legally mandated directors with fiduciary duties, including both nonexecutives and executives. This accounts for enhanced access to resources – through the director’s personal networks in the form of human and social capital (Boyd, 1994; Pfeffer & Salancik, 1978) – as well as the managerial and coordination capability of the board in terms of communication and free-riding (Boyd, 1994). The second is the natural logarithm of average executive tenure, which captures executive entrenchment and then the implications of this for risk preferences and the making of decisions such as the adoption of new governance measures that may jeopardize personal power and the appropriation of private benefits of control. The third variable is the ratio of nonexecutives to board size, which captures the division between nonexecutives and their executive counterparts. The fourth is a binary dummy taking the value 1 if the founder is retained as CEO at IPO and 0 otherwise. Founder succession at the IPO juncture is a major transition in the governance of the focal firm, with the social networks and focused leadership of the founder often giving way to a more professionalized managerial cadre and the adoption of a distinct governance structure (Jain & Tabak, 2008). Our fifth control is the ratio of nonexecutives that are drawn from social elite backgrounds – namely senior military, governmental, commercial and university personnel – to total board size. This accounts for the degree to which the firm seeks to legitimize its governance structure within the scope of the demographically narrow political economy, in order to obtain resources.

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<sup>12</sup> We assume that the distinction between tier-one and tier-two boards is caught by our common-law dummy control variable.



Our third set of control variables consists of four *firm-specific control variables*. Here, we use the natural logarithm of firms' pre-tax revenues (or sales) as a proxy for size, in line with Sanders & Carpenter (1998) and Finkelstein & Boyd (1998). This variable is representative of the complexity of a given firm's operations and thus mirrors the complexity of the task environment which, in turn, is reflective of the information-processing requirements of the board. As our second variable in this category, we use the accounting return on assets (ROA)<sup>13</sup> as a measure of firm performance, in line with Finkelstein & Boyd (1998) and Khanna & Palepu (2000). We also control for firm age, older firms being anticipated to have larger, more complex operations mirroring more complex task environments. This variable also controls for the "liability of newness" and the considerable information asymmetries generated by a lack of operational and performance history (Arthurs *et al.*, 2008). Following Bruton *et al.* (2010), we introduce as our fourth variable financial leverage or gearing control, as the ratio of debt to total assets.<sup>14</sup>

Finally, as a fourth set of control variables, we use three *IPO control variables*. The first accounts for the demand for external equity finance in terms of the number of shares issued at IPO divided by the total number of shares issued by the firm post-IPO, where these values are sourced from listing prospectuses. Including this variable follows the intuition of Hoskisson *et al.* (2002) in terms of the introduction of new owners within the firm generating "conflicting voices" over firm strategy and executive decision-making. The conflicting voices arising from owners are also viewed as sources of coercive institutional pressures infusing into the organizational structure. The second control variable in this set is a binary dummy accounting for whether the lead manager is foreign (or not). This reflects the importance of the lead manager as a potential vehicle for infusing rival

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<sup>13</sup> ROA is conventionally defined as  $ROA = (\text{Net Income} + \text{Interest} \times (1 - \text{Tax Rate})) / \text{Total Assets}$  (see Khanna & Palepu, 2000). However, due to significant variation in the data, arising from varying reporting standards across Africa, with the frequent omission of reported interest income and corporate taxation rates from listings prospectuses, we use a modified version of this, namely  $ROA = \text{Net Income} / \text{Total Assets}$ . However, while both measures suffer from business cycle effects and neither is forward looking, they provide a representative indication of firm performance subject to the data limitations prevalent in emerging economies.

<sup>14</sup> This circumvents issues surrounding the vulnerability of the debt-to-equity ratio to fluctuations in the firm's business cycle.

institutionalized logics into the firm and thereby influencing the adoption of Anglo-American market-orientated corporate governance provisions.

### Empirical model

Our multilevel mixed-effects ordered probit model is constructed in two stages. The first, which assumes the likelihood of any given firm's adoption of Anglo-American corporate governance, is determined by the following function:

$$\begin{aligned}
 AA_{i,t}^* &= x_{ij,t-1}\beta' + z_{ij,t-1}u'_j + \varepsilon_{i,t} \\
 \beta' x_{ij} &= \beta_1 \text{Explanatory and moderating variables}_{i,t} \\
 &+ \beta_2 \text{Board controls}_{i,t-1} \\
 &+ \beta_3 \text{Firm specific controls}_{i,t-1} \\
 &+ \beta_4 \text{Ownership controls}_{i,t-1} \\
 &+ \beta_5 \text{IPO controls}_{i,t-1} \\
 &+ \delta_1 \text{Industry F.E.} + \delta_2 \text{Time F.E.}
 \end{aligned} \tag{2}$$

where  $AA_{i,t}^*$  is a latent variable representing the preferred degree of compliance with Anglo-American governance provisions by a given firm at IPO.  $\mathbf{x}_{ij, t-1}$  is a set of country and firm governance controls – as outlined in the preceding section – with a one-period lag.  $\beta'$  is the parameter vector, while  $\varepsilon_{i,t}$  is the residual term, which is assumed to be normally distributed. Similarly,  $\mathbf{u}'_j$  are cluster-level random effects with their own vector of parameter coefficients given by  $\mathbf{z}_{ij, t-1}$ . Industry and time (year) binary effects are applied cross all models. The industry definitions vary by country (see Khanna and Rivkin, 2001 for details of similar issues in a comparable study of 14 emerging economies), leading us to adopt Bloomberg basic industry definitions.<sup>15</sup>

Equation (2) is a benchmark model in our analysis, with  $AA_{i,t}^*$  being deemed as latent or unobservable in practice. To further explore the association between the discrete adoptions of

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<sup>15</sup> The industry classifications are Basic Materials, Consumer Goods Non-Cyclical, Consumer Goods Cyclical, Energy, Financials, Health, Industrials, Technology, Telecommunications and Utilities. The identification of firms according to their industry using broad Bloomberg definitions is in keeping with the data limitations across our sample, a characteristic prevalent among emerging economies.

Anglo-American governance provisions by individual firms based upon their wider governance characteristics, we define the actually observed firm-level adherence to Anglo-American corporate governance,  $AA_t$ :

$$AA_t = \begin{cases} 1, & \text{if } AA_t^* \leq \gamma_1 \\ 2, & \text{if } \gamma_1 \leq AA_t^* \leq \gamma_2 \\ 3, & \text{if } \gamma_2 \leq AA_t^* \leq \gamma_3 \\ 4, & \text{if } \gamma_4 \leq AA_t^* \end{cases}$$

(3)

The numbers 1, 2, 3, and 4 in expression (3) are arbitrary and merely relate to numerical categories. Of particular relevance are the  $\gamma_1$ ,  $\gamma_2$ ,  $\gamma_3$  and  $\gamma_4$  as these are the unknown cut-off points, or thresholds, which define the ranges of the latent variable  $AA_t^*$ . In other words, given the ordered choice of relative degrees of adherence to the Anglo-American corporate governance provisions possible to an individual firm at IPO, the firm can choose the relative degree of corporate governance adoption that most closely represents its own true intention to assimilate with the Anglo-American institutional system,  $AA_t^*$ .  $\mathbf{x}_{ij, t-1}$  in expression (2) does not contain a constant term because its effect is absorbed into the cut-off points,  $\gamma$ .

According to equation (2), we test the extent to which the set of firm-specific corporate governance parameters in vector  $\mathbf{x}_{ij, t-1}$  can explain the observed adoption of Anglo-American corporate governance provisions by the firm. Under the assumption of normality, the probabilities of the observed governance adoption are attached to  $\mathbf{x}_{ij, t-1}$ ,  $\boldsymbol{\beta}'$ ,  $\mathbf{u}_j'$ ,  $\mathbf{z}_{ij, t-1}$ ,  $\boldsymbol{\varepsilon}_{i,t}$  and  $\gamma$ :

$$\begin{aligned} \text{Prob}\langle AA_t = 1 \mid x_{ij, t-1}\boldsymbol{\beta}, z_{ij, t-1}, \boldsymbol{\varepsilon}_{i,t} \rangle &= \Phi(\gamma_1 - x_{ij, t-1}\boldsymbol{\beta}' + z_{ij, t-1}\mathbf{u}_j') \\ \text{Prob}\langle AA_t = 2 \mid x_{ij, t-1}\boldsymbol{\beta}, z_{ij, t-1}, \boldsymbol{\varepsilon}_{i,t} \rangle &= \Phi(\gamma_2 - x_{ij, t-1}\boldsymbol{\beta}' + z_{ij, t-1}\mathbf{u}_j') - \Phi(\gamma_1 - x_{ij, t-1}\boldsymbol{\beta}' + z_{ij, t-1}\mathbf{u}_j') \\ \text{Prob}\langle AA_t = 3 \mid x_{ij, t-1}\boldsymbol{\beta}, z_{ij, t-1}, \boldsymbol{\varepsilon}_{i,t} \rangle &= \Phi(\gamma_3 - x_{ij, t-1}\boldsymbol{\beta}' + z_{ij, t-1}\mathbf{u}_j') - \Phi(\gamma_2 - x_{ij, t-1}\boldsymbol{\beta}' + z_{ij, t-1}\mathbf{u}_j') \\ \text{Prob}\langle AA_t = 4 \mid x_{ij, t-1}\boldsymbol{\beta}, z_{ij, t-1}, \boldsymbol{\varepsilon}_{i,t} \rangle &= 1 - \Phi(\gamma_4 - x_{ij, t-1}\boldsymbol{\beta}' + z_{ij, t-1}\mathbf{u}_j') \end{aligned}$$

(4)

where  $\Phi(\cdot)$  is the cumulative normal distribution function. The structure of expression (4) provides the framework for an econometric model of how transitions in the adoption of Anglo-American corporate governance occur in firms at the IPO juncture. The estimations of parameters  $\beta$ ,  $z$ ,  $\gamma_1$ ,  $\gamma_2$ ,  $\gamma_3$  and  $\gamma_4$  are based on maximum likelihood, provided in *option 17 of Stata version 14.1*.

Four models are tested in total. The first uses only our controls. The second introduces our five block shareholder ownership categories. Model 3 adds the explanatory variable into model 2, as well as the moderating variable formed from the product of the five ownership variables and formal institutional quality. Model 4 – our overall model – adds the explanatory variable into model 2, as well as the moderating variable formed from the product of the five ownership variables and informal institutional tribal index.

We undertake additional robustness tests on our ordered probit model. Specifically, we apply two robustness tests related to the dependent variable. First, we look at the underlying Anglo-American index, with a 0-1 scale. Second, we address the four respective categories reflecting the adoption of measures by an individual firm. Assuming the continuous data properties of both, we fit OLS regression models and check on the direction and relative size of the marginal effects. Such a robustness check is a necessity given that ordered probit models implicitly assume proportionate odds, i.e. the equal likelihood of any of the four outcome states (the varying degrees of governance adoption). This is reflected in the coefficients of our hierarchical linear probit being identical for all four outcome states. Application of the ordered probit methodology leads to a loss of information in the underlying causal model – necessitating our check of the robustness of the marginal effects using analogous OLS configurations.

As a final robustness check, we apply a hierarchical linear Poisson count model, which assumes independence of occurrence of each of the four outcome states. In this way, at the time of the IPO firms are assumed to make decisions regarding their governance structure independent of one another, but related to a variety of covariates – namely our independent and control variables. We find that the assumption of independence between the occurrence of any of the four outcome

states and the count model (Poisson probability distribution) is supported, and this lends further credibility to our conclusions.

## **5. EMPIRICAL RESULTS**

### **Descriptive statistics**

Table 2 reveals considerable variation across the African countries in terms of formal institutional quality, prevalence of informal tribal institutions, and the average firm-level degree of adoption of Anglo-American corporate governance measures. In particular, it is notable that the markets of Southern Africa, surrounding the largest market of South Africa, all have low degrees of tribalism and higher institutional quality, alongside elevated adoption rates of Anglo-American corporate governance. Contrastingly, the North and West African sub-regions are characterized by high tribalism, generally low institutional quality and correspondingly weak adoption of Anglo-American corporate governance. East Africa exhibits a somewhat more mixed profile, with considerable intra-regional variation in tribalism and institutional quality, alongside mixed degrees of firm-level adoption of Anglo-American corporate governance.

The average firm-level adoption of Anglo-American corporate governance provisions is 41%, varying considerably, from 23% on the Francophone West African regional stock exchange, the BRVM, 30% in Morocco, and 31% in the Cape Verde Islands, to 67% in Botswana and 87% in South Africa. No IPO firm in our sample attained a value of 100, i.e. the full “score” for compliance with every Anglo-American corporate governance provision. Variation is also reflected in the distribution of firms, across markets, among our four designated bins or categories of corporate governance adoption, with 52 or 26% of the sample firms having little corporate governance adoption, a further 109 or 55% having minimal corporate governance adoption, 26 or 13% adopting a slight majority of provisions, and only 14 or 7% adopting a large majority of the corporate governance provisions.

### **Table 2**

### **Bivariate analysis**

Pearson correlations are reported in Table 3 and reveal weak associations, with generally low statistical significance. The only exception is the high (-0.806) and statistically significant ( $p \leq 0.01$ ) correlation between our two moderating variables: formal institutional quality and the informal tribal index. In terms of multicollinearity concerns, an inspection of the variance inflation factors for all the independent variables reveals them to be unproblematic (below 10, the commonly assumed higher threshold for possible multicollinearity; see Belsey, 1980) and the mean variance inflation factor for all independent variables together is 2.89. Furthermore, the variance inflation factors for both institutional quality and the tribal index are acceptable, being below 4.80.

**Table 3**

### **Multivariate analysis**

The results from our mixed-effects hierarchical linear ordered probit model regressions are presented in Table 4. Model 1, as our benchmark regression, contains only our control variables. Model 2 tests the associations together with traditional controls applying to *Hypotheses 1 to 5*, while models 3 and 4 test the moderation of our hypotheses by institutional quality and the informal tribal index. The coefficients are interpreted in terms of the association between any given independent variable and the likelihood of the outcome of the highest category – category 4 – i.e. that the firm adopts between 76% and 100% of the Anglo-American corporate governance provisions – against the alternative three lower categories. The threshold parameters,  $\gamma_1$ ,  $\gamma_2$ , and  $\gamma_3$  are reported for each of the four models and are necessary for the computations but of no intrinsic interest on their own. Equally, a country-level constant is reported in the random component of

variance – in line with the mixed-effects hierarchical linear aspect of modelling and accounting for a nested data structure.<sup>16</sup>

The empirical evidence in model 2 – without considering moderating effects - supports the statistical maintenance of *Hypotheses 2 to 4* and reveals a significant hypothesized association between the equity ownership retained by the corporate block holders and private equity entities on the one hand, and the likelihood of a more extended adoption of Anglo-American governance on the other. The opposite is true for business groups retained ownership and a decreasing likelihood of more extended adoption of Anglo-American governance.

The evidence from models 3 and 4 provides statistical support for the theoretical arguments provided by *Hypotheses 1, 3, 4* and *5*, relating to moderation by institutional quality and tribalism. Hence, for corporate block holders (*Hypothesis 2*) we found a strong positive association but with no moderating effects from institutional quality or tribalism. In sum, the moderating effects are found significant and in several cases found to override the underlying main effects demonstrating the appropriateness of our novel institutional logics approach.

The empirical evidence regarding the association between various other controls and our dependent variable – the firm-level adoption of Anglo-American corporate governance – is consistent across all models. Our control variables show Anglo-American corporate governance adoption to be more likely in common-law – as opposed to civil-law – jurisdictions and in wealthier economies, measured by GDP per capita. Firms with longer-serving (tenured) executives, with higher ratio of nonexecutives on the board and with large turnover – as a proxy for extensive and complex operations – are more likely to become more compliant with Anglo-American corporate governance. Furthermore, a firm employing a foreign lead manager to coordinate its IPO is much more likely to adopt Anglo-American corporate governance measures.

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<sup>16</sup> However, while being essential to the modelling of underlying latent model, the threshold parameters and country-level random variance component are omitted from further discussion in terms of causality between the observed variables.

In terms of diagnostic statistics, we observe that, across all four models, the Wald  $\chi^2$  test supports rejection of the null hypotheses ( $p \leq 0.01$ ). Furthermore, the final likelihood (LR) vs. ordered probit test is statistically significant ( $p \leq 0.01$ ) and shows that there is enough variability between countries to favor a random-effects ordered probit regression over a standard ordered probit regression. This provides support for our inclusion of the additional country random variance term and our adoption of a hierarchical linear model to account for the nested structure of our dataset.

#### **Table 4**

##### **Robustness checks**

We conducted robustness checks designed to address questions regarding both the informational loss in probit models and potential alternative modeling specifications arising from our dependent variable. We do not report these results for brevity reasons, but they are available from the authors upon request. OLS regressions utilizing dependent variables of the underlying index and the four respective categories reveal directions and proportionate absolute sizes of coefficients of association very similar to those of our hierarchical linear ordered probit. It should also be noted that the adjusted  $R^2$ s are generally high and over 20% across all models, except in the case of moderation by formal institutional quality. These OLS-determined marginal effects confirm those of our ordered probit models.

Finally, we constructed a hierarchical linear Poisson count model – utilizing our dependent variable consisting of four categories of governance adoption by a firm. This assumes that firms make decisions at IPO – to adopt as many or as few Anglo-American governance provisions – independently of one another. The results further confirm those of our ordered probit model in the main part of our analysis (Supplement 3). This is evident from the direction, size and statistical significance of the coefficients in all cases.



## 6. DISCUSSION AND CONCLUSIONS

### Theoretical implications and contributions

In this study, we apply the institutional logics theoretical perspective in analyzing the international diffusion of firm-level corporate governance “best practices”. We measure the migration of such corporate governance practices through the diffusion of a variety of measures attributed to Anglo-American shareholder-value corporate governance in the institutionally heterogeneous setting of Africa. Although the empirical evidence comes from a multiyear sample across African countries, we maintain that the same arguments could be applied more broadly across emerging economies. Specifically, we find empirical support for the argument that indigenous block shareholder groups represent a unique tying of the firm to a nexus of indigenous institutions affecting the probability of an implementation of Anglo-American corporate governance measures. More broadly, we suggest that our findings lend support to the relevance of indigenous structures (beyond block shareholders) for the migration of Anglo-American corporate governance practices across emerging economies.

We maintain that the institutional logics perspective helps to rationalize the multilevel inter-institutional structure of emerging economy firms, as it considers heterogeneity both between and within societies. In our study, this is shown by the fact that we observe contrasting levels of adoption of Anglo-American corporate governance in the focal IPO firm in relation to retained ownership by a variety of distinct entities that are embedded in the indigenous political economy and are themselves subject to rival institutional logics. These entities are nonexecutive directors – whose very being is contingent on the socialized definitions of roles within the Western corporate bureaucratic organizational form – corporate block shareholders, business groups, private equity, and lastly the state itself. In this way, we extend Hoskisson *et al.* (2002)’s notion of “conflicting voices” arising from different block shareholders within the firm through our explicit consideration of the institutionalized logics that regulate and govern these heterogeneous shareholders.

We conclude that our adopted perspective is particularly useful given the incongruities that exist across many developing and emerging economies concerning formal and informal corporate

governance and organizational frameworks, the formal originating from colonial-era transplantation and the informal predominantly communitarian. We thereby emphasize the shortfalls in traditional institutional approaches (e.g. North, 1989, 1994; Aoki, 2001) that focus on broad aggregate-level constructs with the assumptions of institutional uniformity and homogeneity nationally. We suggest that rational adoption theorists (e.g. Coffee, 2001) are inherently “under-socialized” in assuming a worldwide diffusion of “best practice” corporate governance codes as the natural outcome of competitive forces in the attraction of foreign investment.

At the firm level, our application of the institutional logics perspective provides a valuable rationale for firms’ choices of corporate governance practices within emerging and developing nations. In addition, our study highlights the dynamic interaction between shareholders, organizations and their structural form, and the wider societal-level institutional framework – be this in terms of formal institutional quality or tribalism. In particular, the preferences of heterogeneous block shareholders are revealed in terms of their own institutional logics drawn from the societal realms within which they are embedded. Our study also suggests that institutional logics play a significant role in the focal firm’s adoption or non-adoption of Anglo-American shareholder-value governance tenets at the time of a major institutional transition, the IPO event.

Our public policy recommendation to international development agencies, national regulatory authorities and corporate code bodies, is that they broaden the theoretical perspective when selecting corporate governance policies and measures. Moreover, our results support the criticism of a “one-hat-fits-all” policy in the debate on the convergence of corporate governance regimes.

### **Limitations and future directions**

Our results lead us to question the conventional wisdom of the universality of “corporate governance best practice”, commonly with the concept of world-wide corporate governance convergence at its center. The results have implications in terms of the limitations of promoting

uniform economic development policy. A considerable part of such policies tends to be shaped by neoclassical and rational adaptation perspectives, the universality of Western-style business education, and associated global industry norms. In contrast, our findings highlight the important role of the demographic shape and composition of the indigenous political economy, being itself shaped by existing legal and institutional frameworks and less so by Anglo-American corporate governance “best practice” tenets.

One limitation of our study relates to the geographic focus of the sample, being limited to the African continent. While this is beneficial in terms of the considerable variation in institutional quality, demographic structure and composition of polity and societal fractionalization, a useful extension would be to apply our model to a broader worldwide sample in order to strengthen generalizability.

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**Table 1. Elements of Anglo-American firm-level governance**

This table outlines the governance elements we have included as an integral part of the Anglo-American (or “markets-orientated”) firm-level governance structure. Each element is defined alongside its source. All indices are equally weighted arithmetic averages of constituent elements. There are two overall or aggregate indices denoting firm’s adoption of overall Anglo-American governance – where the distinction between the two is based on (1) if there is at least one independent nonexecutive director present on board or (2) a minimum of 50% of board are independent nonexecutives. Compiled by authors from individual IPO listings prospectuses for all IPOs that have taken place across Africa between January 2000 and August 2016

<b>Element</b>	<b>Definition</b>
<b>Separation of ownership from control</b>	
Presence of non-ordinary shares	Binary 1/0 variable. Takes value of 1 if firm exclusively uses ordinary (one share one vote) shares across entire shareholder base. Thus there is no discrimination between shareholders through the use of non-voting stock, preference shares, convertible instruments or share structures inferring differentials in voting rights – such as A, B, C class shares. These all act to divide shareholders away from universal, homogenous and equitable rights. They also exacerbate voting control over entitlements inferred by cash flow rights.
Proxy voting	Binary 1/0 variable. Takes value of 1 if a clear statement is made in listing prospectus regarding recognition and arrangements for voting by proxy
International Auditor	Binary 1/0 variable. Takes value of 1 if either an international auditor or its local subsidiary is used as the firm’s auditor. Across the African sample the international auditors used are Deloitte, Ernst & Young, KPMG, PKF as well as their local indigenous subsidiaries
International Accounting standards	Binary 1/0 variable. Takes value of 1 if firm declares it’s accounts and financial statements have been prepared in accordance to international (as opposed to indigenous) accounting standards. These are typically GAAP, US GAAP or IFRS.
<b>Incentive compensation</b>	
CEO pay disclosure	Binary 1/0 variable. Takes value of 1 if CEO salary is disclosed in listing prospectus. This relates to improved transparency with external investors (principals) and a reduction in their bonding costs
Executive stock options	Binary 1/0 variable. Takes value of 1 if firm remunerates its executives with stock options or other derivative instruments
Executive bonuses	Binary 1/0 variable. Takes value of 1 if firm remunerates its executives with performance-related bonus payments at end of tax year.
Executive ownership	Binary 1/0 variable. Takes value of 1 if executives are entitled to stock ownership as part of their compensation arrangements.
<b>Board monitoring</b>	
Unitary Board	Binary 1/0 variable. Takes value of 1 if the board of directors is unitary i.e. it is comprised of a single tier encompassing executive and nonexecutives. The most common alternatives are dual tier (ubiquitous to continental European originated governance systems) where a supervisory board comprised of nonexecutive representatives of block shareholders and other stakeholder representatives is augmented by a separate management board, comprised of CEO plus senior management personnel (also known as “executives”). A third governance system is also present whereby a supervisor board is augmented by a variety of managerial committees – responsible for various tasks normally attributable to the traditional role of executive directors.
CEO = Chairperson	Binary 1/0 variable. Takes value of 0 if the same individual occupies both the roles of CEO and Chairperson and 1 otherwise
Remuneration committee	Binary 1/0 variable. Takes value of 1 if the firm has established a

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	remuneration committee as part of its governance apparatus – where this exclusively decides compensation levels and structure for board members
Remuneration committee independence	Binary 1/0 variable. Takes value of 1 if the remuneration committee is independent (in terms of membership) from CEO or other dominant block shareholders
Auditor committee	Binary 1/0 variable. Takes value of 1 if the firm has established an audit committee as part of its governance apparatus – where this is solely responsible for the firm undertaking audits of its activities and for ensuring these audits are performed by external independent auditors
Auditor committee independence	Binary 1/0 variable. Takes value of 1 if the audit committee is independent (in terms of membership) from CEO or other dominant block shareholders
Attendance statement of nonexecutives	Binary 1/0 variable. Takes value of 1 if the firm either declares an Attendance Rota of nonexecutives in designated board meetings (essential to their performing monitoring function within firm on behalf of external principals) or a clear statement that attendance is checked and duly reported to external shareholders
(a) Independent nonexecutives > 1	Binary 1/0 variable. Takes value of 1 if there is at least one independent nonexecutive on board
(b) Independent nonexecutives > 50% of total nonexecutives	Binary 1/0 variable. Takes value of 1 if a minimum of 50% of nonexecutives are independent and unaffiliated to CEO or any external shareholder principal
<b>Governance indices</b>	
<b>Continuous data indices</b>	
Anglo-American overall index (>1)	Equally-weighted arithmetic average of all constituent elements – except with sole inclusion of (a) “independent nonexecutives greater than one” with (b) excluded
Anglo-American overall index (>50%)	Equally-weighted arithmetic average of all constituent elements – except with sole inclusion of (b) “independent nonexecutives over 50% of all nonexecutives” with (a) excluded
<b>Categoric data indices</b>	
Anglo-American overall index (>1) ordinal – categories	A four category variable is created – where individual firm-level values of aggregate Anglo-American overall index (>1) are allotted into four distinct categories or bins: (1) 0 – 0.25, (2) 0.26 – 0.50, (3) 0.51 – 0.75, (4) 0.76 - 1
Anglo-American overall index (>50%) ordinal - categories	A four category variable is created – where individual firm-level values of aggregate Anglo-American overall index (>50%) are allotted into four distinct categories or bins: (1) 0 – 0.25, (2) 0.26 – 0.50, (3) 0.51 – 0.75, (4) 0.76 – 1

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**Table 2. Descriptive statistics of Anglo-American governance adoption and institutional environment**

This table outlines the country averages of firm-level adoption of Anglo-American governance measures – designated by the Anglo-American index that includes a minimum of one independent nonexecutive director on the board (i.e. “>1”). The four respective categories of firm adoption of Anglo-American governance are designated as 0 – 0.25, 0.26 – 0.50, 0.51 – 0.75, and finally 0.76 – 1. Formal Institutional quality – which is the average of the six World Bank governance metrics (democratic voice and accountability, rule of law, regulatory quality, political stability and absence from terrorism, government effectiveness and corruption control) as developed by Kaufman et al (2009). Informal tribal index denotes the tribal index developed by University of South Florida. N is sample size of IPO firms

Market	N	Firm-level Anglo-American governance (0 – 1)					Country-level Institutional environment	
		>1 index	0 – 0.25	0.26 – 0.50	0.51 – 0.75	0.76 – 1	Formal: Institutional quality	Informal: Tribal index
		%	#	#	#	#	%	%
<b>North Africa</b>								
Algeria	3	39.58	0	3	0	0	33.77	71.00
Egypt	11	48.86	2	6	2	1	38.94	68.00
Morocco	37	30.24	15	21	1	0	46.82	72.00
Tunisia	39	33.81	13	26	0	0	48.88	53.00
<b>East Africa</b>								
Kenya	7	60.71	0	2	5	0	39.06	81.00
Tanzania	7	40.18	2	3	2	0	42.95	64.00
Uganda	1	37.50	0	1	0	0	39.37	71.00
Rwanda	1	37.50	0	1	0	0	51.92	55.00
Mauritius	13	39.90	3	7	3	0	72.11	51.00
Seychelles	3	33.33	1	2	0	0	56.15	51.00
<b>West Africa</b>								
Nigeria	31	35.28	10	20	1	0	29.09	84.00
BVRM	6	22.92	5	1	0	0	42.22	70.83
Ghana	15	41.67	1	10	4	0	52.84	61.00
Cape Verde Islands	1	31.25	0	1	0	0	58.62	35.00
Sierra Leone	1	37.50	0	1	0	0	36.08	68.00
<b>Southern Africa</b>								
Botswana	7	66.96	0	1	5	1	68.88	46.00
Malawi	1	56.25	0	0	1	0	48.87	67.00
Zambia	2	65.63	0	1	0	1	46.88	72.00
Namibia	4	68.75	0	1	2	1	61.17	51.00
Mozambique	1	31.25	0	1	0	0	44.56	56.00
South Africa	10	86.88	0	0	0	10	59.26	52.00
Africa overall	201	41.04	52	109	26	14	47.21	64.72

**Table 3. Correlation analysis**

This table reports the Pearson correlations between all variables included in our study. These are the Anglo-American governance index – representing firm-level adoption of Anglo-American governance measures, including at least 1 independent nonexecutive on board of directors as dependent variable. Five shareholder retained post-IPO ownership categories – namely nonexecutive directors, corporate block, business group, private equity (Business Angel and Venture Capitalist), and state (including government, state and regional development agencies controlled by state). Four Institutional environment controls are the institutional quality metric which is a simple arithmetic average of the six World Bank Governance indicators – as developed by Kaufman et al (2009), tribal index – as developed by University of South Florida, common law dummy taking value 1 if jurisdiction is common law and 0 otherwise i.e. if civil code law and finally the natural logarithm of GDP per capita. Our three board variables are natural logarithm of board size in terms of total number of executive and nonexecutive directors, ratio of nonexecutives on board, being ratio of nonexecutives to board size, natural logarithm of the average tenure of executives, and finally the ratio social elites on board – defined as number of nonexecutives drawn from social elite backgrounds (senior military, government, university and commercial) to board size. Log (revenues) is natural logarithm of pre-tax firm revenues while ROA is accounting return to assets. Log (age) is natural logarithm of time (in years) between IPO year and year of establishment. Ratio total debt to total assets is a measure of leverage or gearing (see Bruton et al, 2010) with this being total debt divided by total asset value. Finally shares offered at IPO to total shares issued as well as a binary dummy indicating whether Lead Manager is foreign (and 0 otherwise) are our last IPO related controls included.

	1	2	3	4	5	6	7	8	9	10
1 Anglo-American overall index (>1)	1.000									
2 Nonexecutive own	0.161*	1.000								
3 Corporate block own	0.141*	-0.106	1.000							
4 Private equity own	0.104	0.003	-0.142*	1.000						
5 Business Group own	-0.237**	-0.107	-0.256**	-0.063	1.000					
6 State own	-0.123†	-0.083	-0.043	0.043	-0.047	1.000				
7 Institutional quality	0.272**	-0.087	0.169*	-0.098	-0.050	0.038	1.000			
8 Tribal index	-0.228**	0.157*	-0.107	0.050	-0.009	-0.027	-0.806**	1.000		
9 Common law	0.426**	0.161*	0.149*	-0.354**	-0.067	-0.131†	-0.206**	0.292**	1.000	
10 Log (GDP per capita)	0.150*	-0.055	-0.107	0.090	0.076	0.029	0.452**	-0.536**	-0.426**	1.000
11 Log (board size)	-0.119†	0.107	-0.168*	0.167*	0.098	0.215**	-0.142*	0.210**	-0.141*	-0.044
12 Log (Av. Executive tenure)	-0.001	0.041	-0.180*	0.086	0.091	-0.063	-0.200**	0.231**	0.028	-0.113
13 Ratio nonexecutives on board	0.105	0.075	0.205**	0.088	0.027	0.078	-0.092	0.056	0.215**	-0.116†
14 CEO = Founder	0.059	0.050	-0.136†	-0.108	0.019	-0.201**	-0.028	-0.077	0.040	0.156*
15 Ratio social elite nonexecutives	0.161*	0.084	0.096	-0.067	-0.151*	-0.022	-0.226**	0.270**	0.442**	-0.265**
16 Log (Revenue)	0.204**	0.095	-0.164*	0.298**	0.137†	0.054	-0.087	0.118†	-0.152*	0.232**
17 ROA	0.055	0.077	-0.122†	0.037	0.019	-0.005	-0.005	0.050	-0.044	0.018
18 Log (Firm Age)	-0.108	0.037	-0.213**	0.182*	0.038	0.150*	-0.176*	0.258**	-0.145*	-0.049
19 Ratio debt to total assets	0.014	-0.018	0.076	0.048	-0.046	-0.037	-0.064	0.001	-0.014	0.058
20 Shares Offered/ Total Shares	-0.040	0.077	0.116	-0.292**	-0.086	-0.055	-0.095	0.034	0.276**	-0.247**
21 Lead Manager is foreign	0.286**	0.004	0.027	-0.054	0.081	-0.028	-0.023	0.071	0.035	-0.062

† p < 0.10; \* p < 0.05; \*\* p < 0.01

**Table 3. Correlation analysis (continued)**

	11	12	13	14	15	16	17	18	19	20	21
1 Anglo-American overall index (>1)											
2 Nonexecutive own											
3 Corporate block own											
4 Private equity own											
5 Business Group own											
6 State own											
7 Institutional quality											
8 Tribal index											
9 Common law											
10 Log (GDP per capita)											
11 Log (board size)	1.000										
12 Log (Av. Executive tenure)	-0.011	1.000									
13 Ratio nonexecutives on board	0.123†	0.112	1.000								
14 CEO = Founder	-0.180*	0.084	-0.124†	1.000							
15 Ratio social elite nonexecutives	-0.059	-0.048	0.242**	-0.091	1.000						
16 Log (Revenue)	0.283**	0.100	-0.017	-0.091	-0.113	1.000					
17 ROA	0.011	0.119†	0.003	0.077	-0.030	0.195**	1.000				
18 Log (Firm Age)	0.361**	0.429**	-0.024	-0.321**	-0.118†	0.305**	0.126†	1.000			
19 Ratio debt to total assets	0.097	0.010	0.121†	0.046	0.007	0.020	-0.076	-0.076	1.000		
20 Shares Offered/ Total Shares	-0.091	-0.152*	0.137†	-0.052	0.201**	-0.296**	-0.063	-0.225**	0.034	1.000	
21 Lead Manager is foreign	0.053	-0.041	0.058	-0.056	-0.015	0.196**	0.054	0.038	-0.039	0.071	1.000

† p < 0.10; \* p < 0.05; \*\* p < 0.01

**Table 4. The association between ownership groups and firm's adoption of Anglo-American governance<sup>a, b, c</sup>**

This table presents the mixed effects hierarchical linear ordered probit model results for dependent variable adopting one of four values: value 1 represents firm's adoption of Anglo-American governance between 0 and 25%, value 2 represents firm's adoption of Anglo-American governance between 26% and 50%, value 3 represents firm's adoption of Anglo-American governance between 51% and 75%, and finally value 4 represents firm's adoption of Anglo-American governance between 76% and 100%. In all cases the formal institutional quality and informal tribal indices are mean-centered and normalized. Additional country-level constant is included in variable part of variance. Explanatory and control variables are all defined in Table 3.

	Dependent variable: Anglo-American overall index (>1) – four ordinal categories			
	Controls only	Ownership only	Formal institutions	Informal institutions
	Model 1	Model 2	Institutional quality Model 3	Tribal index Model 4
<b>Fixed variance</b>				
<b>Hypotheses</b>				
Nonexecutive own	---	1.645 [1.68]	1.227 [1.61]	2.226 [1.64] †
Corporate block own	---	2.642 [0.75]***	3.665 [1.12]***	3.104 [0.95]***
Private equity own	---	2.772 [1.26]*	3.033 [0.94]***	2.816 [0.90]***
Business Group own	---	-1.011 [0.91] †	-0.799 [0.81]	-1.055 [0.68] †
State own	---	-0.394 [1.43]	-0.821 [1.55]	-0.066 [1.15]
<b>Moderation - formal</b>				
Nonexecutive own x Institutional quality	---	---	3.016 [1.49]**	---
Corporate block own x Institutional quality	---	---	-0.668 [0.90]	---
Private equity own x Institutional quality	---	---	-2.369 [0.80]***	---
Business Group own x Institutional quality	---	---	-1.897 [0.61]***	---
State own x Institutional quality	---	---	7.220 [4.55] †	---
<b>Moderation - informal</b>				
Nonexecutive own x Tribal index	---	---	---	-2.552 [1.46]**
Corporate block own x Tribal index	---	---	---	0.569 [0.54] †
Private equity own x Tribal index	---	---	---	2.097 [0.56]***
Business Group own x Tribal index	---	---	---	1.333 [0.53]**
State own x Tribal index	---	---	---	-2.857 [1.05]***
<b>Environmental controls</b>				
Institutional quality	---	---	1.038 [0.67] †	---
Tribal index	-1.303 [0.59]**	-1.312 [0.59]**	---	-1.618 [0.57]***
Common law	4.622 [1.26]***	4.621 [1.33]**	5.019 [1.42]***	4.932 [1.33]***
Log (GDP per capita)	1.390 [0.63]*	1.462 [0.66]*	1.928 [0.79]**	1.517 [0.62]**
<b>Board controls</b>				
Log (board size)	-0.691 [0.69]	-0.829 [0.66]	-0.836 [0.65] †	-0.798 [0.64] †
Log (Av. Executive tenure)	0.364 [0.25] †	0.532 [0.21]***	0.463 [0.25]*	0.463 [0.25]**
Ratio nonexecutives on board	4.739 [1.18]***	3.849 [1.22]***	3.723 [1.39]***	3.606 [1.38]***
CEO = Founder	0.263 [0.43]	0.483 [0.54]	0.765 [0.65]	0.689 [0.67]

Ratio social elite nonexecutives	2.022 [1.84]	2.515 [1.87] †	2.589 [1.98] †	2.980 [1.93] †
<b>Firm controls</b>				
Log (Revenue)	0.469 [0.11]***	0.550 [0.11]***	0.553 [0.10]***	0.597 [0.10]***
ROA	-0.073 [0.66]	-0.050 [0.56]	-0.579 [0.56]	-0.310 [0.56]
Log (Firm Age)	-0.190 [0.39]	-0.149 [0.40]	-0.152 [0.43]	-0.116 [0.41]
Ratio debt to total assets	-0.212 [0.23]	-0.185 [0.23]	-0.261 [0.23]	-0.156 [0.23]
<b>IPO controls</b>				
Shares Offered/ Total Shares	-1.841 [1.05]*	-1.821 [1.11]*	-1.699 [1.45]	-1.856 [1.33] †
Lead Manager is foreign	1.696 [0.80]*	1.886 [0.82]**	1.732 [0.83]**	1.835 [0.80]**
<b>Random variance</b>				
Country-level constant	1.270 [0.46]	1.888 [1.43]	2.660 [2.17]	2.223 [1.75]
$\gamma_1$	13.732 [6.55]*	17.119 [6.51]***	20.602 [6.94]***	17.641 [6.17]***
$\gamma_2$	19.597 [7.30]***	23.314 [7.16]***	27.272 [7.27]***	24.147 [6.73]***
$\gamma_3$	23.339 [7.32]***	27.148 [7.17]***	31.360 [7.19]***	28.218 [6.64]***
No. Obs.	190	190	190	190
Wald $\chi^2$ (prob.)[variable]	64.27 (0.00) [38]***	64.93 (0.00) [43]**	62.87 (0.00) [47]*	65.00 (0.00) [48]**
LR test vs. ordered probit model	15.84 (0.00)***	13.34 (0.00)***	11.62 (0.00)***	12.51 (0.00)***
Log pseudo-likelihood	-119.54	-114.88	-111.80	-111.33

<sup>a</sup> Binary effects for year and industry were included in the models but are not reported in the table; <sup>b</sup> Standard errors are in parentheses; <sup>c</sup> Country-cluster adjusted standard errors & covariance; † p < 0.10; \* p < 0.05; \*\* p < 0.01; \*\*\* p < 0.005

## Appendix Table 1. Data sources

Table documenting a non-exhaustive representation of data and information sources from across Africa

Market	Information source
<b>North Africa</b>	Databases: Al Zawya (see website at: <a href="http://www.zawya.com/">http://www.zawya.com/</a> ); Mubasher investment reporting ( <a href="http://www.mubasher.net/en/Index.aspx">http://www.mubasher.net/en/Index.aspx</a> ); Bloomberg LLP; Business Week
Algeria	Websites: Bourse d'Algérie [SGBV] ( <a href="http://www.sgbv.dz">http://www.sgbv.dz</a> ); Commission d'Organisation et des Surveillances des Opérations de Bourse [COSOB] ( <a href="http://www.cosob.org/">http://www.cosob.org/</a> ) Telephone interviews and direct correspondence: M. Hamdi and Mme. Haffar (Bourse d'Alger)
Egypt	Websites: Egyptian Stock Exchange [EGX] ( <a href="http://www.egx.com.eg/english/homepage.aspx">http://www.egx.com.eg/english/homepage.aspx</a> ); The Egyptian Financial Supervisory Authority ( <a href="http://www.efsa.gov.eg/content/IFIE/about_efsa.html">http://www.efsa.gov.eg/content/IFIE/about_efsa.html</a> ); Central Bank of Egypt ( <a href="http://www.cbe.org.eg/English/">http://www.cbe.org.eg/English/</a> ) Telephone interviews (unstructured) to obtain data: Mohammed Omran (Chairman, EGX) Cairo-based interviews: Ayman Raafat (Market Control, EGX); Hebatallah El Serafi (Research & Market Development, EGX); Yasmin El-Khatib (PR & Communications, EGX)
Morocco	Websites: Bourse de Casablanca ( <a href="http://www.casablanca-bourse.com/">http://www.casablanca-bourse.com/</a> ); Le Conseil Déontologique des Valeurs Mobilières [CDVM] ( <a href="http://www.cdvm.gov.ma/">http://www.cdvm.gov.ma/</a> ) Casablanca-based interviews to obtain data: Mme. Meryem Tazi (Chef de Produits, Service Marketing, Bourse de Casablanca); Mme. Amina Zouaoui (Analyste, Service Négociation, Bourse de Casablanca)
Tunisia	Websites: Bourse de Tunis ( <a href="http://www.bvmt.com.tn/">http://www.bvmt.com.tn/</a> ); Conseil du Marché Financier [CMF] ( <a href="http://www.cmf.org.tn/">http://www.cmf.org.tn/</a> ); Central Bank of Tunisia ( <a href="http://www.bct.gov.tn/">http://www.bct.gov.tn/</a> ) Tunis-based interviews: M. Hatem Zribi (Direction de la Promotion du Marché, Bourse de Tunis); Mme. Maher Chtourou (Banque Centrale de Tunisie library) Tunis-based procurement of data from library of African Development Bank
<b>Sub Saharan Africa</b>	Databases: African financials annual reports ( <a href="http://www.africanfinancials.com/">http://www.africanfinancials.com/</a> ); Invest Africa annual reports ( <a href="http://investinginafrica.net/african-stock-markets/">http://investinginafrica.net/african-stock-markets/</a> ); Thomson Perfect Information portal; Bloomberg LLP; Business Week
<b>East Africa</b>	
Kenya	Websites: Nairobi securities exchange ( <a href="https://www.nse.co.ke/">https://www.nse.co.ke/</a> ); Capital Markets Authority Kenya ( <a href="http://www.cma.or.ke/">http://www.cma.or.ke/</a> ); Daily Nation business journal ( <a href="http://www.nation.co.ke/">http://www.nation.co.ke/</a> ) Local Nairobi-based interviews: Public relations officer, Nairobi Stock Exchange; Investment Manager, Suntra Investment Bank, Kenya
Mauritius	Websites: Stock Exchange of Mauritius [SEM] ( <a href="http://www.stockexchangeofmauritius.com/">http://www.stockexchangeofmauritius.com/</a> )
Seychelles	Websites: Trop-X Seychelles stock exchange ( <a href="http://www.trop-x.com/">http://www.trop-x.com/</a> )
Tanzania	Websites: Dar Es Salaam stock exchange ( <a href="http://www.dse.co.tz/">http://www.dse.co.tz/</a> ) Telephone procurement of listing prospectus from M. Stimali, Tanzania Tea Packers Ltd
Rwanda	Websites: Rwanda stock exchange ( <a href="http://rse.rw/">http://rse.rw/</a> ); Capital Market Authority ( <a href="http://cma.rw/">http://cma.rw/</a> )
Uganda	Websites: Uganda securities exchange [USE] ( <a href="http://www.use.or.ug/">http://www.use.or.ug/</a> ); Capital Markets Authority ( <a href="http://www.cmauganda.co.ug/">http://www.cmauganda.co.ug/</a> ) Procurement of annual reports: Kampala-based USE library Kampala-based interviews: Investment Management team, Crane Bank, Kampala; Head of trading, USE trading floor, Kampala; Investment Manager, African Alliance Securities, Kampala; Head of equities trading, Standard Chartered Bank, Kampala
<b>West Africa</b>	
Nigeria	Websites: Nigerian stock exchange [NSE] ( <a href="http://www.nse.com.ng/Pages/default.aspx">http://www.nse.com.ng/Pages/default.aspx</a> ); Securities and Exchange Commission Nigeria ( <a href="http://www.sec.gov.ng/">http://www.sec.gov.ng/</a> ) Lagos-based procurement of annual reports and listings prospectuses from NSE library, Lagos Lagos-based interviews: M. Obaseki (President of Operations, NSE); Mme. Hauwa M. Audu (Founder CEO, Amyn Investments and stockbroking, Lagos)



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BVRM	<p>Websites: BRVM main site (<a href="http://www.brvm.org">http://www.brvm.org</a>)</p> <p>Cote d'Ivoire:</p> <p>Procurement of annual reports: Abidjan (Cote d'Ivoire)-based library for BRVM</p> <p>Abidjan-based interviews:</p> <p>BRVM exchange: Emmanuel Zamble (Market operations manager, BRVM); Khassim Diop (Chargée de développement du Marché, BRVM); Abdoulaye Sogoba (Assistant chargée de la formation, BRVM)</p> <p>Abidjan brokers: M. Auguste Kouakou (Gniman-Finance SA, Abidjan); M. Hermann Boua (Hudson et Cie, Abidjan)</p> <p>Mali: Bamako-based interviews: M. Amadou Djeri Bocoum (Directeur de l'Antenne Nationale de Bourse du Mali, Bamako); M. Alassane Sissoko (Responsable des études et de la négociation, Société de Gestion et d'Intermédiation (SGI) du Mali SA, Bamako)</p>
Ghana	<p>Websites: Ghana stock exchange (<a href="http://www.gse.com.gh/">http://www.gse.com.gh/</a>)</p> <p>Accra-based interviews:</p> <p>Ghana stock exchange: Worlanyo Amoa (Senior Manager, Research and Product Development, GSE)</p> <p>Ghana Brokers: Armah I. J. Akotey (Vice President, Databank Brokerage and Investment Banking, Accra, Ghana); Edem Akpenyo (HFC Brokerage Services, Accra, Ghana); Kafui Asare (Head of Client Relations, SAS Investment Management, Accra, Ghana); Haruna Gariba (Head of Client Relations, Merchant Bank of Ghana Ltd, Accra, Ghana)</p>
Cameroon	<p>Websites: Douala stock exchange (<a href="http://www.douala-stock-exchange.com/">http://www.douala-stock-exchange.com/</a>)</p> <p>Pretoria (South Africa)-based interviews: Cameroon Embassy, Pretoria, South Africa</p>
Cape Verde	<p>Website: Cape Verde stock exchange [BVC] (<a href="http://www.bvc.cv/">http://www.bvc.cv/</a>)</p> <p>Telephone based interviews and procurement of data: Edmilson Mendonça (Operations Manager, BVC); Ronnie Machado (Compliance Manager, BVC)</p>
Sierra Leone	<p>Telephone-based interviews and procurement of data: M. Gibrilla Sesay (Operations Manager, Sierra Leone stock exchange); M. Michael Collier (Deputy President, Rokel Commercial Bank, Freetown, Sierra Leone); Jacob Kanu and Daniel Thomas (CEO's of independent local licensed stockbrokers, Freetown)</p>
<b>Southern Africa</b>	
Botswana	<p>Website: Botswana stock exchange [BSE] (<a href="http://www.bse.co.bw/">http://www.bse.co.bw/</a>)</p> <p>Telephone interviews and data procurement: Kopane Bolokwe (Operations officer, BSE)</p> <p>Gabarone-based interviews with Head of Operations, BSE; President of Stock Brokers Botswana</p>
Malawi	<p>Websites: Malawi stock exchange [MSE] (<a href="http://www.mse.co.mw/">http://www.mse.co.mw/</a>); The Nation business journal (<a href="http://mw-nation.com/">http://mw-nation.com/</a>)</p> <p>Telephone interviews and data procurement: Malawi stock brokers, Blantyre, Malawi</p>
Zambia	<p>Websites: Lusaka stock exchange [LuSE] (<a href="http://www.luse.co.zm/">http://www.luse.co.zm/</a>); The Post business journal (Zambia) (<a href="http://www.postzambia.com/">http://www.postzambia.com/</a>)</p> <p>Telephone-based procurement: Mme. Sitali Mugala (Operations Manager, Lusaka stock exchange)</p> <p>Lusaka-based interviews: LuSE operations personnel</p>
Namibia	<p>Websites: Namibia stock exchange [NSX] (<a href="http://nsx.com.na/">http://nsx.com.na/</a>)</p> <p>Windhoek-based data procurement from NSX building and library</p> <p>Telephone based procurement: John Mandy (CEO, NSX); Loide Nakanduungile (Research Manager, NSX); Manda Steynberg (Operations Manager, NSX)</p>
Mozambique	<p>Websites: Bolsa de Valores de Maputo [BVM] (<a href="http://www.bvm.co.mz/">http://www.bvm.co.mz/</a>)</p> <p>Maputo-based interviews: Señor Bruno Tembe (Técnico Superior, BVM); Señor Felisberto Navalha (Operations Manager, Central Bank of Mozambique)</p> <p>Maputo-based procurement from Central Bank of Mozambique annex library, Baixa, Maputo</p>
South Africa	<p>Websites: Johannesburg stock exchange [JSE] (<a href="https://www.jse.co.za/">https://www.jse.co.za/</a>)</p> <p>Telephone-based procurement: Market data department, JSE, Johannesburg, South Africa</p>

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## Appendix Table 2. Institutional measures data sources

Table documenting sources and construction behind formal and informal institutional controls used

Formal institutions	Definition
<b>Worldwide Governance measures</b>	
Voice and Accountability	capturing perceptions of the extent to which a country's citizens are able to participate in selecting their government, as well as freedom of expression, freedom of association, and a free media
Political Stability and Absence of Violence/ Terrorism	capturing perceptions of the likelihood of political instability and/or politically-motivated violence, including terrorism
Government Effectiveness	capturing perceptions of the quality of public services, the quality of the civil service and the degree of its independence from political pressures, the quality of policy formulation and implementation, and the credibility of the government's commitment to such policies
Regulatory Quality	capturing perceptions of the ability of the government to formulate and implement sound policies and regulations that permit and promote private sector development
Rule of Law	capturing perceptions of the extent to which agents have confidence in and abide by the rules of society, and in particular the quality of contract enforcement, property rights, the police, and the courts, as well as the likelihood of crime and violence
Control of Corruption	capturing perceptions of the extent to which public power is exercised for private gain, including both petty and grand forms of corruption, as well as "capture" of the state by elites and private interests
Underlying Source:	The WGI are based on a large number of different data sources, capturing the views and experiences of survey respondents and experts in the public and private sectors, as well as various NGOs. These data sources include: (a) surveys of households and firms (e.g. Afrobarometer surveys, Gallup World Poll, and Global Competitiveness Report survey), (b) NGOs (e.g. Global Integrity, Freedom House, Reporters Without Borders), (c) commercial business information providers (e.g. Economist Intelligence Unit, Global Insight, Political Risk Services), and (d) public sector organizations (e.g. CPIA assessments of World Bank and regional development banks, the EBRD Transition Report, French Ministry of Finance Institutional Profiles Database). For a complete list of sources used in the current update of the WGI refer to <a href="http://info.worldbank.org/governance/wgi/index.aspx#faq">http://info.worldbank.org/governance/wgi/index.aspx#faq</a>
Informal institutions	Definition
Tribalism index	<p>Tribalism Index = Corruption Measure + 0.5(Ethnic Fractionalism) + 0.5(Indigenous Population) + 2(Gender Equality) + Group Grievance</p> <p>The index has a 0 – 1 scale and is sourced from University of South Florida. <a href="http://usfglobalinitiative.org/">http://usfglobalinitiative.org/</a></p>
Corruption Measure	Corruption Perceptions Index (CPI) published annually by Transparency International to gauge relative perceptions of corruption. Information specific to the Corruption Perceptions Index can be found on their website at: <a href="http://www.transparency.org/policy_research/surveys_indices/about">http://www.transparency.org/policy_research/surveys_indices/about</a>
Ethnic Fractionalism	Alberto Alesina et al.'s work of ethnic and linguistic fractionalization presents what is, in conjunction with the use of indigenous populations as a percentage of the national population, one of the most interesting component of the Tribalism Index. See: Alesina et al (2003)
Indigenous Population	This is the percentage of the population that is indigenous. Data about demographic variables such as ancestry, ethnicity, language and religion is sourced from CIA World Factbook online at <a href="https://www.cia.gov/library/publications/the-world-factbook/">https://www.cia.gov/library/publications/the-world-factbook/</a>
Gender Equality	Gender Gap Index (GGI), published annually by the World Economic Forum. <a href="http://www.weforum.org/issues/global-gender-gap">http://www.weforum.org/issues/global-gender-gap</a>
Group Grievance	A tribal society will also experience high levels of group grievance, as defined by the Fund for Peace and used by the organization as one of the ten measures for the compilation of the Failed States Index. The variable captures the history of aggrieved communal groups, public scapegoating of those groups with or without nationalistic political rhetoric, any patterns of atrocity committed with impunity or with support or participation of government groups, and institutionalized political exclusion

**Supplementary Appendix Table 1. The association between ownership groups and firm's adoption of Anglo-American governance<sup>a, b, c</sup>**

This table presents the OLS regression results for dependent variable which is the Anglo-American governance index. In all cases the formal institutional quality and informal tribal indices are mean-centered and normalized. Additional country-level constant is included in variable part of variance. Explanatory and control variables are all defined in Table 3.

	Dependent variable: Anglo-American overall index (>1) – underlying index			
	Controls only	Ownership only	Formal institutions	Informal institutions
			Institutional quality	Tribal index
	Model 1	Model 2	Model 3	Model 4
Constant	0.290 [0.84]	0.098 [0.85]	-0.043 [0.67]	0.136 [0.90]
<b>Hypotheses</b>				
Nonexecutive own	---	0.134 [0.09] †	0.146 [0.06]**	0.182 [0.06]***
Corporate block own	---	0.060 [0.06]	0.092 [0.06] †	0.078 [0.06] †
Private equity own	---	0.153 [0.06]***	0.176 [0.05]***	0.149 [0.05]***
Business Group own	---	-0.052 [0.03] †	-0.037 [0.04] †	-0.045 [0.03]*
State own	---	-0.066 [0.03]*	-0.109 [0.03]***	-0.057 [0.03]*
<b>Moderation - formal</b>				
Nonexecutive own x Institutional quality	---	---	0.156 [0.05]***	---
Corporate block own x Institutional quality	---	---	-0.006 [0.05]	---
Private equity own x Institutional quality	---	---	-0.071 [0.06] †	---
Business Group own x Institutional quality	---	---	-0.039 [0.02]*	---
State own x Institutional quality	---	---	0.485 [0.12]***	---
<b>Moderation - informal</b>				
Nonexecutive own x Tribal index	---	---	---	-0.156 [0.06]***
Corporate block own x Tribal index	---	---	---	0.012 [0.04]
Private equity own x Tribal index	---	---	---	0.076 [0.05]*
Business Group own x Tribal index	---	---	---	0.047 [0.03]*
State own x Tribal index	---	---	---	-0.071 [0.07] †
<b>Environmental controls</b>				
Institutional quality	---	---	-0.041 [0.02]*	---
Tribal index	-0.043 [0.07]	-0.005 [0.08]	---	-0.043 [0.08]
Common law	---	---	---	---
Log (GDP per capita)	0.004 [0.09]	0.020 [0.10]	0.035 [0.08]	0.015 [0.10]
<b>Board controls</b>				
Log (board size)	-0.042 [0.03] †	-0.050 [0.02]*	-0.060 [0.03]**	-0.051 [0.02]*
Log (Av. Executive tenure)	0.013 [0.01]	0.015 [0.01] †	0.010 [0.01]	0.012 [0.01]
Ratio nonexecutives on board	0.036 [0.03] †	0.029 [0.04]	0.043 [0.04]	0.040 [0.04]
CEO = Founder	0.012 [0.02]	0.012 [0.02]	0.025 [0.02] †	0.021 [0.02] †
Ratio social elite nonexecutives	0.063 [0.09]	0.079 [0.08]	0.092 [0.08] †	0.096 [0.08] †
<b>Firm controls</b>				
Log (Revenue)	0.017 [0.01]***	0.018 [0.01]***	0.019 [0.01]***	0.020 [0.01]***
ROA	0.011 [0.04]	0.006 [0.03]	-0.013 [0.03]	-0.012 [0.03]

Log (Firm Age)	-0.014 [0.01]	-0.013 [0.01] †	-0.009 [0.01]	-0.013 [0.01]
Ratio debt to total assets	-0.012 [0.01]	-0.010 [0.01]	-0.011 [0.01]	-0.009 [0.01]
<b>IPO controls</b>				
Shares Offered/ Total Shares	-0.073 [0.04]*	-0.070 [0.04]*	-0.066 [0.04] †	-0.063 [0.04] †
Lead Manager is foreign	0.076 [0.04]*	0.074 [0.03]*	0.066 [0.03]*	0.070 [0.03]*
No. Obs.	190	190	190	190
Within R <sup>2</sup>	0.3434	0.4082	0.4639	0.4520
Between R <sup>2</sup>	0.1711	0.3264	0.0356	0.2133
Overall R <sup>2</sup>	0.2131	0.2894	0.1355	0.3535

<sup>a</sup> Binary effects for year and industry were included in the models but are not reported in the table; <sup>b</sup> Standard errors are in parentheses; <sup>c</sup> Country-cluster adjusted standard errors & covariance; † p < 0.10; \* p < 0.05; \*\* p < 0.01; \*\*\* p < 0.005

**Supplementary Appendix Table 2. The association between ownership groups and firm's adoption of Anglo-American governance<sup>a, b, c</sup>**

This table presents the OLS regression results for dependent variable which are the four respective categories of categoric version of the Anglo-American governance index. In all cases the formal institutional quality and informal tribal indices are mean-centered and normalized. Additional country-level constant is included in variable part of variance. Explanatory and control variables are all defined in Table 3.

	Dependent variable: Anglo-American overall index (>1) – categories 1-4			
	Controls only	Ownership only	Formal institutions	Informal institutions
			Institutional quality	Tribal index
	Model 1	Model 2	Model 3	Model 4
Constant	1.205 [3.94]	0.094 [4.31]	-2.613 [3.56]	0.178 [4.66]
<b>Hypotheses</b>				
Nonexecutive own	---	0.458 [0.35] †	0.491 [0.30]*	0.639 [0.31]*
Corporate block own	---	0.546 [0.27]*	0.755 [0.32]**	0.638 [0.29]*
Private equity own	---	0.548 [0.25]*	0.656 [0.21]***	0.534 [0.14]***
Business Group own	---	-0.228 [0.15] †	-0.163 [0.13] †	-0.207 [0.09]*
State own	---	-0.156 [0.41]	-0.307 [0.40]	-0.139 [0.24]
<b>Moderation - formal</b>				
Nonexecutive own x Institutional quality	---	---	0.601 [0.26]*	---
Corporate block own x Institutional quality	---	---	-0.217 [0.19] †	---
Private equity own x Institutional quality	---	---	-0.293 [0.16]*	---
Business Group own x Institutional quality	---	---	-0.265 [0.09]***	---
State own x Institutional quality	---	---	1.428 [0.49]***	---
<b>Moderation - informal</b>				
Nonexecutive own x Tribal index	---	---	---	-0.606 [0.28]*
Corporate block own x Tribal index	---	---	---	0.231 [0.17] †
Private equity own x Tribal index	---	---	---	0.364 [0.14]***
Business Group own x Tribal index	---	---	---	0.269 [0.10]***
State own x Tribal index	---	---	---	-0.639 [0.25]***
<b>Environmental controls</b>				
Institutional quality	---	---	-0.215 [0.09]**	---
Tribal index	-0.667 [0.32]*	-0.443 [0.35] †	---	-0.699 [0.37]*
Common law	---	---	---	---
Log (GDP per capita)	0.042 [0.44]	0.123 [0.48]	0.436 [0.41] †	0.122 [0.53]
<b>Board controls</b>				
Log (board size)	-0.167 [0.16] †	-0.189 [0.15] †	-0.240 [0.15]*	-0.182 [0.13] †
Log (Av. Executive tenure)	0.080 [0.06] †	0.104 [0.05]*	0.073 [0.04]*	0.090 [0.05]*
Ratio nonexecutives on board	0.123 [0.16]	0.048 [0.20]	0.150 [0.23]	0.122 [0.21]
CEO = Founder	0.082 [0.11]	0.099 [0.12]	0.142 [0.13] †	0.128 [0.14]
Ratio social elite nonexecutives	0.509 [0.39] †	0.599 [0.38] †	0.584 [0.36]*	0.650 [0.35]*
<b>Firm controls</b>				
Log (Revenue)	0.083 [0.02]***	0.093 [0.02]***	0.091 [0.02]***	0.099 [0.02]***

ROA	-0.075 [0.20]	-0.080 [0.15]	-0.160 [0.14] †	-0.165 [0.14] †
Log (Firm Age)	-0.055 [0.08]	-0.051 [0.07]	-0.034 [0.07]	-0.052 [0.07]
Ratio debt to total assets	-0.059 [0.05] †	-0.057 [0.05] †	-0.065 [0.04] †	-0.045 [0.04]
<b>IPO controls</b>				
Shares Offered/ Total Shares	-0.262 [0.24] †	-0.231 [0.24]	-0.220 [0.26]	-0.201 [0.27]
Lead Manager is foreign	0.257 [0.14]*	0.248 [0.14]*	0.220 [0.14]*	0.236 [0.13]*
No. Obs.	190	190	190	190
Within R <sup>2</sup>	0.3530	0.4038	0.4491	0.4431
Between R <sup>2</sup>	0.0924	0.1325	0.0164	0.1081
Overall R <sup>2</sup>	0.1714	0.2818	0.0955	0.2912

<sup>a</sup> Binary effects for year and industry were included in the models but are not reported in the table; <sup>b</sup> Standard errors are in parentheses; <sup>c</sup> Country-cluster adjusted standard errors & covariance; † p < 0.10; \* p < 0.05; \*\* p < 0.01; \*\*\* p < 0.005

**Supplementary Appendix Table 3. The association between ownership groups and firm's adoption of Anglo-American governance<sup>a, b, c</sup>**

This table presents the hierarchical linear model Poisson Count model results for dependent variable adopting one of four values: value 1 represents firm's adoption of Anglo-American governance between 0 and 25%, value 2 represents firm's adoption of Anglo-American governance between 26% and 50%, value 3 represents firm's adoption of Anglo-American governance between 51% and 75%, and finally value 4 represents firm's adoption of Anglo-American governance between 76% and 100%. In all cases the formal institutional quality and informal tribal indices are mean-centered and normalized. Additional country-level constant is included in variable part of variance. Explanatory and control variables are all defined in Table 3.

	Dependent variable: Anglo-American overall index (>1) – four ordinal categories			
	Controls only	Ownership only	Formal institutions	Informal institutions
			Institutional quality	Tribal index
	Model 1	Model 2	Model 3	Model 4
<b>Fixed variance</b>				
Constant	-0.534 [0.47] †	-0.765 [0.36]*	-1.010 [0.37]***	-0.797 [0.34]**
<b>Hypotheses</b>				
Nonexecutive own	---	0.175 [0.12] †	0.094 [0.10]	0.202 [0.11]*
Corporate block own	---	0.352 [0.10]***	0.414 [0.09]***	0.401 [0.09]***
Private equity own	---	0.313 [0.15]*	0.364 [0.09]***	0.339 [0.11]***
Business Group own	---	-0.134 [0.06]**	-0.093 [0.06]*	-0.117 [0.05]**
State own	---	-0.051 [0.20]	-0.083 [0.21]	-0.081 [0.17]
<b>Moderation - formal</b>				
Nonexecutive own x Institutional quality	---	---	0.206 [0.10]**	---
Corporate block own x Institutional quality	---	---	-0.166 [0.10]*	---
Private equity own x Institutional quality	---	---	-0.351 [0.07]***	---
Business Group own x Institutional quality	---	---	-0.125 [0.06]*	---
State own x Institutional quality	---	---	0.139 [0.48]	---
<b>Moderation - informal</b>				
Nonexecutive own x Tribal index	---	---	---	-0.166 [0.11] †
Corporate block own x Tribal index	---	---	---	0.172 [0.05]***
Private equity own x Tribal index	---	---	---	0.347 [0.05]***
Business Group own x Tribal index	---	---	---	0.123 [0.06]*
State own x Tribal index	---	---	---	-0.173 [0.11] †
<b>Environmental controls</b>				
Institutional quality	---	---	0.161 [0.05]***	---
Tribal index	-0.147 [0.06]**	-0.135 [0.05]***	---	-0.196 [0.04]***
Common law	0.441 [0.09]***	0.385 [0.08]***	0.400 [0.08]***	0.407 [0.08]***
Log (GDP per capita)	0.090 [0.05]*	0.087 [0.04]**	0.125 [0.04]***	0.094 [0.04]***
<b>Board controls</b>				
Log (board size)	-0.090 [0.08] †	-0.088 [0.07] †	-0.065 [0.06] †	-0.061 [0.06]
Log (Av. Executive tenure)	0.035 [0.02]*	0.045 [0.02]**	0.040 [0.02]*	0.048 [0.02]***
Ratio nonexecutives on board	-0.023 [0.11]	-0.026 [0.10]	0.051 [0.08]	-0.001 [0.08]
CEO = Founder	0.033 [0.04]	0.068 [0.05] †	0.093 [0.05]*	0.072 [0.05] †

Ratio social elite nonexecutives	0.246 [0.16] †	0.250 [0.16] †	0.183 [0.15] †	0.26 [0.15]*
<b>Firm controls</b>				
Log (Revenue)	0.041 [0.01]***	0.043 [0.01]***	0.038 [0.01]***	0.044 [0.01]***
ROA	0.035 [0.08]	0.063 [0.06] †	0.015 [0.06]	0.038 [0.05]
Log (Firm Age)	0.010 [0.03]	0.015 [0.03]	0.001 [0.03]	0.003 [0.02]
Ratio debt to total assets	0.003 [0.02]	0.006 [0.02]	-0.001 [0.01]	0.006 [0.01]
<b>IPO controls</b>				
Shares Offered/ Total Shares	-0.176 [0.09]*	-0.186 [0.10]*	-0.162 [0.11] †	-0.199 [0.10]*
Lead Manager is foreign	0.240 [0.07]***	0.234 [0.06]***	0.218 [0.05]***	0.227 [0.05]***
<b>Random variance</b>				
Country-level constant	7.92E-35 [1.50E-36]	6.39E-35 [3.63E-73]	4.56E-35 [4.33E-36]	1.73E-34 [2.21E-39]
No. Obs.	190	190	190	190
Log pseudo-likelihood	-256.05	-254.72	-254.31	-258.11

<sup>a</sup> Binary effects for year and industry were included in the models but are not reported in the table; <sup>b</sup> Standard errors are in parentheses; <sup>c</sup> Country-cluster adjusted standard errors & covariance; † p < 0.10; \* p < 0.05; \*\* p < 0.01; \*\*\* p < 0.005