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The Corporate Governance of Business Groups: What We Know and What Lies Ahead

Ruth V. Aguilera  
Northeastern University  
r.aguilera@northeastern.edu

Ryan Federo  
Universitat de les Illes Balears  
ryan.federo@uib.es

Bartolome Pascual-Fuster  
Universitat de les Illes Balears  
tomeu.pascual@uib.es

Rafel Crespi-Cladera  
Universitat de les Illes Balears  
rafel.crespi@uib.es

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The Corporate Governance of Business Groups: What We Know and What Lies Ahead

Ruth V. Aguilera¹, Ryan Federo², Bartolome Pascual-Fuster² and Rafel Crespi-Cladera²

¹Northeastern University, USA; r.aguilera@northeastern.edu
²Universitat de les Illes Balears, Spain; ryan.federo@uib.es, tomeu.pascual@uib.es, rafel.crespi@uib.es

ABSTRACT

In this monograph, we discuss the corporate governance of business groups (BGs). To this end, we broadly define both BGs and corporate governance to provide an interdisciplinary conceptualization. We begin by reviewing the key governance theories that scholars have applied to BGs thus far. We then examine the different corporate governance dimensions (ownership, boards of directors, top-management teams, external control mechanisms, and sustainability-related issues) across the different types of BGs. As a result, we identify what we know about these organizations’ corporate governance mechanisms. We close with a detailed discussion of fruitful areas for future research on BG corporate governance based on the gaps we identify.
Introduction

What do India’s Tata, Japan’s Mitsubishi, South Korea’s Hyundai, Spain’s Banco Bilbao Vizcaya Argentaria (BBVA), and Sweden’s Handelsbanken have in common? All of these organizations are what we refer to as business groups (BGs). BGs are ubiquitous around the world, controlling the economic development of many developed and emerging economies (Colpan et al., 2010; Morck et al., 2005). Some BGs are present around the globe though often referred to in different ways depending on the country or region: Chinese qiye jituan (e.g., China National Petroleum Corporation, Sinopec, and State Grid); Indian business houses (e.g., Aditya Birla Group, Mahindra Group, and Muthoot Group); Japanese zaibatsu and its modern successor, the keiretsu (e.g., DKB Group, Mitsui, and Toyota); Latin American grupos economicos (e.g., Ardila Lulle, Petrobras, and Techint); South Korean chaebol (e.g., LG, Samsung and SK Group); Spanish grupos (e.g., Banco Santander, Endesa, and Mondragón); Taiwanese guanxiqiye (e.g., Formosa Plastics, Tainan Textile, and Weiquan Foods); and Turkish family holdings (e.g., Çukurova, Koç Group, and Sabanci), among others. BGs tend to have connotations of weak corporate governance structures, mostly due to tunneling practices and strategic over-diversification, as well as being
very large and opaque because they typically combine publicly-traded and non-traded firms and adopt complex ownership structures. They have existed as an organizational form since industrialization and continue to be key, particularly in emerging markets where they potentially fill some essential institutional vacuums.

In this review, we first summarize how the existing body of literature has defined and studied BGs. We then discuss the arguments for why BGs exist and persist. Moreover, to provide a contextual understanding of BGs, we present the worldwide distribution and structure of these organizations. Gaining an overview of BGs’ and their affiliated firms’ characteristics allows us to disentangle the various dimensions of their corporate governance, particularly focusing on identifying what we know about how they are governed and where future research should continue. For this, we adopt a traditional corporate governance framework based on financial economics to discuss BGs’ corporate governance mechanisms. We then attempt to complement this financial perspective by incorporating an organizational and sociological lens to better understand how ties among the affiliate firms influence BG governance. Overall, we argue that BG corporate governance is a fruitful path for scholars to continue to examine because many internal and external governance mechanisms remain understudied and the specificities of BGs generate differences in how these mechanisms are understood in these organizations, resulting in gaps in the literature ripe for future research.

1.1 What Are BGs?

The extant literature offers several definitions of BGs, largely rooted in two disciplines, Sociology and Economics (Chung and Luo, 2018), in which previous studies have adopted several management theories to shed light on what BGs actually are. On the one hand, the sociological-based definitions of BGs highlight the social relationships among several firms (Cuervo-Cazurra, 2006). This view broadly defines BGs as “collections of firms bound together in some formal and/or informal ways, characterized by an intermediate level of binding” (Granovetter, 1995: 95). The member firms (also known as affiliates) are bound by “relations
of interpersonal trust, on the basis of similar personal, ethnic, or commercial background” (Leff, 1978: 663). More specifically, affiliates are linked together through the interplay of both “economic (such as ownership, financial, and commercial) and social (such as family, kinship, and friendship) ties” (Yiu et al., 2005: 183). In short, the sociological definitions place great emphasis on relational ties and the BGs’ overall network structure.

Researchers who draw on the sociological approach treat BGs as networks or carriers of institutional logics. Adopting a network perspective, BG governance characteristics are assumed to lie between markets and hierarchies. In this vein, network theory is the basis for the discussion on the importance of network position (i.e., centrality and boundary-spanning status) to yield the desired organizational outcomes (e.g., Mahmood et al., 2013). The other perspective within the sociological approach sees BGs as carriers of institutional logics based on the tenets of political economy in which BGs are perceived as products of state ideology (c.f., Fields, 1995; Wade, 2004). For example, governments may channel their economic developmental projects, communitarian initiatives, and social and environmental undertakings by providing grants, loans, and subsidies to BGs that will drive manufacturing and exports to reduce the countries’ reliance on foreign markets for goods and services (e.g., Costa et al., 2013; Maman, 2002).

On the other hand, the economic-based definitions focus on unrelated diversification facilitated by cross-shareholding and control (c.f., Cuervo-Cazurra, 2006). The economic view is narrower and refers to BGs as “an organizational form characterized by diversification across a wide range of businesses, partial financial interlocks among them, and, in many cases, familial control” (Ghemawat and Khanna, 1998: 35). Although several scholars identify BGs using family ties to create strong links between firms (e.g., Almeida and Wolfenzon, 2006; Chang and Hong, 2002; Mahmood and Lee, 2004), other researchers highlight interlocking directorates (Douma et al., 2006; Fisman and Khanna, 2004) and ownership of large shareholders—such as banks, the state, and funds—as distinguishing features of BGs (c.f., Hoshi and Kashyap, 2004; Keister, 2004).
1.1. What Are BGs?

Scholars who adopt an economic approach to understand BGs suggest an internal-market view and resource-bundle perspective. The predominant internal-market view primarily draws on transaction cost economics to argue that BGs are substitutes for inefficient or missing external markets. Meanwhile, the resource-bundle perspective builds on resource-related theories (i.e., resource-based, resource dependence, and organizational learning) to contend that BGs create competitive advantage as they repeatedly enter several unrelated industries, thus allowing them to build resources and capabilities that are not industry-specific.

Other definitions are also broad and do not fully fit in either category. For example, some scholars have adopted a definition used by the Korea Fair Trade Commission, arguing that BGs are a constellation of companies of which more than 30 percent of shares are owned by the group’s controlling shareholder and its affiliated companies (Bae et al., 2002). Others characterize BGs as consisting of a parent company and legally-independent subsidiaries that all function as a single entity through a common source of control, often attributed to common ownership (Beaver et al., 2019; Belenzon and Berkovitz, 2010; Bena and Ortiz-Molina, 2013; Bertrand et al., 2008). This is a phenomenon in which an investor holds partial shares in two or more entities that compete in the same market (c.f., Bresnahan and Salop, 1986).

These definitions have led to numerous inconsistencies and difficulties in the literature regarding how to differentiate BGs vis-à-vis other types of organizational forms such as firm networks (e.g., strategic, supplier, and distribution networks), strategic alliances, and standalone firms (e.g., conglomerates and multidivisional companies). Cuervo-Cazurra (2006) and Guillen (2000) argue that both strategic unrelatedness and cross-shareholding should be present in order to qualify as BGs. Contrarily, Chung (2001) contends that industry diversification is not a necessary condition to identify BGs, given that affiliates at the early stage of the group’s growth may be in the same industry and that other ties also exist to bind firms together (e.g., mutual loans and internal transactions). Moreover, Yiu et al. (2005) emphasize that BGs need to have a certain level of administrative or managerial coordination among the affiliates to achieve mutual goals and objectives.
Introduction

Although there are different ways to account for the existence of BGs, we see the different definitions as complementary; that is, the varying definitions and approaches are important to understand the corporate governance practices in these organizational forms. In fact, because of the multiple definitions in the literature, scholars face challenges in simply identifying what BGs are. For example, several organizational forms such as multidivisional firms, conglomerates, and interfirm networks (i.e., groups of suppliers and consumers) are often misconstrued as BGs. Therefore, for the purpose of this review, we draw on previous studies to propose a synthesized definition of BGs as a *set of legally-independent firms that are linked through various, persistent economic and social relationships and that operate in a coherent manner to achieve mutual objectives*.

Our definition of BGs intends to be broad and contains three important characteristics that distinguish BGs from other types of organizations. First, BGs comprise firms with their own distinct and legally-separable identities and autonomy. This means that BG affiliates have their own legal personality to autonomously comply with their fiscal responsibilities, unlike units or divisions in standalone firms that consolidate their financial reporting and tax filing. Moreover, although some BG affiliates are fully controlled by parent firms, they inherently have the capacity to enter into contracts independently. By contrast, the contractual actions of units in standalone firms are almost always subject to the hierarchical authority of their headquarters.

Second, despite the fact that some affiliates are comparable to wholly-owned subsidiaries of standalone firms because of the direct and absolute control of a parent (or apex) firm, to be considered a BG, the independent member firms require a certain degree of relationship with all the other firms under the same umbrella group. Yiu *et al.* (2007) classify these as H-form BGs, which manifests several features of diversified conglomerates. However, BGs differ from conglomerates and multidivisional companies because the latter pertains to standalone firms that do not always have ties that bind their subsidiaries together, except for economic grounds (i.e., intra-firm economic transactions, market efficiency through integration, tax advantages, and/or ownership). Moreover, BG affiliates’ economic and social relationships are mutually
1.2. Why Do BGs Exist and Persist?

An extensive literature has attempted to explain why BGs have emerged and continue to exist. Scholars have raised this question because, at the outset, BGs and unrelatedly-diversified groups, in particular, are seen as inefficient organizational forms. Carney et al. (2018) argue that the existence and persistence of BGs can be understood using several management theories which can be categorized into two overall perspectives: institutional voids and entrenchment/exploitation. The institutional voids perspective builds on both institutional theory (Aguilera and Grøgaard, 2019) and transaction-cost theories (Cuypers et al., 2021) to suggest that BGs are efficient organizational responses to inefficient or
missing institutions, thus filling institutional voids in an external market that is incapable of facilitating the acquisition of resources through arms-length contracting (Khanna and Yafeh, 2007). Consequently, BGs would theoretically vanish in developed economies with strong institutions favoring efficient market-based transactions to acquire the necessary goods and capabilities (Khanna and Palepu, 1999). In other words, this view considers BGs a substitute for imperfect markets in reducing transaction costs (Wan, 2005).

In contrast, the entrenchment/exploitation perspective draws on financial economics (Rajan and Zingales, 2003) and agency theories (Jensen and Meckling, 1976) to argue that controlling elite incumbents create BGs as part of their efforts to influence how their countries’ markets and institutions are shaped, creating competitive advantage against new entrants (Morck et al., 2005). Consequently, any generated profits are then “tunneled” or covertly transferred within the BG units to benefit the group’s ultimate owners (Bae et al., 2002; Siegel and Choudhury, 2012). In this view, a key issue is the expropriation of minority investors’ interests in both the member firms and the group (Bertrand et al., 2002; Young et al., 2008).

Both perspectives indeed explain the ubiquity of BGs, particularly in emerging/developing economies that often have weak institutional settings to enable efficient market transactions and protect minority investors. However, BGs are also widespread in many advanced economies where the markets are efficient, institutions are strong, and the expropriation of minority investors is low (Belenzon et al., 2013). In fact, Carney et al. (2017) show evidence suggesting that the prevalence of BGs does not diminish over time with economic development. Thus, it is not surprising that researchers have also drawn on other theories such as resource dependence (Wry et al., 2013), the resource-based view (Wernerfelt, 1984), and organizational learning (Fiol and Lyles, 1985) to explain why BGs persist in these economies. For example, Dieleman and Boddewyn (2012) have built on resource dependence theory to show that Indonesia’s Salim Group mitigated its dependence on the state by adopting loosely-coupled organizational structures to manage its political ties. In a similar vein, Belderbos and Heijltjes (2005) argue that member firms in a Japanese BG reduced their dependence on
1.2. Why Do BGs Exist and Persist?

local managers of their foreign subsidiaries in Asia by exchanging interorganizational knowledge about the local policies of the host countries where the BG affiliated firms were located.

Meanwhile, drawing on the resource-based view and/or organizational learning, some scholars contend that BGs can serve as a tool to develop strategic resources and obtain competitive advantage. BGs learn to foster capabilities that allow them to identify and exploit opportunities (Guillen, 2000; Yiu, 2011). This might come, for example, from their geographic diversification in the international markets to help them grow (Kumar et al., 2012). In some instances, intragroup learning also occurs between the parent and affiliates or among the affiliates through knowledge transfers and sharing facilitated by managers or through joint R&D efforts (Kim and Lee, 2001). For example, Lincoln et al. (1998) find that Hitachi, Matsushita, and Toyota all learn from their intragroup transactions, but how that learning occurs in each BG differs. Hitachi uses on-site learning-by-doing by adopting the role of a customer, while Matsushita and Toyota leverage their extensive keiretsu networks to gain new knowledge and technologies from their foreign suppliers. Similarly, Mahmood and Mitchell (2004) provide evidence of increased innovation in BGs when the affiliates engage in joint R&D programs.

Moreover, BGs serve as internal capital, resource, and innovation markets, thereby reducing member firms’ dependence on external stakeholders such as the market and investors to satisfy their organizational needs to be able to operate and survive (Boutin et al., 2013; Chang and Hong, 2002). Belderbos and Heijltjes (2005) argue that BGs facilitate the movement of human capital across the network to support understaffed affiliates. In some cases, scholars have observed that the transfer of executives in BGs helps increase the capacity to coordinate affiliates’ activities (Belenzon et al., 2013). Alternatively, BG organizational structure can also serve as bailout funds for financially-struggling affiliates (Faccio et al., 2006).
1.3 BGs Around the World

Much of the literature has focused on defining BGs and explaining their raison d’être. This prevalent research trend has thus resulted in our limited understanding of how they actually function. It is therefore important to first identify these organizations, since they exist in most countries worldwide. However, there is no pre-existing, explicit database on BGs. Different scholars have collected data on BGs in certain countries such as: Khanna and Palepu (2000) and Bertrand et al. (2002) in India; He et al. (2013) in China; and Colpan et al. (2010) in Western countries (updated in 2016 by Colpan and Hikino). Interestingly, in the Forbes Global 2000 (2022) ranking which classifies the world’s largest companies using four metrics—sales, profits, assets, and market value—, Iowa-based BG Berkshire Hathaway tops the list. Table 1.1 shows the BGs in this ranking.

In order to devise a comprehensive description of BGs around the world, we extracted all the firms included in the Orbis database and applied the identification strategy defined by Aguilera et al. (2020a), Belenzon et al. (2019) and Masulis et al. (2011) which consists of using the 50-percent threshold of ownership structure over non-listed firms and 20 percent for listed firms as the criteria to identify BGs (c.f., Faccio et al., 2021; Faccio and O’Brien, 2021). This identification strategy allows us to determine the control of a parent over its affiliates. Given that we cannot empirically capture the informal links from our database and many firms are not listed and do not provide complete information regarding their top executives and board members, our sample consists of BGs with strong ownership-based ties that are frequent in H- (i.e., holding) and M- (multidivisional) form BGs; the former are diversified BGs that are similar to conglomerates, while the latter are vertically-integrated affiliates often operating in the same or closely-linked industry (c.f., Yiu et al., 2007).

As of 2020, our dataset comprises 9,273,856 unique firms that are unevenly distributed worldwide (see Table 1.2 and Figure 1.1). More than 15 percent of the total number of firms in our database were identified as belonging to a BG. The region with the highest percentage of BG-affiliated firms is Sub-Saharan Africa (25.76%), followed by
### Table 1.1: Top 40 business groups in the 2022 Forbes Global 2000 List

<table>
<thead>
<tr>
<th>Rank</th>
<th>Business Group</th>
<th>Country</th>
<th>Sales*</th>
<th>Profit*</th>
<th>Assets*</th>
<th>Market Value*</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Berkshire Hathaway</td>
<td>USA</td>
<td>276.09</td>
<td>89.80</td>
<td>958.78</td>
<td>741.48</td>
</tr>
<tr>
<td>14</td>
<td>Samsung Group</td>
<td>South Korea</td>
<td>244.16</td>
<td>34.27</td>
<td>358.88</td>
<td>367.27</td>
</tr>
<tr>
<td>31</td>
<td>China Mobile</td>
<td>Hong Kong</td>
<td>131.49</td>
<td>17.97</td>
<td>283.37</td>
<td>147.05</td>
</tr>
<tr>
<td>45</td>
<td>Sinopec</td>
<td>China</td>
<td>384.82</td>
<td>11.04</td>
<td>292.05</td>
<td>80.81</td>
</tr>
<tr>
<td>54</td>
<td>Reliance Industries</td>
<td>India</td>
<td>86.85</td>
<td>7.81</td>
<td>192.59</td>
<td>228.63</td>
</tr>
<tr>
<td>65</td>
<td>Petrobras</td>
<td>Brazil</td>
<td>83.89</td>
<td>19.77</td>
<td>174.68</td>
<td>83.98</td>
</tr>
<tr>
<td>118</td>
<td>Vale</td>
<td>Brazil</td>
<td>54.40</td>
<td>22.47</td>
<td>89.61</td>
<td>82.03</td>
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<tr>
<td>138</td>
<td>Itausa</td>
<td>Brazil</td>
<td>37.47</td>
<td>7.22</td>
<td>387.74</td>
<td>71.31</td>
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<td>147</td>
<td>Hyundai Motor</td>
<td>South Korea</td>
<td>102.70</td>
<td>4.32</td>
<td>196.80</td>
<td>37.61</td>
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<tr>
<td>159</td>
<td>Danaher</td>
<td>USA</td>
<td>30.28</td>
<td>6.46</td>
<td>83.39</td>
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<tr>
<td>167</td>
<td>LukOil</td>
<td>Russia</td>
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<td>10.49</td>
<td>92.49</td>
<td>32.17</td>
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<td>170</td>
<td>SK</td>
<td>South Korea</td>
<td>178.99</td>
<td>12.47</td>
<td>287.89</td>
<td>99.08</td>
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<tr>
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<td>America Movil</td>
<td>Mexico</td>
<td>51.82</td>
<td>5.14</td>
<td>110.35</td>
<td>79.12</td>
</tr>
<tr>
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<td>Bradesco (Banco)</td>
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<td>5.57</td>
<td>298.25</td>
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<td>China Telecom</td>
<td>China</td>
<td>68.15</td>
<td>4.02</td>
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<td>35.23</td>
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<tr>
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<td>Cathay Financials</td>
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<td>Oversea-Chinese Banking</td>
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<td>DBS</td>
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<td>4.98</td>
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<td>Canada</td>
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<td>2.37</td>
<td>507.06</td>
<td>20.47</td>
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<td>Banco do Brasil</td>
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<td>3.40</td>
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<td>20.70</td>
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<td>Baoshan Iron and Steel</td>
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<td>55.52</td>
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<td>62.17</td>
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<td>United Overseas Bank</td>
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<td>Wesfarmers</td>
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<td>25.35</td>
<td>1.65</td>
<td>18.34</td>
<td>40.57</td>
</tr>
<tr>
<td>577</td>
<td>Svenska Handelsbanken</td>
<td>Sweden</td>
<td>6.34</td>
<td>2.27</td>
<td>369.65</td>
<td>19.52</td>
</tr>
<tr>
<td>593</td>
<td>Vedanta Limited</td>
<td>India</td>
<td>16.38</td>
<td>2.63</td>
<td>25.30</td>
<td>20.21</td>
</tr>
<tr>
<td>625</td>
<td>Koç Holding</td>
<td>Turkey</td>
<td>38.84</td>
<td>1.70</td>
<td>76.85</td>
<td>6.79</td>
</tr>
<tr>
<td>639</td>
<td>Formosa Plastics</td>
<td>Taiwan</td>
<td>45.09</td>
<td>5.69</td>
<td>57.86</td>
<td>69.45</td>
</tr>
<tr>
<td>710</td>
<td>Bharti Airtel</td>
<td>India</td>
<td>14.98</td>
<td>0.41</td>
<td>48.72</td>
<td>56.80</td>
</tr>
<tr>
<td>717</td>
<td>George Weston</td>
<td>Canada</td>
<td>43.37</td>
<td>0.60</td>
<td>37.27</td>
<td>18.04</td>
</tr>
</tbody>
</table>

*Note: *In US$ millions.
Figure 1.1: Geographical distribution of business group-affiliated firms worldwide.

Table 1.2: Distribution of firms in our sample

<table>
<thead>
<tr>
<th>Region</th>
<th>% of Firms</th>
<th>% of BG-Affiliated Firms</th>
<th>% of Standalone Firms</th>
</tr>
</thead>
<tbody>
<tr>
<td>East Asia and Pacific</td>
<td>51.42</td>
<td>11.81</td>
<td>88.19</td>
</tr>
<tr>
<td>Europe and Central Asia</td>
<td>44.63</td>
<td>19.46</td>
<td>80.54</td>
</tr>
<tr>
<td>Latin America and Caribbean</td>
<td>1.04</td>
<td>8.77</td>
<td>91.23</td>
</tr>
<tr>
<td>Middle East and North Africa</td>
<td>0.44</td>
<td>14.94</td>
<td>85.06</td>
</tr>
<tr>
<td>North America</td>
<td>1.46</td>
<td>11.37</td>
<td>88.63</td>
</tr>
<tr>
<td>South Asia</td>
<td>0.93</td>
<td>13.76</td>
<td>86.24</td>
</tr>
<tr>
<td>Sub-Saharan Africa</td>
<td>0.07</td>
<td>25.76</td>
<td>74.24</td>
</tr>
</tbody>
</table>

Panel B: By Country-Income Level

<table>
<thead>
<tr>
<th>Income Level</th>
<th>% of Firms</th>
<th>% of BG-Affiliated Firms</th>
<th>% of Standalone Firms</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low income</td>
<td>0.01</td>
<td>28.52</td>
<td>71.48</td>
</tr>
<tr>
<td>Lower-middle income</td>
<td>4.07</td>
<td>7.14</td>
<td>92.86</td>
</tr>
<tr>
<td>Upper-middle income</td>
<td>50.18</td>
<td>11.70</td>
<td>88.30</td>
</tr>
<tr>
<td>High income</td>
<td>45.74</td>
<td>19.82</td>
<td>80.18</td>
</tr>
</tbody>
</table>

Total number of firms: 9,273,856

Note: *See appendix for the classification of countries.
### Table 1.3: BG distribution and structure in our sample

<table>
<thead>
<tr>
<th>Region</th>
<th>% of BGs with 2 Firms</th>
<th>% of BGs with 3–5 Firms</th>
<th>% of BGs with 6–10 Firms</th>
<th>% of BGs with &gt; 10 Firms</th>
<th>Total Number of BGs</th>
<th>% of Total BGs</th>
</tr>
</thead>
<tbody>
<tr>
<td>East Asia and Pacific</td>
<td>60.72</td>
<td>27.91</td>
<td>6.99</td>
<td>4.38</td>
<td>134,434</td>
<td>38.47</td>
</tr>
<tr>
<td>Europe and Central Asia</td>
<td>57.97</td>
<td>30.40</td>
<td>7.31</td>
<td>4.32</td>
<td>192,128</td>
<td>55.81</td>
</tr>
<tr>
<td>Latin America and Caribbean</td>
<td>48.43</td>
<td>29.93</td>
<td>11.87</td>
<td>9.77</td>
<td>4,103</td>
<td>1.19</td>
</tr>
<tr>
<td>Middle East and North Africa</td>
<td>53.19</td>
<td>30.58</td>
<td>10.03</td>
<td>6.20</td>
<td>1,645</td>
<td>0.48</td>
</tr>
<tr>
<td>North America</td>
<td>57.92</td>
<td>24.25</td>
<td>8.96</td>
<td>8.87</td>
<td>10,224</td>
<td>2.97</td>
</tr>
<tr>
<td>South Asia</td>
<td>68.08</td>
<td>23.90</td>
<td>5.48</td>
<td>2.54</td>
<td>3,067</td>
<td>0.89</td>
</tr>
<tr>
<td>Sub-Saharan Africa</td>
<td>52.05</td>
<td>31.26</td>
<td>9.86</td>
<td>6.83</td>
<td>659</td>
<td>0.19</td>
</tr>
</tbody>
</table>

**Panel A: By Region**

**Panel B: By Country-Income Level**

<table>
<thead>
<tr>
<th>Income Level</th>
<th>% of BGs with 2 Firms</th>
<th>% of BGs with 3–5 Firms</th>
<th>% of BGs with 6–10 Firms</th>
<th>% of BGs with &gt; 10 Firms</th>
<th>Total Number of Firms: 9,273,856</th>
<th>% of Total BGs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low income</td>
<td>59.38</td>
<td>28.13</td>
<td>9.38</td>
<td>3.13</td>
<td>32</td>
<td>0.01</td>
</tr>
<tr>
<td>Lower-middle income</td>
<td>66.90</td>
<td>24.49</td>
<td>5.47</td>
<td>3.13</td>
<td>6,230</td>
<td>1.81</td>
</tr>
<tr>
<td>Upper-middle income</td>
<td>62.20</td>
<td>27.46</td>
<td>6.46</td>
<td>3.88</td>
<td>128,303</td>
<td>37.27</td>
</tr>
<tr>
<td>High income</td>
<td>56.75</td>
<td>30.41</td>
<td>7.85</td>
<td>4.99</td>
<td>209,684</td>
<td>60.91</td>
</tr>
<tr>
<td>Total number of firms:</td>
<td><strong>58.97</strong></td>
<td><strong>29.20</strong></td>
<td><strong>7.29</strong></td>
<td><strong>4.54</strong></td>
<td><strong>344,260</strong></td>
<td><strong>100.00</strong></td>
</tr>
</tbody>
</table>

**Note:** *See appendix for the classification of countries.

Europe and Central Asia (19.46%), the Middle East and North Africa (14.94%), and South Asia (13.76%). The firms’ distribution adds up to the total number of 344,260 BGs identified in our sample. More than 55 percent of these BGs are headquartered in Europe and Central Asia, followed by East Asia and the Pacific, with 38.47 percent (see Table 1.3). Although a large portion of firms in our sample are from upper-middle-income and high-income countries, low-income countries have the highest percentage of BG-affiliated firms (28.55%) vis-à-vis standalone firms. In contrast, most of the identified BGs are in high-income countries. Moreover, most of the identified BGs in our sample encompass 2 firms, while roughly 12 percent of the BGs consist of at least 6 firms.
We further explored the size of these BG-affiliated firms in terms of job figures. As a result, we reduced our sample to just about a quarter of the total firms in the initial dataset with complete data on employment. We then evaluated the representativeness of our sample by comparing employment figures from our dataset with World Bank employment data on different regions of the world. The firms in our sample employ approximately 194 million individuals, which is 5.79 percent of the global work force. The regions with the highest percentage of employees in BG-affiliated firms over the global labor force are Europe and Central Asia and North America, with 21 and 19 percent, respectively (see Table 1.4 for a complete list). The bias of our sample is evident as...
1.3. *BGs Around the World*

we explore the total number of employees for each region shown in Table 1.4. The employees are mostly hired in BG-affiliated firms in high-income countries (almost 70%), partially due to a high percentage of our subsample with data on employment coming from large BG-affiliated firms in Europe and Central Asia and North America.


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References


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Chung, C. N. and X. R. Luo (2018). “The economic and sociological approaches to research on business groups in emerging markets”.


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References


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