



Business groups and export performance: the role of coordination failures and institutional configurations

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Abstract:	We explore the nature of business groups (BGs) and their affiliates in emerging markets through the lens of the coordination failures associated with economic development. In addition to internalization advantages, we propose that BGs develop distinct economic and political capabilities that provide affiliates with access to the complementary resources required for successful exporting. We further argue that these capabilities are context-specific, based on the market and political institutions of the home country. We propose that the BG advantage increases as market institutions strengthen but is reduced (strengthened) as political systems become more democratic (autocratic). We apply Tobit estimation methods to a large sample of firms from emerging and developing countries at different stages of institutional development and find consistent evidence in favor of our hypotheses. We develop a framework to analyze alternative BG internationalization paths in a comparative institutional context.

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Abstract

We explore the nature of business groups (BGs) and their affiliates in emerging markets through the lens of the coordination failures associated with economic development. We propose that BGs develop distinct economic and political capabilities that provide affiliates with access to the complementary resources required for successful exporting. We further argue that these capabilities are context-specific, based on the market and political institutions of the home country. We propose that the BG advantage in supporting affiliate exporting increases as market institutions strengthen but is reduced (strengthened) as political systems become more democratic (autocratic). We apply Tobit estimation methods to a large sample of firms from emerging and developing countries at different stages of institutional development and find consistent evidence in favor of our hypotheses. We develop a framework to analyze alternative BG internationalization paths in a comparative institutional context.

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INTRODUCTION

Business groups (BGs), a collection of legally independent multi-business entities coordinated through a central entity (Granovetter, 1994; Leff, 1978) and operating primarily in emerging markets (Ramachandran, Manikandan & Pant, 2013), continue to attract considerable academic attention (Aguilera, Crespi-Cladera, Infantes-Sanchez & Pascual-Fuster, 2020; Holmes, Hoskisson, Kim, Wan & Holcomb, 2018; Carney, Van Essen, Estrin & Shapiro, 2018; Carney, Gedajlovic, Heugens, Van Essen & Van Oosterhout, 2011). Nevertheless, the literature has not arrived at a consensus regarding whether BG affiliation supports internationalization (Aguilera et al., 2020), or the relationship of BGs to the process of economic development (Holmes et al., 2018). Moreover, most of the evidence to date has come from a relatively small number of countries, notably India, Japan, South Korea and Taiwan, not all of which can be said to be emerging economies. This has led to calls for more generalizable research on the ability of BG affiliates in emerging markets to compete in international markets and a greater understanding of how their performance and persistence vary across countries and institutional contexts (Holmes et al., 2018; Aguilera et al., 2020).

We address these issues by complementing and contextualizing the prevailing institutions voids (IV) approach to BGs (Khanna & Palepu, 1997; 2010) using an explicit economic development and comparative institutional framework to extend our understanding of the export performance of BG affiliates in emerging markets. We organize our analysis around *coordination failures* and their role in economic development (Rodrik, 1996; Hoff, 2000; Hoff & Stiglitz, 2000). Coordination failures represent a specific type of institutional void arising when both market and non-market (state) institutions are not capable of organizing the provision of the complementary assets required for successful economic development (Hoff & Stiglitz, 2000), particularly export-led development. Such a void often implies an enhanced role for the state in the form of industrial policy (Rodrik, 2004; Wade,

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2018). We argue that BGs help to resolve this type of coordination failure by developing group-level capabilities which facilitate exporting by their affiliates but also support an export-led development strategy by the state. These capabilities, which we term CFR (coordination failure resolution) capabilities, are central to understanding the export performance of BGs in emerging markets where both market and state institutional weakness can limit the provision of complementary assets required for development and internationalization (Doh, Rodrigues, Saka-Helmhout, and Makhija, 2017; Rodrik, 2004). We, therefore, consider CFR capabilities along two broad dimensions: economic and political efficiency (Collin, 1998).

In its most general form, economic capabilities focus on the ability of the BG to coordinate resource flows within the group (Collin, 1998:725), referred to by Gubbi, Aulakh & Ray, (2015: 1488) as “the coordinating feature of the core entity (which) plays an important intermediation role for the network”. This definition encompasses the ability of the BG to create and coordinate internal markets to overcome institutional voids in resource markets and facilitate shared access by affiliates (Khanna & Palepu, 2000; Khanna & Yafeh, 2007). We contextualize this broad view by focusing on specific capabilities related to overcoming coordination failures. We propose that BGs in emerging markets develop CFR economic capabilities associated with exploring and exploiting new opportunities and sharing relevant information that allows them to fill coordination voids by providing complementary assets (Leff, 1978; Lamin, 2013; Manikandan & Ramachandran, 2015). In particular, we suggest that BGs share information regarding market opportunities for export (Lamin, 2013), and coordinate within the group the provision of complementary assets, vertical and horizontal, both to produce inputs required for export and to facilitate their transportation and distribution (Lincoln, Gerlach & Ahmadadjian, 1996; Mahmood, Chung & Mitchell, 2013; Morck & Nakamura, 2007).

At the same time, we extend the idea of CFR capabilities to include political efficiency, defined by Collin (1998: 724) to exist when an organization helps create value for the government. Accordingly, we adopt an international political economy perspective (Schneider, 2009; Yiu, Lu, Bruton & Hoskisson, 2007), focused on business-state relations (Lazzarini, 2015; Maxfield & Schneider, 1997; Lemma & te Velde, 2017) and their impact on economic development. We suggest that BGs can assist developmental states in overcoming coordination failures, building on Collin's (1998: 737) intuition that "BGs possess a governance capacity that the government can make use of." Thus, BGs that develop the CFR capabilities to coordinate their actions with those of the state can benefit both themselves and their affiliates (Gedefaw Birhanu & Wezel, 2022).

Our analysis shows that creating these two types of CFR capabilities provides BG members with an export advantage relative to non-affiliated firms. Thus, as a building block, we first test the hypothesis that there remains a positive export performance effect for BG affiliates after controlling for the firm-specific variables that support firm-level exporting as identified in the broad export (Chabowski et al, 2018) and more specific BG export literatures (Gubbi et al., 2015; Tajeddin & Carney, 2019).

Drawing on the distinction between economic and political CFR capabilities, we next identify the comparative institutional contexts that moderate the impact of BG affiliation on exports across countries. We develop an institutional contingency perspective to categorize the factors underlying the BG export advantage.

We first examine the economic dimension of BG exporting capabilities. We argue that BGs in emerging markets develop CFR economic capabilities associated with their ability to fill coordination voids by providing the complementary assets and shared information necessary for exporting. Because these CFR capabilities are rooted in the intangible capability of BGs to recognize (export) opportunities, pool that information within the group,

and coordinate the mobilization of relevant resources, the advantages that they bestow may not be eroded by improvements in the quality of *market-supporting* institutions. Instead, BGs can adapt to institutional changes (Lamin, 2013; Gopal, Manikandan & Ramachandran, 2021; Manikandan & Ramachandran, 2015) and thus continue to support internationalization within the group. Consequently, our second hypothesis is that the BG affiliate export performance advantage identified in our first hypothesis will be magnified as market-supporting institutions strengthen. This hypothesis is contrary to the prediction of the traditional institutional voids (IV) perspective, which suggests that the BG advantage based on the internalization of resources should diminish as institutional voids recede (Khanna & Yafeh, 2007).

Our final hypothesis considers the political element of CFR capabilities, particularly the institutional context of BG-state relations, an area that has been largely neglected in the BG literature. We follow the political economy literature (Przeworski, Alvarez, Chebub, & Limongi, 2000; Acemoglu, Naidu, Restrepo & Robinson, 2019) to consider political institutions along the spectrum from autocracy to democracy. We reason that autocratic states are more likely to view BGs as instruments of state-led development (Clegg, Voss & Tardios, 2018) and thus support their internationalization efforts. In contrast, democracies will shy away from discretionary interventions and will be focused on equal treatment for all firms, including a greater concern over monopoly power (Mukand & Rodrik, 2020). They are, therefore, more likely to develop policies that limit the advantages of BGs (Commander and Estrin, 2022). Thus, the ability of BGs to coordinate actions with the state will be higher in autocracies, and we hypothesize that the positive BG export performance advantage will erode (be enhanced) when democratic (autocratic) institutions strengthen.

We test these hypotheses across a broad range of emerging markets and institutional contexts, drawing on the World Bank Enterprise Survey (WBES) database, encompassing

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3 more than 45,000 firms in 57 countries with considerable institutional heterogeneity and
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5 augmented by country-level institutional data. We find consistent and robust support for all
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7 our hypotheses: BG affiliates have an export advantage, which is greater as market
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9 institutions strengthen and is reduced when political institutions are more democratic. We
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11 combine these effects to propose an institutional contingency framework reconciling some
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13 conflicting perspectives regarding BGs.
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17 We make both theoretical and empirical contributions to the management literature on
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19 BGs. Theoretically, we develop the concept of BG CFR capabilities, which allows us to
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21 complement and contextualize the existing theory of BGs. We argue that in addition to the
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23 benefits of internalized markets previously analyzed in the IV literature, BGs also develop
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25 unique intangible economic and political capabilities to provide complementary knowledge
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27 and resources to affiliates and engage with the state to overcome coordination failures. On
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29 this basis, we offer a richer and more nuanced theoretical understanding of the BG in
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31 emerging markets rooted in its ability to resolve coordination failures in a comparative
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33 institutional framework defined by both market and political institutions.
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37 Empirically, we test these ideas using data drawn from multiple and often
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39 understudied jurisdictions. We thus respond to calls for more cross-country and comparative
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41 institutional research on BGs (Aguilera et al., 2020; Holmes et al., 2018). Using our results,
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43 we develop an institutional contingency framework that extends our understanding of the
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45 performance and persistence of BGs in a comparative institutional context. We employ a
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47 three-way interaction technique to encompass the joint effects of market and political
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49 institutions. Compared with longitudinal single-country studies, our multi-country setting
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51 thus enables us to contextualize the institutional voids thesis.
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55 Our theoretical approach and empirical results contribute to the literature on
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57 comparative institutional analysis. Despite recent calls for greater attention to understanding
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contextual differences across countries (Ahmadjian, 2016; Haxhi & Aguilera, 2017; Kostova, Beugelsdijk, Scott, Kunst, Chua, and van Essen, 2020), BG research has only begun developing arguments that are conditional on institutional arrangements and contextual contingencies (Hu, Cui & Aulakh, 2019). We contribute in particular by focusing on the potential role of political systems (Cuervo-Cazurra, Duran, Arregle & van Essen, 2023) and autocratic institutions (Clegg et al, 2018; Maier, 2021) in an emerging market context. Moreover, by focussing on exports and the contribution of BGs to export-led development, we provide a more finely-grained understanding of the early internationalization of firms (Aguilera et al., 2020; McCormick & Somaya, 2020), an understanding that accounts for both market and political contexts.

LITERATURE AND HYPOTHESIS DEVELOPMENT

Coordination Failures, Industrial Policy and Business-State Relations

Khanna and Palepu (2010:14, emphasis ours) define institutional voids (IV) as “the lacunae created by the absence of *market* intermediaries.” Therefore, the IV perspective frames the BG as an efficiency-enhancing organizational form: it internalizes transactions across affiliates to increase the efficiency of resource allocation in contexts where high transaction costs limit arms-length transactions. Hence, superior access to resources, notably capital, knowledge and labour (Gubbi et al., 2015), provides the basis for affiliated firms’ improved performance. To be sure, Khanna and Palepu (1997) also noted the possible political implications of institutional voids, and the potential benefits to BGs of working with governments. Yet, there is little research on the nature of such relations (Doh et al, 2017).

We complement and contextualize the IV framework with a *coordination failure* perspective based on the economic development literature (Hoff, 2000; Hoff & Stiglitz, 2000; Rodrik, 2004) and adapted to focus on the role of BGs, especially concerning internationalization. The theory of coordination failures is rooted in the idea that, especially

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3 in developing economies, market mechanisms may fail to coordinate individual firm
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5 decisions concerning complementary products and services, including backward and forward
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7 linkages along the supply chain (Hirschman, 1958). Complementarity implies that the returns
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9 from an individual or company action may depend on the actions of others¹. Coordination
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11 failures occur when a firm abandons potentially profitable investments because it cannot
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13 coordinate with the providers of complementary assets, a negative externality (Hoff, 2000).
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15 In this way, the coordination failures perspective emphasizes that in addition to access to
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17 resources, firm-level outcomes may depend on the decisions of other firms.
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21 The coordination failures approach also extends the range of relevant stakeholders to
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23 include the government. From a development economics perspective, the question posed by
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25 the earliest contributors to the theory is how or whether government action can solve
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27 coordination problems (Rosenstein-Rodan, 1943; Hirschman, 1958). These theorists argued
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29 for a ‘big push’ industrial policy comprising technological catch-up and export-oriented
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31 development policies (Easterly, 2006; Wade, 2018). The policy community also recognizes
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33 that governments in emerging markets often have limited state capacities, in public
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35 administration, human capital, and infrastructure (Hoff & Stiglitz, 2000) and that this may
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37 result in the government being unable to address coordination failures.
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41 The possibility that governments may lack the ability or resources to resolve
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43 coordination failures is central to the international political economy literature on business-
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45 state relations (Lazzarini, 2015; Maxfield & Schneider, 1997; Lemma & te Velde, 2017;
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51 ¹ Rodrik (2004: 13) offers the example a firm considering entering the orchid business. “An individual producer
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53 contemplating whether to invest in a greenhouse needs to know that there is an electrical grid he can access
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55 nearby, irrigation is available, the logistics and transport networks are in place, quarantine and other public
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57 health measures have been taken to protect his plants from his neighbors’ pests, and his country has been
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59 marketed abroad as a dependable supplier of high-quality orchids. All of these services have high fixed costs
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and are unlikely to be provided by private entities unless they have an assurance that there will be enough
greenhouses to demand their services in the first place. This is a classic coordination problem. Profitable new
industries can fail to develop unless upstream and downstream investments are coaxed simultaneously.” A
similar point with respect to the sugar industry in Mozambique is made by Whitfield & Buur (2014: 131)

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Schneider, 2009). This possibility highlights the potential reciprocal benefits of sharing resources and information to support their mutual interests (Buur & Whitfield, 2013; Hausman & Rodrik, 2003; Morck & Nakamura, 2007; Yiu et al., 2007). Indeed, Rodrik (2004) argues that industrial policy is best understood as a strategic collaboration between the private sector and the state, from which both can benefit. Lazzarini (2015) discusses how successful industrial policy relies on potential symbiotic effects that increase government capabilities to administer policy while encouraging or stimulating firms to improve their performance. Similarly, Lemma & te Velde (2017) argue that a structured engagement between governments and firms can alleviate constraints to the growth of both².

We suggest that these ideas are relevant to understanding the export performance of BGs in emerging economies. BGs can help resolve coordination failures by creating two different, but not mutually exclusive, dimensions of CFR capabilities: economic and political (Collin, 1998)³. We argue that exporting performance is associated with both the internal ability of BGs to provide diversified complementary assets (*economic coordination*) and their capacity to engage with the state as a strategic partner around the shared goal of export promotion (*political coordination*). We go on to use the distinction as the basis for a comparative contextual analysis of BG performance.

Business Groups, Coordination Capabilities and Export Performance

In contrast to much of the literature on BG internationalization, which typically focuses on outward foreign direct investment (OFDI) (e.g., Chari, 2013), our analysis is concerned with exporting (Holmes et al., 2018). Few studies focus on the exporting

² It is understood that not all business-state relationships result in successful development outcomes, and success requires shared goals and mechanisms to ensure reciprocity (Buur & Whitfield, 2013; Maxfield & Schneider, 1997). Any system of government incentives for private firms may end up serving as a mechanism to transfer rents to corrupt businessmen or bureaucrats.

³ Collin (1998) does not analyze economic and political capabilities in the emerging markets context.

performance of BG affiliates (Eduardsen, Marinova, González-Loureiro & Vlačić, 2022; Gubbi et al., 2015; Tajeddin & Carney, 2019) and rarely across a wide sample of countries. However, focusing on FDI imposes a performance standard that relatively few emerging market firms can meet (Cuervo-Cazurra & Genc, 2011), since the firm-level productivity requirements for exporting are lower than those for investing abroad (Helpman, Mellitz, & Yeaple, 2004). As a result, in considering exports rather than OFDI, researchers can analyze a broader sample of firms from a more extensive selection of countries, increasing institutional heterogeneity.

There is a long research tradition in the export literature of identifying the capabilities associated with successful exporting, and most studies take a resource-based view, focusing on a variety of firm-specific variables such as access to finance and managerial capabilities (Chabowski et al., 2018; Chen, Sousa & He, 2016), though with mixed results (Boehe, Qian & Peng, 2016). A relatively small number of studies have added an institutional perspective, (Cuervo-Cazurra & Dau, 2009; Wang & Ma, 2018), including the impact of institutional configurations on exporting across countries (Carney, Estrin, Liang & Shapiro, 2019). Gubbi et al. (2015) focus on the adaptability of BG affiliates to institutional change based on the resources they control. These resources are similar to those identified in the export literature.

There is also some evidence that BGs can facilitate and support the export-led strategies of home country governments (Castellaci, 2015; Fisman & Khanna, 2004; Kock & Guillén, 2001; Schneider, 2009). For example, Kock & Guillén, (2001: 104/5) discuss how Hyundai in the 1970s entered the trading and merchant marine businesses with government permission and support, thus supporting the exports of other affiliates. We extend this literature by examining the role of BGs in enhancing the export capabilities of their affiliates in the context of coordination failures across institutional contexts distinguished in terms of economic and political institutions.

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Hypotheses

The coordination capabilities of the BG can involve coordinating internal market access affiliates (Khanna & Palepu, 2010; Khanna & Yafeh, 2007), and these have been relatively widely studied (Holmes et al., 2018). We complement this understanding through the lens of coordination failures. We argue that BGs help resolve coordination failures by developing two different, but not mutually exclusive, dimensions of CFR capabilities, economic and political.

Economic capabilities refer to CFR capabilities that help BGs overcome coordination voids in economic development by providing the complementary assets required for the development process. Building on Denrell, Fang & Winter (2003), who advanced the idea that resolving coordination failures can result in competitive advantage, Manikandan & Ramachandran (2015) extended the argument to the case of BGs in emerging markets. Manakandian & Ramachandran (2015: 601) propose that “business group affiliation provides member firms with distinctive vantage points” that give affiliates valuable opportunities not available to non-affiliates. Similarly, research identifies the ability of the BG to help affiliates sense new opportunities and promote cross-business opportunities by sharing knowledge and information (Lamin, 2013; Ramachandran et al., 2013). Therefore, we suggest that BG economic CFR capabilities arise from the ability to sense and respond to the risks and opportunities associated with coordination failures in emerging markets that limit exports. These capabilities enhance the export performance of affiliated firms.

Specifically, BGs can coordinate the provision of complementary physical assets such as infrastructure to facilitate exports (Fisman & Khanna, 2004; Kock & Guillén, 2001); coordinate efficient supply chains and buyer-supplier relationships (Li, Ramaswamy, & Pettitt, 2006; Lincoln et al., 1996; Mahmood et al., 2013) and secure and sponsor affiliate access in host markets (Elango & Pattnaik, 2007; Lamin, 2013). These capabilities are augmented by the

BGs ability to import and disseminate new technologies and practices from more advanced economies (Guillén, 2000; Chari & Dixit, 2015). Access to complementary assets allows affiliates to provide contractual certainty to customers in international markets, thus conferring reputational benefits that can mitigate the liability of foreignness (Khanna & Palepu, 2010; Gao, Zuzul, Jones & Khanna, 2017).

We extend the coordination failure approach to include managing political linkages with the government. Although state-led industrial policy is one possible solution to coordination failures in economic development (Rodrik, 2004), in an emerging economy, the state might lack the information or capacity to fully implement such a policy, especially in the face of weak institutions (Lazzarini, 2015; Doh et al., 2017). However, businesses are closer to market conditions than the state, so information asymmetries may put the government at a disadvantage (Hausman & Rodrik, 2003). This has led the literature to suggest that effective state-business relations can help overcome deficiencies in the state coordination of industrial policy by facilitating information exchange and sharing mutually beneficial resources (Buur & Whitfield, 2013; Lazzarini, 2015; Lemma & te Velde, 2017).

We apply this argument to BGs and suggest they leverage their economic capabilities to engage in strategic collaborations with the state to advance industrial policies, in our case export-led development. Morck & Nakamura (2007) discuss how the rulers of Meiji Japan enlisted the support of business families (zaibatsu) in implementing an industrial strategy that included exporting. This model influenced President Park Chung Hee, who initiated South Korea's industrial strategy in 1961 by working with industrialists who became the Korean BGs (Chaebol) (Amsden, 1989). Thus, the ability of BGs to coordinate relations with the state can assist their affiliates' participation in state-led export development programs (Hobday, 1995; Guillén, 2000) and can facilitate deeper access to political networks (Fernández-Méndez, García-Canal & Guillén, 2018). At the same time, they can protect affiliates against arbitrary

government actions (Peng & Luo, 2000; Zheng, Singh, & Mitchell, 2015) or political instability (Gedefaw Birhanu & Wezel, 2022) that may hinder exports.

In sum, we propose that BGs develop CFR capabilities to address coordination failures in emerging markets that involve the ability to recognize new opportunities and organize the provision of complementary products and services required for exporting by affiliates, while simultaneously managing mutually beneficial relations with the state that facilitate affiliate exports. The resulting benefits may be shared with affiliated firms and both dimensions of CFR activities may be complementary. Therefore, diversified BGs fill coordination voids by developing CFR capabilities required for the international success of their affiliated companies. These CFR capabilities are distinct from the resources and capabilities associated with exporting by affiliated or non-affiliated firms identified by the export literature discussed above, where even for BGs the emphasis is on access to financial resources and management (Gubbi et al., 2015). Our analysis is therefore different from the traditional IV argument that BG affiliates have access to internalized markets, in particular for capital and management resources that can enhance exporting (Liang & Carney, 2020). We control for these traditional firm-level capabilities in our empirical analysis.

Thus, our first hypothesis states that, after controlling for capital and labor resources associated with firm-level exporting there remains a positive export performance effect of group affiliation which we associate with group-level CFR capabilities:

H1: Business Group Performance: *Controlling for capital and labor resources associated with firm-level exporting, business group affiliates will export more than non-affiliates.*

Although our first hypothesis is grounded in CFR capabilities, it does not distinguish between their economic and political dimensions (Collin, 1998). We now use that distinction to establish the comparative institutional context under which BGs operate. We begin with economic CFR capabilities and the impact of market institutions.

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3 The IV perspective implies that any export performance advantage of BG affiliates
4 should diminish as the institutional constraints on market transactions decline and non-
5 affiliates gain market access to the same assets as affiliates (Carney et al., 2018). As market
6 institutions improve, the transaction costs of arms-length trading decline and market
7 exchanges on strategic factor markets will increase. For example, the liberalization of capital
8 markets enables new sources of credit and equity for all firms (Kim & Song, 2017).
9 Similarly, access to better management practices is more readily available in countries with
10 stronger market institutions (Bloom & Van Reenen, 2010).
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21 While improvements in the quality of market-supporting institutions may limit the
22 advantage of BGs in creating internal markets for resources, as the IV perspective predicts,
23 we propose that the same will not be true of BG economic capabilities developed in response
24 to coordination failures. Rather, we argue that the economic capabilities of BGs related to
25 resolving coordination failures provide affiliates with benefits that *do not dissipate* as market-
26 supporting institutions strengthen, and may in fact increase. It will be recalled that economic
27 CFR capabilities comprise BGs' ability to provide complementary assets that are absent or
28 deficient in the development process but are required for exporting. Economic CFR
29 capability, therefore, resides in the ability of the BG to identify and invest in a diversified set
30 of complementary assets that facilitate exporting by affiliates. This CFR capability may be
31 traced to Leff (1978) who argued that BGs possessed entrepreneurial capabilities that allowed
32 them to identify and implement opportunities, in our case associated with exporting
33 opportunities. Manakandian & Ramachandran (2015) and Ramachandran et al. (2013)
34 advance the argument suggesting that the BG helps affiliates engage in opportunity
35 recognition that provides affiliates with benefits not available to non-affiliates. Lamin (2013)
36 makes a similar point but emphasizes not only opportunity recognition, but the sharing of
37 information within the BG that facilitates "altering their opportunity sets" (Lamin, 2013:
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1488). Lamin further argues that the BG affiliation “not only exposes group-affiliated firms to information that unaffiliated firms cannot easily access, but also confers additional information-based advantages, such as third-party referrals and general reputation, that enable group-affiliated firms to then capitalize on these opportunities.” (Lamin 2013: 1489). Importantly for our purposes, Lamin (2013) applies these arguments to the international activities of BG affiliates.

This CFR capability to identify and exploit new opportunities is intangible, complex, not tradeable in open markets, and difficult to imitate. Although the BG CFR capability is difficult to imitate, its intangible nature suggests that it can be shared with affiliates without dissipation and can be augmented through learning, even as market institutions strengthen. For these reasons, we propose that economic CFR advantages conferred by BG affiliation may not dissipate as market institutions strengthen. Lamin (2013) and Manakandian & Ramachandran (2015) find evidence to support this view.

However, the CFR capabilities that we identify may *increase* the BG advantage as markets liberalize. Lamin (2013) suggests that the informational benefits of BGs may in fact become more valuable as new opportunities arise, including those in foreign markets. Similar arguments, in different contexts, are made by Manakandian & Ramachandran (2015) and Chittoor, Kale & Puranam (2015), who suggest that BGs capabilities may be complementary to liberalized markets. Gopal et al. (2021) find that in India, as markets became liberalized, BGs did indeed discover new opportunities for diversified growth. In general, a growing number of studies find that BG competitive advantages *increase* in the wake of institutional strengthening (Colpan & Hikino, 2018).

With respect to economic CFR capabilities, this suggests that the BG can adapt and benefit from contextual change (Gopal et al, 2021; Li & Yayavaram, 2021; Carney et al., 2018). Further, broad institutional change (Gubbi et al, 2015) accentuates BG affiliates’

access to the information and search capabilities of the BG (Lamin, 2013; Vissa, Greve & Chen, 2010). Thus, economic liberalization will not limit the relative ability of BGs to identify and pursue opportunities to provide the complementary assets required for successful exporting by their affiliates. Indeed, BG's experience in addressing coordination failures can assist them in identifying new opportunities, including ones overseas, even as broad market institutions strengthen (Carney, Dieleman, & Taussig, 2016; Gaur, Kumar & Singh, 2014; Li & Fleury, 2020; Johanson & Vahlne, 2009).

Consequently, our second hypothesis states that the BG performance advantage identified in our first hypothesis will not disappear and is magnified as *market-supporting* institutions strengthen.

H2: Business Groups and Market Institutions: *The positive effect of BG affiliation on export intensity is higher in countries where the quality of market institutions is higher.*

Our third hypothesis focuses on the impact of political institutions on the export performance of BG affiliates. We have previously noted the importance of business-state relations in resolving coordination failures. We now extend the analysis and propose that political institutions, defined along the spectrum of autocracy-democracy, establish boundary conditions on BG performance.

We base our analysis on the distinction between autocratic and democratic political regimes and their potential economic impact (Acemoglu, 2008; Acemoglu et al., 2019; Przeworski et al., 2000; Olson, 1993; Przeworski, 2004). The debate over the role of political regimes is wide-ranging and somewhat contested, with the significant concern being whether democratic or autocratic states have superior capabilities to orchestrate growth-enhancing strategies (Acemoglu et al, 2019; Boese & Eberhardt, 2022; Eberhard, 2022).

Our intention is not to enter these general debates but rather to use them to examine the characteristics of autocratic and democratic states that may be relevant to the performance of BGs in export markets. Specifically, we argue that autocratic states are more likely to

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support BGs as instruments of state policy to promote an international presence or international competitiveness (Clegg et al., 2018; Gertz & Evers, 2020; Luo et al., 2010; Schneider 2009). In contrast, democratic states are more likely to support policies that limit the competitive advantage of BGs and their affiliates.

For this discussion, we follow Przeworski et al. (2000) and Przeworski (2004) in defining a democratic political regime as one where free and contested elections select the chief executive and legislative body. An autocratic regime is one where contested elections do not occur. This is a dichotomous definition that we employ for purposes of discussion. In our empirical work, we use continuous measures based on several criteria. Using these simple definitions, Przeworski (2004) reports that historically democracies are primarily found in developed countries, but also notes that of the countries that experienced rapid growth in the second half of the last century, such as Taiwan, South Korea, Thailand, Japan, Singapore, Portugal, Greece, and Malta only Japan and Malta were democracies throughout the period. In our study, we include only countries currently considered as developing or emerging markets.

As discussed above, the international political economy approach to business-state relations focuses on the potential for strategic collaboration between firms and the state based on the provision of reciprocal benefits and goal congruence (Evans, 1995; Rodrik, 2004; Schneider, 2009; Yiu et al., 2007). We focus on the industrial policy goal of promoting exports, a common goal of many developing countries (Rodrik, 2004, Wade, 2018), and the role of BGs in supporting that goal in different political contexts. In the case of BGs and state policy, reciprocity might involve the BG supporting and contributing to the development goals and industrial policies of the state (Fisman & Khanna, 2004; Yiu et al., 2007) in return for access to critical resources such as subsidies, licenses, and favorable trade policies (Doh et al., 2017; Luo et al., 2010; Whitfield & Buur, 2014). We address the heterogeneity in these

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3 arrangements across countries and the effect on BG performance across political regimes
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5 (Puente & Schneider, 2020).
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8 The much-cited work of Amsden (2001) accentuates the state's role in supporting
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10 export-led growth by BGs in various countries. Amsden argues that East Asia's success was
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12 related to reciprocal control mechanisms whereby firms, often BGs, had to meet performance
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14 export targets in exchange for special policy consideration. Thus, firms received state
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16 assistance in finance, technology, and protection from imports in return for delivering
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18 performance, including exporting. In addition, BGs, through their networks of firms, provide
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20 information crucial to policy design and implementation. Most of the countries cited by
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22 Amsden would be considered autocratic, at least at the time of their rapid growth, including
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24 South Korea in the 1960s (Amsden, 1989) and Japan in the Meiji period (Morck &
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26 Nakamura, 2007).
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31 This immediately suggests that policies promoting and favouring the exporting
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33 success of BGs are associated with autocracy. There are several reasons why this might be
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35 the case. Independent firms face free-rider issues in coordinating collective actions that can
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37 support exporting (Olson, 1993). However, BGs control multiple firms and well placed to fill
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39 political action voids and engage in collective political action. Equally, as BGs represent a
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41 "small number of actors" (Collin, 1998:737), autocrats may better coordinate the relevant
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43 actors because coordination costs of organizing a smaller number of agents are lower than
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45 formalizing rules when democratic checks and balances do not encumber them. Indeed, many
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47 countries cited by Amsden (2001) coordinated actions among groups of elite insiders,
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49 including BGs and top government officials, often through informal mechanisms (Wade,
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51 2018). Indonesia's president Suharto engineered a high-growth industrial policy with just 20
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53 BG leaders (Dieleman & Sachs, 2008).
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Coordination with BGs allows autocracies to pursue national goals while economizing on the time and resources required to achieve them, implemented through coordinated actions with BGs and orchestrated by a limited but powerful bureaucracy (Clegg et al., 2018). Gertz & Evers (2020) suggest that effective state-business relations are a “force multiplier” (p. 17) that can enhance state power, which may be of particular value to autocrats. However, we note that even autocrats must achieve a measure of legitimacy and would understand the need to create prosperity for the wider population, including through the economic success of BGs. Olson (1993: 569) observed that an autocrat is “not like the wolf that preys on the elk, but more like the rancher who makes sure that his cattle are protected and given water.” Thus, we expect autocratic regimes to support BGs' export activities more.

These arguments are substantially reversed in democratic states. Democratic institutions often limit elite benefits and what Acemoglu and Robinson (2012) refer to as “extractive institutions.” Similarly, Mukand & Rodrik (2020) suggest that democracies value civil rights, defined as equal treatment by the state for all groups. While the details might depend on the exact nature of the democracy (Olson, 1993; Mayer & Whittington, 2004), in general, democratic institutions tend to act to limit the influence of entrenched powerful elites such as the families owning BGs (Commander and Estrin, 2022). This occurs partly because democracies tend to favour more liberal economic systems, civil liberties, and greater state capacity (Acemoglu et al., 2019). Democratization leads to trade liberalization, increasing import competition in the home market (Milner & Kubota, 2005) and threatening the position of BGs. Democracies are also associated with freedom of expression and the press and subject BGs and governments to greater external monitoring. Aidt & Gassenbern (2010) argue that such monitoring incentivizes states to strengthen internal government institutions (state capacity). In turn, state capacity increases the effectiveness of public policy (Guillén &

Capron, 2016) and reduces the reliance on BGs as partners in policy implementation. Greater state capacity will also increase the coordination capabilities of the state, allowing it to provide more complementary assets and so weaken the advantage of BGs in this regard. Finally, state capacity building, including building a skillful and independent bureaucracy, along with robust civil liberties and a free press, will reduce the value of domestic political ties (Fernández-Méndez et al., 2018). Such developments reduce the political influence of BGs, including any preferential access to state-supported export incentives.

These arguments are strengthened by considering the sensitivity of democracies to aspects of BG behaviour that are potentially highly unpopular. The literature has long been concerned by the opacity and potential for abusing minority shareholders inherent in the BG governance structure (Almeida and Wolfenzon, 2006), as well as by the market and overall monopoly power exercised by BGs and their controlling families (Morck, Wolfenzon & Yeung, 2005). This suggests that democracies are more likely to limit BGs power and influence while reducing any favourable treatment that might enhance affiliate performance.

Therefore, we conclude that the BG export advantage will be greater in autocratic regimes. Thus, we hypothesize that the positive BG performance advantage is enhanced (eroded) when autocratic (democratic) institutions are stronger.

H3: Business Groups and Political Institutions: *The positive effect of BG affiliation on export intensity is higher (lower) in countries that are more autocratic (democratic)*

We summarise our model in Figure 1

[Figure 1 about here]

METHODS, DATA AND ESTIMATION

Data and Variable Definition

The World Bank has undertaken firm-level surveys, using a standard survey instrument, on developing and emerging economies since 2006. Each survey is a global stratified random

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sample, with strata chosen to reflect firm size, business sector, and geographic regional variation to facilitate cross-country comparisons. WBES data are used widely in development economic studies (Harrison et al., 2014), international business (Jensen, Li, & Rahman, 2010; McCormick & Somaya, 2020; Carney et al., 2019), and in studies of BG affiliation (Castellacci, 2015). WBES data have been instrumental in studies relying on comparative institutional analysis (Carney et al., 2019; Jensen, Li, & Rahman, 2010; McCormick & Somaya, 2020). We use the surveys from 58 emerging and developing countries conducted between 2006 and 2016. Our total sample contains 86,000 firms in the manufacturing and service sectors. The country-time dimensions of the underlying sample are available in Appendix Table A1.

Dependent Variables. We measure BG by export intensity (*EXPORT*) (Bernard, Jensen, Redding, & Schott, 2018, Wang & Ma, 2018), defined as the percentage of sales directly exported (McCormick & Somaya, 2020).

Independent Variables. Hypothesis 1 considers the relationship between export intensity and BG membership after controlling for affiliate-level capabilities. WBES allows for the fact that a firm may be embedded in a broader enterprise; whether the firm is 'a firm on its own' or 'related to another enterprise'. WBES then uses a standard definition of group affiliation across jurisdictions, requiring firms to identify themselves as group members or as an established independent entity. Firms are defined as independent according to the following criteria: a firm must i) be legally registered for tax purposes, ii) make its own financial decisions and iii) have its own financial statements separate from those of the group, iv) have its own management and control over its payroll and v) be owned by private domestic individuals, companies, or organizations. Thus, we classify firms that self-identify as related to a larger enterprise as a group affiliated firm (GAF), and we code them as 1, and

0 otherwise. This definition meets the criteria for BG affiliation found in the literature (Castellacci, 2015).

Hypothesis 2 proposes that the export advantage of BG affiliates is sustained or increased in contexts where market-supporting institutions are stronger. Our primary measure is the Economic Freedom Index, which measures economic freedom with 12 indices of market-supporting institutions, derived from 4 pillars (rule of law, government size, regulatory efficiency, and market restrictions) across 184 economies since 2006. We also considered the World Bank Doing Business (DB) index as an alternative measure. The DB Index is widely used but is subject to criticism for various reasons (Hallward-Driemeier & Pritchett, 2015), and as of September 2021, has been discontinued. Nevertheless, we did consider it as a robustness test. Both variables are included with a one-year lag to account for potential endogeneity.

Hypothesis 3 proposes that the export advantage of BG affiliates is higher in more autocratic countries and lower in more democratic countries. We measure political institutions using the POLITY IV dataset, developed by The Center for Systemic Peace (Marshall, Gurr & Jaggers, 2017). The POLITY score measures the nature of the political regime based on a 21-point scale ranging from -10 (strongly autocratic) to +10 (strongly democratic). The POLITY measure has the advantage of providing information on the political regime using a single measure. This dataset is widely used in political science and is increasingly recognized in IB and management studies (Fernández-Méndez et al, 2018; Clegg et al, 2018). Polity is included with a one-year lag because of potential endogeneity.

Control Variables. We follow the export and BG performance literatures (Carney et al., 2011; Chabowski et al., 2018; Chen et al., 2016; Gubbi et al., 2015) in controlling for firm-level characteristics and capabilities associated with exporting, all derived from the WBES survey. Accordingly, we include firm size (SIZE) in the estimating equations,

measured as the logged number of permanent employees. We expect its sign to be positive given the evidence that larger firms tend to export more than smaller firms (Bernard et al., 2018; Chen et al, 2018). We also control for firm age (*AGE*) measured as the number of years of operation since the firm was established. The effect of age on exporting is debatable but it remains an important control variable in most export studies (Krammer et al, 2018; McCormick & Somaya, 2020). Importantly for this study, we also control for firm-specific capabilities, discussed below, that have been identified as important for exporting but are also linked to the literature on BGs: management capabilities and access to financial resources (Tajeddin & Carney, 2019). As is standard in inter-industry studies, we control for sectoral fixed effects. The sectors are those defined in the WBES survey instrument, approximating SIC three-digit level controls. Because the surveys are typically undertaken only once in each country, we are unable to employ country fixed effects, but we control for potential heterogeneity across groups of countries using regional fixed effects, drawing on the relevant standard World Bank geographic regions (Latin America, Asia, Europe and Africa).

In considering firm-specific capabilities identified as important for exporting, we build on Liang and Carney (2020) in selecting 10 survey items from the WBES survey sections about Finance, Trade, Innovation and Technology, Workforce Characteristics, and Government Relations to capture different types of management practices. We combine these to construct two key explanatory variables related to the traditional view of BGs internalizing resources from labour, especially managerial labour, and capital markets (Khanna & Palepu, 2000). Thus, the construct, Management Practices (*MAN*), refers to several relatively sophisticated management actions that a firm has undertaken in the last fiscal year (Bloom and van Reenan, 2010). This is a count variable based on 6 WBES survey measures asking respondents about implementing the practice: 1) Whether the firm has internationally recognized quality certification. 2) Whether the firm has an annual financial statement

reviewed by an external auditor. 3) Whether the firm has used technology licensed from foreign companies. 4) Whether the firm has a website for business related activities. 5) Whether the firm uses E-mail to communicate with clients or suppliers, 6) Whether the firm has provided formal training to full-time employees. All items are coded 1 if the firm reports the practice and 0 otherwise, so *MAN* ranges from 0 to 6. The second construct, Financial Access (*FIN*), refers to the firm's sources of capital, using four items: 1) Whether the firm has a checking or savings account; 2) Whether the firm has an overdraft facility; 3) Whether the firm has a line of credit or a loan from a financial institution; 4) Whether the firm has applied for any loans or lines of credit. These are coded 1 if the firm reports the practice, to construct the *FIN* scale, a count ranging from 1 to 4. Thus, our management and finance variables are indices constructed from 10 variables, which mitigates possible biases from using individual measures (DeVellis & Thorpe, 2021).

We report the complete variable definitions and sources in Table 1.

[Table 1 about here]

Specification and Hypothesis Testing

We estimate our hypotheses using the following full specifications:

$$(1) \text{ Export intensity} = a_1 + a_2 \text{ MAN} + a_3 \text{ FIN} + a_4 \text{ GAF} + a_5 \text{ ECONFREE} + a_6$$

$$\text{ECONFREE} * \text{GAF} + a_7 \text{ Controls} + \text{time, region and industry fixed effects}$$

$$(2) \text{ Export intensity} = b_1 + b_2 \text{ MAN} + b_3 \text{ FIN} + b_4 \text{ GAF} + b_5 \text{ POLITY} + b_6 \text{ POLITY} *$$

$$\text{GAF} + b_7 \text{ Controls} + \text{time, region and industry fixed effects}$$

$$(3) \text{ Export intensity} = c_1 + c_2 \text{ MAN} + c_3 \text{ FIN} + c_4 \text{ GAF} + c_5 \text{ ECONFREE} + c_6$$

$$\text{ECONFREE} * \text{GAF} + c_7 \text{ POLITY} + c_8 \text{ POLITY} * \text{GAF} + c_9 \text{ Controls} + \text{time, region and industry fixed effects}$$

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Our hypotheses are tested by the sign and significance of estimated coefficients as follows:
Hypothesis 1 implies a_4 and b_4 (the coefficients on GAF) >0 , Hypothesis 2 implies $a_6>0$ and
Hypothesis 3 implies $b_6<0$.⁴

Because our dependent variable export intensity (*EXPORT*) has a range of 0–100% and is therefore censored at both 0 and 100, we follow McCormick & Somaya (2020) in using Tobit regressions accounting for both left- and right-censored data. We also note that since our zero values do not represent missing values, Tobit estimation is appropriate (Amore & Murtinu, 2021). Although we base our main results on these Tobit estimates, we also used multilevel modelling to validate our findings. Multilevel analysis can be used for data analysis with a nested structure to take account of the lack of independence among observations (Arregle, Hébert & Beamish, 2006). Datasets with a nesting structure such as firms nested within countries contain variability at each level of nesting. The purpose of the multilevel analysis is to explain such variability. Our dataset contains variables at two levels, firm and country, but nevertheless the bulk of the variation is at the firm level.

Descriptive Statistics

Table 2 reports the mean, standard deviation and correlation coefficients for our dependent, independent and control variables. The Polity and Economic Freedom measures show some overlap ($r = .4120$), so we test our hypotheses using both separate equations (1) and (2). We include both in equation (3) to check for robustness despite the potential collinearity. As expected, the Economic Freedom and Doing Business measures are highly correlated ($r = .7536$), and we use the latter only as a robustness test. The idea that the internal BG market for labour and capital may benefit affiliates finds support in the data: affiliate level resources and capabilities indicators MAN ($r = .2090$) and FIN ($r = .0888$) correlate with BG affiliation,

⁴ Recall that POLITY takes on negative values for autocracies and positive values for democracies. Thus, a negative sign on the relevant coefficient implies that the impact on exporting of autocracies (democracies) is higher (lower) as per H3.

GAF, with the MAN correlation being stronger. Despite these correlations, the VIF for the estimation sample is well within acceptable limits, at 1.31.

[Table 2 about here]

RESULTS

We report the results from estimating our specifications of the export equations for all firms in the sample in Table 3. Column (1) includes only the control variables, to which column (2) adds GAF, permitting a test of Hypothesis 1. Economic Freedom is added in column (3) and Polity in column (5) to show the base equation with the two direct institutional effects. Column (4) estimates the full equation (1), allowing a test of Hypothesis (2) and column (6) estimates the full equation (2) so that Hypothesis (3) can be tested. We also test the latter two hypotheses in column (8); the findings concerning the hypotheses are consistent between the specifications. We include a three-way interaction between GAF and the two institutional variables in column (9), forming the basis for our comparative institutional analysis.

The first column of Table 3 confirms that the exporting intensity of the sample firms depends on managerial capabilities (+), access to finance (+), size (+), and age (-). These results are consistent with those reported in the exporting literature. Column (2) adds the group affiliation variable (GAF), which is positive and statistically significant ($p = .01$). The positive *GAF* coefficient in the export equations suggests a residual benefit of BG affiliation that brings access to CFR coordination capabilities, including access to both complementary economic resources and to political networks that contribute to exporting. This provides strong evidence supporting our first hypothesis. We also note that the positive GAF effect persists when we include measures of institutional quality (Columns 3 and 5).

[Table 3 about here]

Hypothesis 2 concerns the evolution of BG export performance in contexts where market institutions are stronger. We argued that the BG CFR coordination capabilities are

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intangible and difficult to imitate and could continue to be leveraged as market-supporting institutions are stronger. Thus, H2 proposes that the export advantage of BG affiliation will increase with stronger market institutions: that a more robust market-supporting environment, measured by the Economic Freedom Index, will enhance the positive relationship between BG affiliation and export intensity. We test this hypothesis in Column 4 of Table 3 using the interaction between GAF and Economic Freedom. As can be seen, the relevant coefficient is positive and statistically significant ($p<.01$). The result provides support for our second hypothesis. We illustrate the relationship in Figure 2 where BGs affiliates' export advantage increases in countries with stronger market-supporting institutions. Although the exporting performance of non-affiliates (SAFs, stand alone firms) and affiliates (GAFs) increases with the quality of market-supporting institutions, the latter displays a more marked improvement.

[Figure 2 about here]

Our third hypothesis proposes that the export advantage of BG affiliation is stronger in autocracies but is weaker in democracies. We test hypothesis 3 in Column 6 of Table 3 using the interaction of GAF and POLITY. As predicted, this interaction is negative and statistically significant ($p<.01$). Recalling that POLITY takes on negative values for autocracies and positive values for democracies, the negative sign on the interaction term indicates a positive effect on exporting in autocracies, supporting our third hypothesis. We see this in Figure 3, where the predictive margins are plotted. Here we see that the BGs' export advantage is stronger in more autocratic countries, and weaker as they become more democratic. Indeed, for the most democratic countries, the BG export advantage is virtually eliminated. We return to the implications in the discussion below. Finally, we note that Hypotheses 2 and 3 are also supported in the more demanding specification of column (8) when we include both institutional measures together.

[Figure 3 about here]

In the Appendix, we report additional tests undertaken to explore the robustness of our results. We provide a complete set of results using multi-level modelling (Table A2). The results concerning our hypotheses are unchanged except for H3 in column (6), for which the support is slightly weaker using this estimation method. However, the coefficient on the interaction between POLITY and GAF is still negative and there is strong support for hypothesis 3 in column (8). In unreported regressions, available from the authors on request, we also estimated the model using the Doing Business Index instead of the Economic Freedom Index. We controlled for country-specific effects by including national GDP per capita in the sample year. None of these tests challenge the results reported above⁵.

DISCUSSION

We organized our study on the theoretical premise that emerging market BGs can be understood, at least partly, as an organizational response to the economic and political coordination failures that are a feature of developing economies. We argue that BGs develop CFR capabilities that recognize new opportunities and coordinate the provision of complementary assets to affiliates while at the same time coordinating political relations with the state. We utilize the distinction between economic and political efficiency to analyse and evaluate the impact of cross-country institutional differences in market and political institutions. We contribute to developing a comparative institutional framework for understanding BG affiliate export performance and testing it using data drawn from multiple and often understudied jurisdictions. Previous applications of the view that BGs can be understood as responses to coordination failures have been context-specific (Morck & Nakamura, 2007; Manakandian & Ramachandran, 2015). Our approach also encompasses

⁵ Our regressions are undertaken on the full sample. However, to explore possible effects of sample composition we also estimated the basic equations of Table 3 for manufacturing firms only; excluding the smallest firms from the sample (less than ten employees); and using only some elements of the Economic Freedom Index (property rights protection). Since none of these robustness tests challenge our conclusions, we have not reported them here but the results are available from the authors on request.

and links market and non-market strategies by emphasizing both economic and political efficiency, and thus permits a broader and more contextualized understanding of BG advantages in emerging markets, specifically as regards exporting performance.

We organize our discussion around two significant themes: CFR capabilities and comparative institutional configurations.

CFR capabilities and the BG

CFR capabilities have both economic and political aspects. The economic CFR capabilities include the ability of the BG to create and recombine assets to overcome coordination failures through horizontal and vertical diversification. In this sense, economic CFR capabilities are an element of market strategies. Thus, we understand BGs not as randomly diversified organizations but as purpose-built for the context in which they operate. At the same time, the limited ability of the state to address coordination failures in emerging markets may enable potentially mutually beneficial relations between the state and the BG. BGs that develop political capabilities that organize political relations and political networks to create value for both the state and the BGs are more likely to be successful. This cooperative approach to understanding BG political strategies has not been fully explored and may be contrasted with current approaches to nonmarket strategy that do not view the state as a collaborator (Mellahi, Frynas, Sun & Siegel, 2016; Sun, Doh, Rajwani & Siegel, 2021). Our approach is more in the spirit of the political CSR literature (Scherer & Palazzo, 2011; Scherer, Rasche, Palazzo & Spicer, 2016) which points to more collaborative relations between firms and states (and other non-state actors).

While some argue that BG advantages arising from domestic political ties are not transferable across borders, our results suggest that domestic political ties may facilitate early internationalization in certain contexts. The CFR capabilities approach also suggests that

political capabilities are linked to economic capabilities, and it remains unclear whether this combined capability can be transferred across borders.

The role of institutional configurations

To address the issue of institutional complexity and institutional configurations (Haxhi & Aguilera, 2017), we consider jointly the moderating effects on affiliate export performance of market-supporting institutions (economic freedom) and political systems. We generate institutional configurations based on these results. Drawing on our 3-way interaction estimates in Column (9) of Table 3, we report the results of a Margins 3-D plot in Figure 4 with Economic Freedom on the x-axis, Polity on the y-axis, and export intensity on the third vertical dimension (z-axis). These results indicate that the BG affiliate export advantage is highest in autocracies that adopt market-supporting policies (high levels of economic freedom) and lowest in autocracies that do not adopt such policies. The results also confirm that the BG affiliate export advantage generally dissipates as countries become more democratic but slightly less so in countries adopting liberal, market-oriented policies.

These results lead us to propose an institutional configuration approach summarized in Figure 5 which presents a stylized summary of our results in four quadrants.

-Figure 5 about here-

Our results suggest that the BG export advantage is most substantial in relatively strong autocracies where market-supporting institutions are also strong. This quadrant reflects the arguments above that BGs can adapt to, and benefit from, liberalized markets, while developing strong reciprocal relations between the state and BGs that benefit both (Commander & Estrin, 2022). Although the notion of reciprocity in autocracies may be counter-intuitive, recent research (Maier, 2021) has examined political CSR within a broader political-institutional context, including autocracies, noting that “deliberation involving a multitude of state and non-state actors may thus take place in an autocracy” (p. 488).

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Therefore, we characterize the top left quadrant as *Reciprocal Internationalization*. BG affiliates strengthen their relative export performance through enhanced economic and political capabilities. However, while both may contribute to export performance, the importance of each may differ across countries and may depend on the goals of the autocratic regime.

In contrast, we identify the lower left-hand quadrant (weak market supporting institutions; autocracy) as *Political Internationalization*. Although BG affiliates outperform non-affiliates in exporting at the average level of market liberalization in autocracies, they do not have an advantage, even in autocracies, when market liberalization is weak. Thus, we suggest that any group-level capabilities are more likely to be political, leading to the possibility of entrenchment and possible rent-sharing with the autocratic government. At lower levels of market liberalization, this may result in BGs favouring the domestic market over international markets because they lack the relevant economic capabilities to compete abroad successfully. In cases where internationalization occurs, it will support autocratic state political or geopolitical goals.

The autocratic counties provide extreme examples of export performance differences among BG affiliates. However, we also observe other, less extreme differences, among democratic countries. Thus, in the bottom right quadrant, we consider the case of weak market-supporting institutions with a democratic political system. The export performance of affiliates in this quadrant is weaker than that of democracies with stronger market-supporting institutions. Affiliate performance in this quadrant is weakened by institutions that limit the development of both political and economic capabilities. A democratic political environment may be generally unfavourable to BGs, and weak market institutions limit their ability to expand. However, weak market institutions also make it more difficult for non-affiliates to compete, and BGs may maintain a limited export advantage because of the weakness of non-

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3 affiliated firms. Hence on balance, the relative position of BGs is weakened but possibly not
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5 in all cases eliminated, so some BG affiliates may continue to have an export advantage but
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7 others may consider exit. We refer to countries with this institutional configuration as ***Weak***
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9 ***Internationalization***. For example, in the post-apartheid democratic era in South Africa many
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11 business groups, such as Anglo-American, Old Mutual and South African Breweries,
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13 engaged in capital flight, shifting their public listings to overseas stock markets.
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15 Subsequently, black oligarchical business groups have filled the domestic vacuum, building
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17 capabilities in particular domestic sectors (Goldstein, 2010).
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21 The distinction between the two lower quadrants emphasizes that in countries with
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23 weak market-supporting institutions, the outcomes that most affect BGs rest on the absence
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25 of democracy.
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28 The top left-hand quadrant, ***Contingent Internationalization***, is one in which the
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30 performance of non-affiliated firms is more likely to threaten BGs because of access to
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32 liberalized markets. Still, the BG advantage is not eliminated and is greater than that in the
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34 lower quadrant. The BG export advantage may be limited to a smaller number of BGs,
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36 perhaps restricted to specific industries. Although affiliate performance is likely weakened as
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38 political capabilities become less valuable, their economic capabilities may still be relevant if
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40 they can be developed and leveraged. Thus, at least some BGs can take advantage of market
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42 opportunities to deploy their economic capabilities to benefit affiliated firms, but this will
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44 depend on their relative ability to do so. In this case, if BG affiliation continues to bring
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46 benefits, it will reflect the strong economic capabilities of the BG. For example, Korean
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48 chaebol flourished under an autocratic regime between the 1960s and the 1980s. As the
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50 Korean political regime gradually liberalized, the Asian financial crisis resulted in the
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52 bankruptcy and dissolution of 10 of the largest 30 chaebols (Chang, 2006). Subsequent
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54 governments have sought to limit Chaebol dominance but some Korean Chaebol continue to
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prosper internationally while others are breaking-up under the pressure of domestic constraints and international competition (Schober, 2021)

The *Reciprocal Internationalization* quadrant, where we find the strongest evidence of BG export advantage, emerges from the premise that coordination failures are common in emerging markets, and cannot be effectively resolved by either decentralized markets or governments alone (Hoff, 2000). Reciprocal state-firm relationships can therefore be advantageous (Lazzarini, 2015). One early expression of the idea that firms and government engage in a long-run relationship is described as “embedded autonomy” (Evans, 1995), whereby the government retains its autonomy to pursue the national interest and firms seek to develop their competitive capabilities (Puente & Schneider, 2020). Thus, state-business relations represent subtle forms of mutualism and reciprocity. For instance, when Malaysian president Mahathir sought to develop stronger ‘south-south’ relationships with members of the Commonwealth, he embarked upon a series of diplomatic and trade missions. His delegation included prominent executives of YTL, a domestic BG that, through Mahathir’s sponsorship, received a number contracts to build power stations in South Africa and Zimbabwe. Subsequently, YTL entered developed markets building infrastructure utilities in the UK and Australia and luxury hotels in France and Japan (Dieleman, 2021).

An alternative perspective suggests that any collaboration between an autocratic state and its firms is designed to support the geopolitical and security goals of the state (Gertz & Evers, 2020), which we refer to as *Political Internationalization*. In this case, exports (and FDI) are encouraged to promote the state's geopolitical goals (Babic, 2023; Li, Newenham-Kahindi, Shapiro & Chen, 2013). One example is Russia, where it is argued that the state supports exporting by energy companies such as Gazprom as a way to project power across borders (Abdelal, 2013). Although reciprocal relations between firms and governments may be associated with state-supported internationalization, they may also involve rent-seeking

and domestic entrenchment, in which case the international activities of BGs may be curtailed in favor of dominating the domestic market. Our analysis does not permit us to differentiate between these views or fully evaluate their differences, and further research is warranted.

It is widely argued in both the general institutional literature (Ahmadjian, 2016; Haxhi and Agguilera, 2017; Kostova et al, 2020) and the more specific BG literature (Carney et al, 2018) that corporate performance will be highly sensitive to institutional context. Our analysis has sought to extend the literature using the specific example of export performance of BG affiliates from developing countries. We define institutional context by distinguishing market supporting- and political institutions and identify four configurations associated with different export performance.

Limitations

Our multi-country, cross-sectional methodology represents an empirical contribution to the analysis of BG performance across multiple and often understudied jurisdictions. However, there is a trade-off in information between analyzing BGs across multiple jurisdictions and in-depth research on a single or small number of jurisdictions. While our approach has the advantage of providing a consistent definition of BG affiliation across countries, it cannot capture the heterogeneity among business groups observed across various countries. We have sacrificed details regarding specific BG characteristics to facilitate a broader comparative institutional analysis. Another limitation of our data is that, while the effects which we are analyzing operate at the level of the business group, our data is at the level of the affiliates. We therefore infer the existence of group-level capabilities that can be shared with an affiliate as a residual in an export equation which controls for all the standard factors analyzed in the literature. Future work might seek to approach the issue using data at the group level.

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Our analysis does not identify institutional change over time and is therefore not dynamic. Hence, we are primarily exploring the impact of exporting from variations in institutional quality across countries rather than from country-specific variations over time. Future work might consider longitudinal analysis within a country or perhaps within groups of countries differentiated along the lines of Figure 5.

Conclusions

We advance the literature on BGs by proposing that there is an export performance advantage associated with BG affiliation resulting from CFR capabilities whereby the diversified BG as an organizational form emerges to fill coordination failures in emerging markets. By focusing on resolving coordination failures in emerging markets, we offer an understanding of the diversified BG as a potential development agent. In this view, BGs can develop the capability to identify opportunities, share information and coordinate the provision of complementary assets required for export-led development while coordinating cooperative relations with the state to advance their mutual interests. The distinction between economic and political capabilities, extended to a comparative institutional context, allows a more finely grained understanding of how the coordination capability and export advantages of BGs are conditional on institutional arrangements and contextual contingencies. Our results suggest that while BGs can adapt to improved market-supporting institutions, they can be constrained by more democratic political systems. Thus, the BG export advantage is strongest in autocracies that adopt market liberalization policies. We find no evidence that all BGs will wither away as market institutions strengthen, but they are constrained in more democratic environments. Our analysis and results therefore help resolve the debates and inconclusive evidence regarding BG affiliate performance and persistence (Carney et al, 2011; Carney et al, 2018; Holmes et al, 2018) by focusing on the importance of institutional context.

A key managerial implication of our analysis is the relevance of institutional differences in evaluating the potential performance and competitive strategies of BG affiliates in emerging economies. BG managers should be alert to these differences, and our proposed configurations may help in this regard. At the same time, our results point to the importance of mutually supportive business-state relations. For managers of MNEs proposing to enter these markets, our analysis can help managers refine their competitive strategies in the face of emerging economy business group affiliates. Further analysis of the evolution of BGs might consider changes over time, ultimately a dynamic story that needs to be better understood to explain the evolution of BGs and their role in the economic development process identified in this paper.

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Zheng, W., Singh, K., & Mitchell, W. (2015), Buffering and enabling: The impact of interlocking political ties on firm survival and sales growth. *Strategic Management Journal*, 36(11), 1615-1636.

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Table 1 Variable Definitions and Sources

Variable	Definition	Source
EXPORT	Sales exported directly as percentage of total sales.	WBES https://www.enterprisesurveys.org/en/enterprisesurveys
AGE	Year firm began operation to year of survey conducted (log)	WBES
SIZE	Number of permanent workers (log)	WBES
GAF	Dummy variable: whether firms are part of a larger enterprise	WBES
ECONFREE	Economic freedom index (total score lagged one year)	Index of Economic Freedom https://www.heritage.org/index/explore
DB	Doing Business Distance to frontier Score (lagged one year)	World Bank Doing Business https://www.doingbusiness.org/en/doingbusiness
POLITY	Combined POLITY score (lagged one year)	POLITY2 (POLITY IV) https://competitivite.ferdi.fr/en/indicators/polity2-polity-iv
MAN	Sum of six binary items reported regarding management practices: 1) Whether the firm has internationally recognized quality certification. 2) Whether the firm has an annual financial statement reviewed by an external auditor. 3) Whether the firm has used technology licensed from foreign companies. 4) Whether the firm has a website for business related activities. 5) Whether the firm uses E-mail to communicate with clients or suppliers, 6) Whether the firm has provided formal training to full-time employees. All items are coded 1 if the item applies and 0 otherwise. The sum of these items ranges from 0 to 6.	Calculated from WBES
FIN	Sum of four binary items reported regarding financial access: 1) Whether the firm has a checking or savings account; 2) Whether the firm has an overdraft facility; 3) Whether the firm has a line of credit or a loan from a financial institution; 4) Whether the firm has applied for any loans or lines of credit. All items are coded 1 if the item applies and 0 otherwise. The sum of these items ranges from 0 to 4.	Calculated from WBES
Industry	Dummy variable covering 16 sectors as defined in WBES	WBES
Region	Dummy variable indicated firms from four regions, Asia, Europe, Africa, and Latin America, as defined by the World Bank	WBES

Table 2: Descriptive Statistics and Correlation Coefficients

Variable	Mean	Std. Dev.	Min	Max	EXPORT	AGE	SIZE	GAF	ECONFREE	POLITY	DB	MAN	FIN
EXPORT	7.548	22.061	0	100	1								
AGE	2.58	0.796	0	5.347	0.0608*	1							
SIZE	3.343	1.414	0	10.539	0.2969*	0.2712*	1						
GAF	0.176	0.381	0	1	0.0905*	0.0792*	0.2195*	1					
ECONFREE	57.72	7.058	1	90.1	0.0555*	0.1103*	0.0268*	0.0478*	1				
POLITY	4.646	5.283	-10	10	0.0334*	0.1366*	0.0054	-0.0136*	0.3203*	1			
DB	57.184	9.408	30.462	81.546	0.0685*	0.0815*	0.0658*	0.0059	0.7508*	0.1421*	1		
MAN	2.59	1.673	0	6	0.2509*	0.1905*	0.5716*	0.2090*	0.0673*	0.1077*	0.1329*	1	
FIN	1.91	1.219	0	4	0.1100*	0.1585*	0.3257*	0.0888*	0.1455*	0.1792*	0.1860*	0.4064*	1

*p <0.05

Table 3. Tobit Estimates: Main Model*

VARIABLES	EXPORT	EXPORT	EXPORT	EXPORT	EXPORT	EXPORT	EXPORT	EXPORT	EXPORT
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
MAN	15.62*** (0.40)	15.18*** (0.40)	14.82*** (0.40)	14.84*** (0.40)	15.06*** (0.40)	15.07*** (0.40)	14.78*** (0.40)	14.84*** (0.40)	14.88*** (0.40)
FIN	4.49*** (0.44)	4.27*** (0.44)	4.03*** (0.44)	4.05*** (0.44)	4.12*** (0.44)	4.11*** (0.44)	3.96*** (0.44)	3.98*** (0.44)	3.71*** (0.44)
AGE	-0.09*** (0.03)	-0.10*** (0.03)	-0.09*** (0.03)	-0.09*** (0.03)	-0.11*** (0.03)	-0.11*** (0.03)	-0.10*** (0.03)	-0.10*** (0.03)	-0.10*** (0.03)
SIZE	16.12*** (0.42)	15.64*** (0.42)	15.83*** (0.42)	15.84*** (0.42)	15.82*** (0.42)	15.87*** (0.42)	15.92*** (0.42)	16.00*** (0.42)	16.11*** (0.42)
GAF		10.28*** (1.2)	9.75*** (1.2)	-16.44* (9.68)	10.27*** (1.2)	16.33*** (1.66)	9.81*** (1.2)	-26.15*** (9.78)	-145.38*** (14.99)
ECONFREE			0.81*** (0.08)	0.70*** (0.09)			0.74*** (0.08)	0.52*** (0.09)	-0.58*** (0.18)
GAF*ECONFREE				0.44*** (0.16)				0.72*** (0.17)	2.87*** (0.26)
POLITY					0.73*** (0.12)	0.97*** (0.13)	0.44*** (0.12)	0.76*** (0.13)	-7.55*** (1.15)
GAF*POLITY						-1.17*** (0.22)		-1.28*** (0.23)	18.32*** (1.91)
ECONFREE* POLITY									0.15*** (0.02)
GAF*ECONFREE* POLITY									-0.35*** (0.03)
Constant	-198.66*** (6.07)	-196.90*** (6.12)	-247.29*** (8.08)	-240.78*** (8.41)	-193.43*** (6.13)	-194.70*** (6.14)	-240.62*** (8.28)	-228.91*** (8.66)	-158.36*** (13.24)
Sigma Constant	70.99*** (0.62)	70.79*** (0.63)	70.56*** (0.62)	70.53*** (0.62)	70.71*** (0.62)	70.67*** (0.62)	70.53*** (0.62)	70.45*** (0.62)	70.65*** (0.62)
Observations	49,694	48,701	48,292	48,292	48,645	48,645	48,292	48,292	48,292
Year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Industry FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Region FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Left Censored	39183	38317	37919	37919	38262	38262	37919	37919	37919
Right Censored	1415	1397	1397	1397	1397	1397	1397	1397	1397
Uncensored	9096	8987	8976	8976	8986	8986	8976	8976	8976

*Polity and Economic Freedom Variables are lagged one year.
Standard errors in parentheses *** p<0.01, ** p<0.05, * p<0.1

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Figure 1: The Model

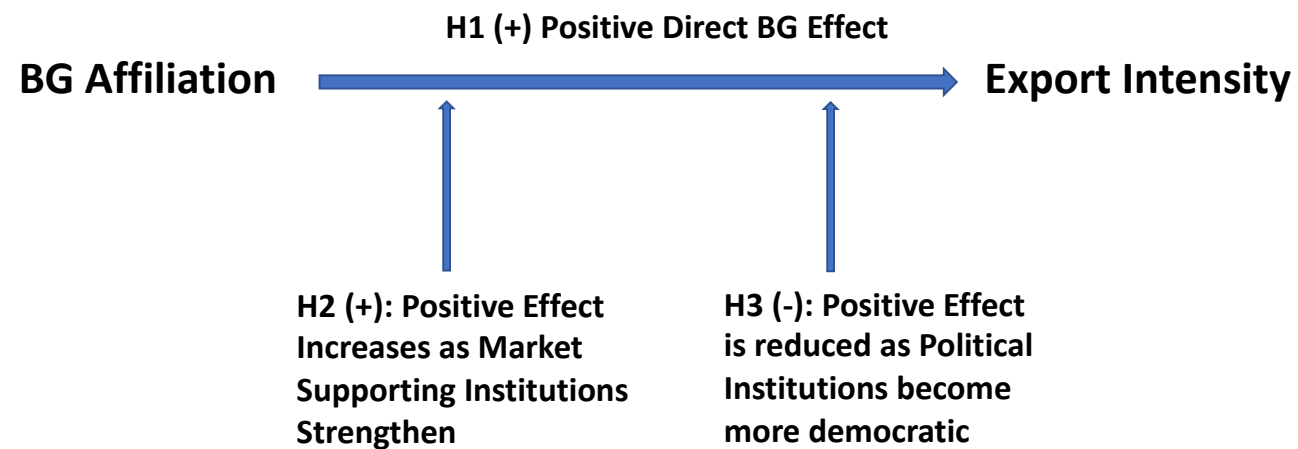
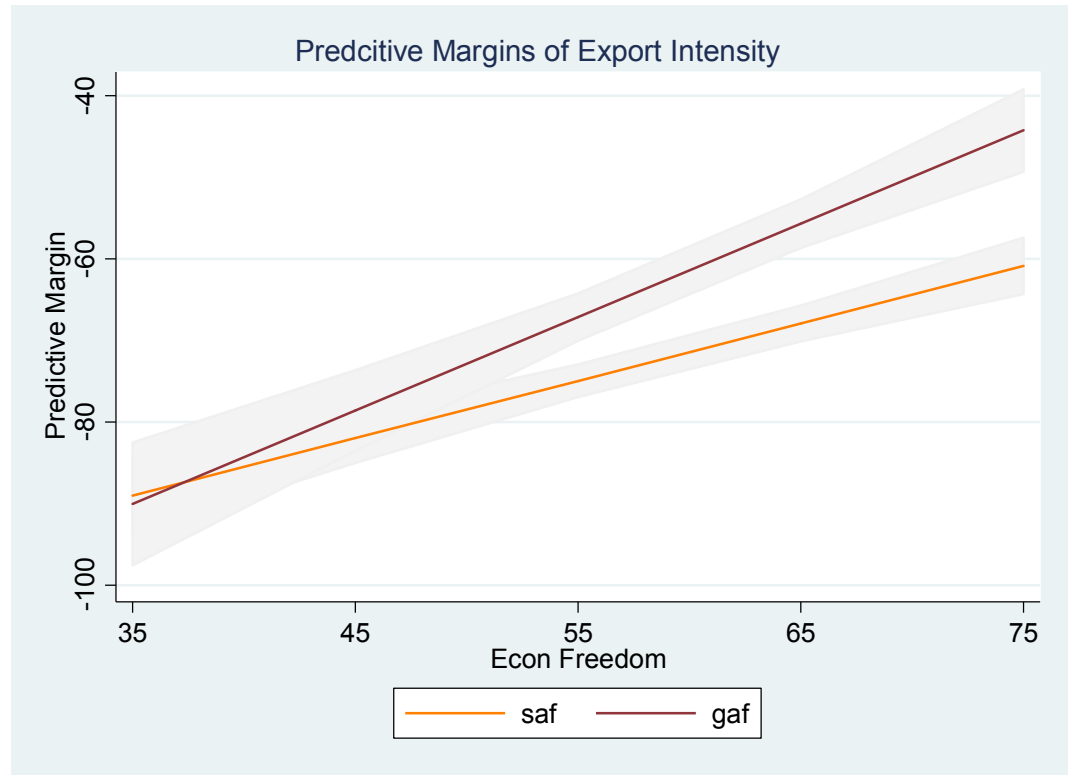
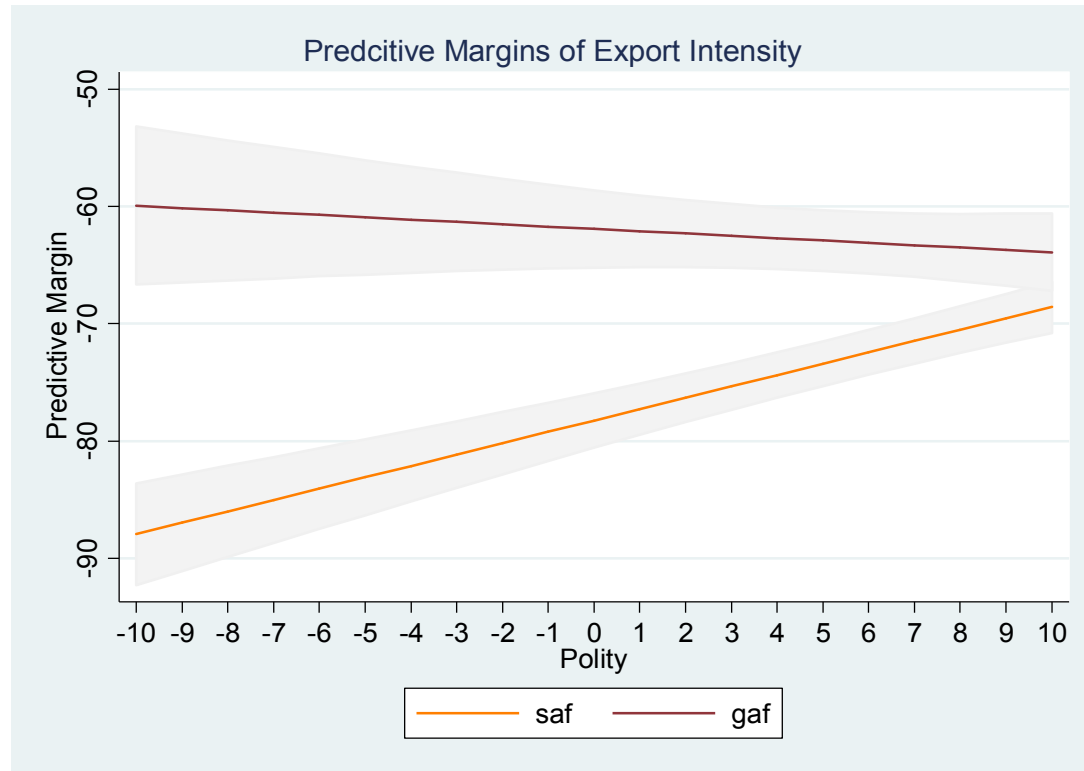


Figure 2: Predictive Margins on Exporting: GAF and Economic Freedom Index



Note: saf refers to unaffiliated (stand-alone) firms; gaf to group-affiliated firms.

Figure 3: Predictive Margins on Exporting: GAF and POLITY



Note: saf refers to unaffiliated (stand-alone) firms; gaf to group-affiliated firms.

Figure 4: Three-Way Interaction Effects

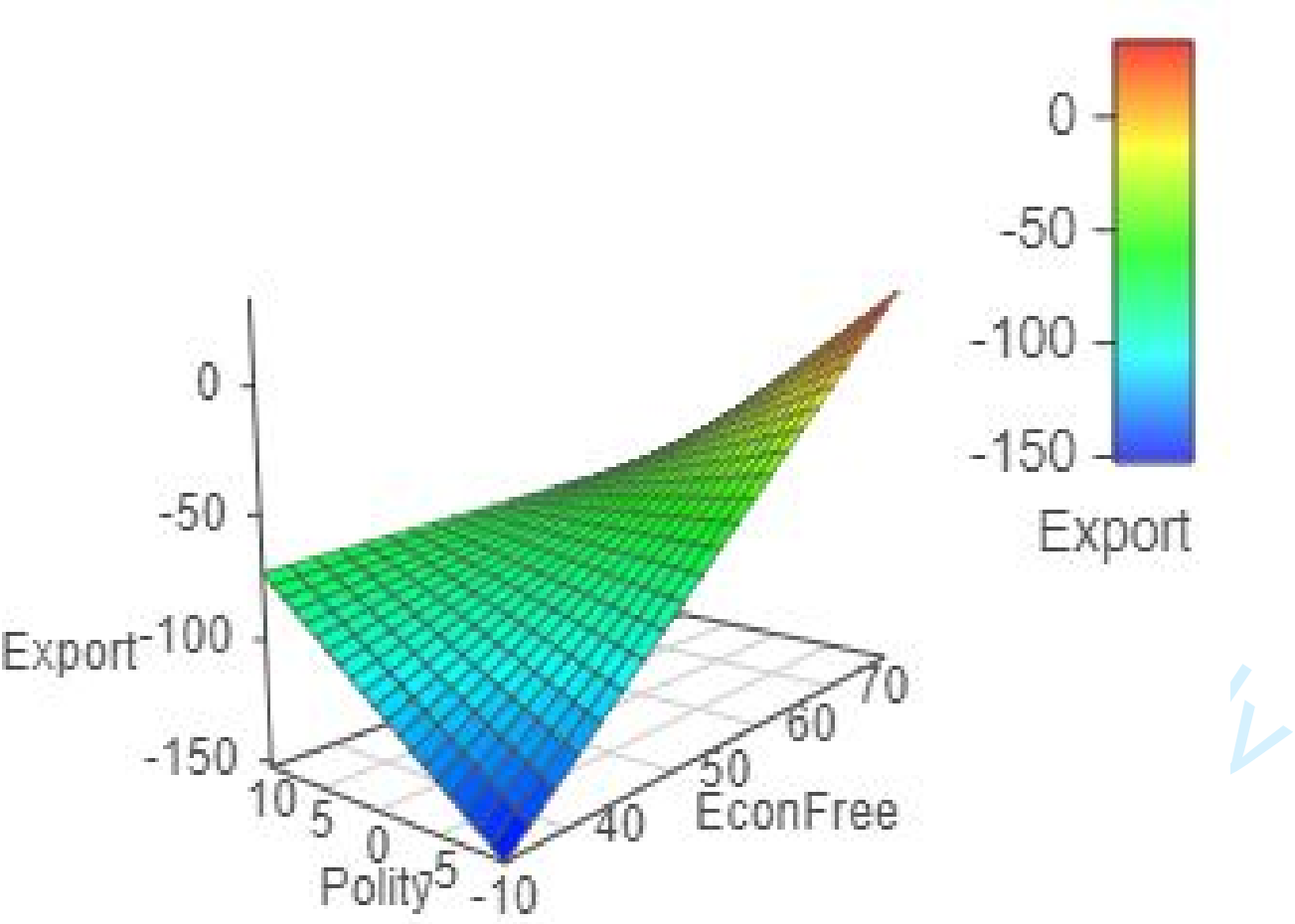


Figure 5: Institutional Configurations and the International Performance of Business Groups in Developing Economies

Stronger Market Supporting Institutions	Reciprocal Internationalization - BGs align with development goals of the state and adapt to institutional change: embedded autonomy - affiliate performance benefits from state support, and access to complementary assets - non-affiliate performance limited by lack of political capabilities	Contingent Internationalization - affiliate performance weakened as political capabilities become less valuable, but economic capabilities may still be relevant if they can be leveraged - non-affiliate performance improves and challenges BG affiliates - only BGs that learn to leverage capabilities will survive
	Political Internationalization - BG reliance on political links favors internal focus and mutual rent seeking with the state - internationalization possible but for political and geopolitical goals - BG relative performance improved by poor performance of non-affiliates	Weak Internationalization - BGs threatened by both limited political access and weak market institutions - affiliate performance deteriorates as political process weakens value of political links - non-affiliate performance also not improving so relative position may remain stable and limited internationalization possible
	- Autocracy	Democracy +

Appendix

Table A1: Sampled countries and years

Country	No. of Obs	Sample Year		Country	No. of Obs	Sample Year	
Angola	197	2006	2010	Malaysia	398	2015	
Argentina	1,011	2006	2010	Mexico	1,404	2006	2010
Azerbaijan	134	2009	2013	Mongolia	173	2009	2013
Bangladesh	926	2013		Morocco	134	2013	
Belarus	121	2008	2013	Namibia	128	2006	2014
Botswana	90	2006	2010	Nigeria	116	2007	2014
Brazil	1,043	2009		Pakistan	926	2007	2013
Bulgaria	524	2007	2009 2013	Peru	781	2006	2010
Cameroon	68	2009		Philippines	907	2009	2015
Chile	1,062	2006	2010	Poland	193	2009	2013
China	1,320	2012		Romania	207	2009	2013
Colombia	925	2006	2010	Russia	1,428	2009	2012
Czech Republic	141	2009	2013	Rwanda	32	2006	
Egypt	765	2013		Senegal	233	2007	2014
Estonia	100	2009	2013	Slovakia	112	2009	2013
Ethiopia	400	2011	2015	Slovenia	112	2009	2013
Georgia	147	2008	2013	Sri Lanka	193	2011	
Ghana	302	2007	2013	Tanzania	311	2006	2013
Hungary	114	2009	2013	Thailand	404	2016	
India	5,814	2014		Tunisia	246	2013	
Indonesia	1,257	2009	2015	Turkey	1,394	2008	2013
Israel	164	2013		Uganda	282	2006	2013
Jordan	210	2013		Ukraine	747	2008	2013
Kazakhstan	256	2009	2013	Venezuela	54	2010	
Kenya	240	2013		Vietnam	1,025	2009	2015
Latvia	103	2009	2013	Yemen	187	2010	2013
Lebanon	147	2013					
Lithuania	125	2009	2013				

Note: "No. of Obs" refers to total observations from all sample year

Table A2. Multilevel Modelling Estimation

VARIABLES	EXPORT	EXPORT	EXPORT	EXPORT	EXPORT	EXPORT	EXPORT	EXPORT
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
MAN	2.18*** (0.08)	2.14*** (0.08)	2.14*** (0.08)	2.14*** (0.08)	2.14*** (0.08)	2.14*** (0.08)	2.14*** (0.08)	2.13*** (0.08)
FIN	-0.20** (0.10)	-0.21** (0.10)	-0.21** (0.10)	-0.20** (0.10)	-0.21** (0.10)	-0.21** (0.10)	-0.21** (0.10)	-0.20** (0.10)
AGE	-0.08*** (0.01)	-0.08*** (0.01)	-0.08*** (0.01)	-0.08*** (0.01)	-0.08*** (0.01)	-0.08*** (0.01)	-0.08*** (0.01)	-0.08*** (0.01)
SIZE	4.09*** (0.09)	4.07*** (0.09)	4.08*** (0.09)	4.08*** (0.09)	4.07*** (0.09)	4.07*** (0.09)	4.08*** (0.09)	4.09*** (0.09)
GAF		0.89*** (0.30)	0.87*** (0.30)	-15.63*** (2.43)	0.89*** (0.30)	1.28* (0.41)	0.87*** (0.30)	-17.17*** (2.47)
ECONFREE			0.37*** (0.08)	0.32*** (0.08)			0.36*** (0.08)	0.31*** (0.08)
GAF*ECONFREE				0.28*** (0.041)				0.33*** (0.04)
POLITY					0.10 (0.10)	0.11 (0.10)	0.07 (0.10)	0.10 (0.10)
GAF*POLITY						-0.08 (0.06)		-0.21*** (0.06)
Observations	49,694	48,701	48,292	48,292	48,645	48,645	48,292	48,292
Number of groups	57	57	56	56	56	56	56	56

Standard errors in parentheses *** p<0.01, ** p<0.05, * p<0.1