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Common ownership and competitive dissimilarity: A global perspective on competition and institutional ownership

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Abstract

Research Summary: Research highlights that common institutional ownership (an investor owning publicly traded shares in two rival firms) can reduce rivals' incentives to compete. So far, this literature focused on domestic market competition. However, competition also arises in global markets, and common owners invest outside their home countries. We integrate the perspectives of global market competition and crossnational distance into a model of shared principals with rival agents and argue for a positive effect of common ownership on rivals' competitive dissimilarity in global markets. Moreover, we argue that the competitive intensity in joint regions amplifies, and the crossnational distance between common owners and their firms mitigates this effect. We find support for our

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theorizing using a multi-industry dataset with 1574 of the largest firms worldwide.

Managerial Summary: When investors hold shares in two competing companies, it can reduce how aggressively those rivals compete. To avoid direct competition, these companies often adopt divergent strategic actions. Our research shows that this dynamic extends to how competitors behave in international markets. We also identify key boundary conditions to this effect: The effect weakens when competition within shared markets decreases and when the distance between the owned rivals and their common investor increases. For managers of globally operating companies, this highlights the need to consider not just competitors' strategies but also their ownership structure. Overlapping ownership could significantly influence competitive dynamics in global markets by shaping competitors' strategic approaches.

KEYWORDS

agency theory, common ownership, competitive dissimilarity, competitive dynamics, institutional investors

1 INTRODUCTION

The increasing prevalence of common ownership, where institutional investors hold shares in two (or more) rival firms, has sparked debate over its impact on competitive behavior (e.g., Connelly et al., 2019; Goranova et al., 2010; Schmalz, 2018). A key concern is the potential for collusion between commonly held firms (e.g., Antón et al., 2023; Azar et al., 2018). To maximize joint asset value, common owners may discourage aggressive competition among their holdings (Hennig et al., 2022; Schmalz, 2018). Connelly et al. (2019) offer a nuanced perspective, suggesting that common owners promote competitive dissimilarity by guiding firms towards distinct strategies.ⁱ This approach avoids direct competition and cannibalization among commonly held firms while maintaining competitiveness against external rivals. To enhance competitive dissimilarity, common owners can leverage their ability to serve as information bridges between their competing investments, that is, to serve as a "connector between them, thus providing the knowledge necessary for them to compete in different ways" (Connelly et al., 2019, p. 6). However, not all common owners may be able or motivated to facilitate competitive dissimilarity. We argue that a global perspective on common ownership and competitive dissimilarity enables us to unravel and test the mechanisms of ability and motivation. Thus, we explore whether and under what conditions common ownership influences firms' competitive dissimilarity in international markets with international investors.

Most research on common ownership has been limited to domestic markets and U.S.-based firms (e.g., Connelly et al., 2019; DesJardine, Grewal, & Viswanathan, 2023; Pawliczek et al., 2022), treating the phenomenon as confined to national boundaries. This focus overlooks the global dimension of competition (Liesch et al., 2012; Tallman et al., 2018), where companies from different countries, partly owned by the same institutional investors, compete internationally. For instance, pharmaceutical firms like Allergan (Ireland) and Bristol Myers Squibb (U.S.) share several common investors. Notably, these firms employ distinct strategies: Allergan strongly emphasizes open science, while Bristol Myers Squibb focuses on conventional alliances (cf., Herper, 2014, 2015; Team, 2015). Furthermore, globally-operating institutional investors with various country backgrounds increasingly invest in markets outside their home countries (Ferreira et al., 2017; Ferreira & Matos, 2008). Among the most prominent globally operating institutional investors are BlackRock and Vanguard, which, for example, owned about 16% of the total free float in German DAX40 companies in 2021 (Tobias et al., 2022). These global common owners act as strategists, actively shaping the competitive strategies of their holdings. BlackRock, for example, advocated for a cross-national merger strategy within the European banking sector rather than supporting a specific national merger involving one of its holdings, Deutsche Bank (see Shekita, 2022).

Our theorizing builds on the agency theory model of shared principals with rival agents (Connelly et al., 2019; Hill & Jones, 1992). Specifically, using a motivation-ability lens, we adapt two main agency theory concepts—goal alignment and information asymmetries (Eisenhardt, 1989; Kim et al., 2019; Oxelheim & Randøy, 2005)-to the global competition context. We borrow from the widely used ability-motivation-opportunity framework, according to which ability, motivation, and opportunity are the foundation for successful task performance (Chang et al., 2012). We focus on ability, that is, "the knowledge, skills, experience needed to perform a task," and motivation, that is, "the willingness [...] to perform it" (Chang et al., 2012, p. 928), since opportunity, defined as the availability of resources to perform a task, is assumed to be given for all our common owners. We argue that common owners, that is, the principals, enhance competitive dissimilarity between their agents when both motivation and ability conditions are met. First, the motivation to influence agents' strategies increases with the perceived need for goal alignment in competitive strategies, which is driven by the intensity of competition. Second, regarding information asymmetries, common owners must have the ability to influence agents' strategies, which stems from their information advantages and role as informational bridges (Connelly et al., 2019; Massa & Žaldokas, 2017).

We leverage the global context to refine the theory by elucidating how contextual parameters shape these mechanisms. The international context introduces certain impediments to the motivation and ability of common owners. We examine investor *motivation* by theorizing on how variations in rivalry between commonly owned firms impact the owner's perceived need to foster competitive dissimilarity. Given that national borders still constrain competition despite intensified global competition (Asmussen, 2009; Verbeke & Asmussen, 2016), we argue that direct competition is less intense when firms operate in different or less competitive regional markets. As a result, common owners are less motivated to promote competitive dissimilarity when the risk of cannibalization is low. Moreover, we investigate the *ability* of common owners, positing that their influence on firm strategies hinges on their capacity to serve as informational bridges. Since cross-national distance hampers information flow (e.g., Berry et al., 2010; Kim et al., 2019), common owners more geographically distant from their investee firms face greater information asymmetry. These information asymmetries weaken the relationship between common ownership and competitive dissimilarity among rival firms. We test our theory using a comprehensive international, multi-industry dataset that covers the majority of global market capitalization. We measure the extent of common ownership across a panel of 74,930 intra-industry dyad-year pairs from 1574 firms in 214 industries and 46 developed and emerging countries listed in the MSCI All Country World Index at least once between 2008 and 2017. Our findings provide evidence of the positive relationship between common ownership and rival firms' competitive dissimilarity in the global context. Moreover, we show that the *motivation* for common owners to foster competitive dissimilarity increases if firms mainly operate in the same competitive industries within the same regions. Furthermore, larger cross-national geographic and institutional distances between investors and firms decrease common owners' *ability* to act as informational bridges.

This paper offers two main contributions to the existing literature. First, we contribute to the agency theory-based model of shared principal-agents (Connelly et al., 2019) by introducing a motivation-ability lens (cf., Chang et al., 2012). We highlight how goal alignment and information asymmetry shape the motivation and ability of common owners to influence firm competition. In doing so, we identify important boundary conditions of the relationships within the shared principal-agent model (cf., Connelly et al., 2019). By extending the shared principalagent model to the global context, we also broaden the scope of global agency relationships beyond more extensively explored ones, such as multinational enterprise (MNE)-subsidiary (e.g., Kostova et al., 2018) or manager-owner relationships (e.g., Oehmichen et al., 2022; Oxelheim & Randøy, 2005). Second, we connect to the literature on institutional ownership and global strategy (Cuervo-Cazurra et al., 2023; Ferreira & Matos, 2008; Kacperczyk et al., 2021; Shi et al., 2021) and specifically extend the theoretical understanding of common institutional ownership (e.g., Antón et al., 2023; DesJardine, Grewal, & Viswanathan, 2023; Qiang et al., 2024) to a global context. We provide empirical evidence that common owners, as strategists, extend beyond the typically theorized context of domestic markets. Additionally, they are a unique type of global owner, with distinct motivations and abilities compared to other global owner types. Lastly, we emphasize the role of investor heterogeneity (see also DesJardine, Grewal, & Viswanathan, 2023) and highlight how cross-national distance increases information asymmetry, limiting investors' influence on their firms. This is an important for the debate on the generalizability of common ownership findings to other non-U.S. country contexts (Boot et al., 2022; Hennig et al., 2022).

2 | LITERATURE BACKGROUND

Institutional investors, that is, organizations investing on behalf of others with discretionary control over assets (Ferreira et al., 2017), account for a majority of volume trades on the major stock markets, owning, for instance, around 80% of all stocks in the S&P500 (Greenspon, 2019). An increasing multi-disciplinary body of theoretical and empirical research discusses common ownership of rival firms as a more specific and increasingly relevant subset of institutional ownership (cf., Hennig et al., 2022; Schmalz, 2018, 2021). This discussion emphasizes joint asset value as a key principle for common owners, potentially leading investee firms to prioritize it over their own profits, thereby reducing firms' incentives to compete (e.g., Goranova et al., 2010; Schmalz, 2018). Such competition-reducing effects would be beneficial from the perspective of common owners but harmful for other stakeholders from a societal or market perspective. While a vast body of literature finds empirical support for such competition-reducing effects (e.g., Antón et al., 2023; Azar et al., 2018), there is also a limited number of

studies failing to find empirical evidence (e.g., Koch et al., 2021; Lewellen & Lowry, 2021). Besides such potentially more harmful implications from a societal perspective, there are also potential beneficial effects of common ownership for firms and society, often attributed to common owners' information advantages (Chen et al., 2023). These effects include a reduction in insider trading (Chen et al., 2023), a reduction in carbon emissions (Qiang et al., 2024), enhanced monitoring efficiency and mitigation of earnings management (Ramalingegowda et al., 2021).

Connelly et al. (2019) address tensions between common ownership studies that identify a competition-reducing effect and those that do not. They explain that common ownership may not always reduce competition intensity but instead promotes dissimilar competitive actions (i.e., competitive dissimilarity) between rival firms. Competitive actions, that is, "all externally directed, specific, and observable newly created moves initiated by a firm to enhance its competitive position" (Ferrier et al., 1999, p. 378), span, for instance, investments in R&D, Marketing, and Mergers and Acquisitions (M&As). A complex, dynamic portfolio of these competitive actions enables firms to outcompete other market rivals and maximize individual profits (Connelly et al., 2017; Steinberg et al., 2023). Firms can also adopt a distinctive, contrasting competitive repertoire compared to their rivals (Ndofor et al., 2011). This competitive dissimilarity between rivals does not eliminate competition entirely, but it reduces direct cannibalization compared to a situation where firms employ similar competitive actions. Such dynamics gain particular significance when common owners seek to protect the joint asset value of their investments (Connelly et al., 2019).

The channels through which common owners influence their investee firms correspond primarily to the mechanisms discussed in the broader literature on institutional investors as strategists (for an overview, see Goranova & Ryan, 2014). Table 1 reviews the influence mechanisms outlined for institutional investors, ranging on a spectrum from direct engagement to passive strategies. Depending on the nature of the mechanisms and their accordance with SEC regulations, they might be more or less overt. Direct engagement mechanisms are mostly covert and difficult to test empirically. However, they are theorized to be the primary means by which common owners influence their holdings through subtle information exchange (Connelly et al., 2019; DesJardine, Shi, & Cheng, 2023). Thus, research has primarily focused on demonstrating the causal influence of common ownership on firms' behavior, providing strong evidence that common owners, as strategists, shape firm strategies rather than alternative explanations like portfolio selection effects (e.g., Antón et al., 2023; DesJardine, Grewal, & Viswanathan, 2023).

Nevertheless, literature on institutional investors as strategists has established that investors frequently engage in covert mechanisms such as private discussions with management, including one-on-one meetings and dinners. Over half of institutional investors engage in these practices (McCahery et al., 2016). The common ownership literature also provides evidence on common owners' direct and covert influence through case discussion and interviews. For example, Shekita (2022) describes how portfolio managers from multiple common owners met to coordinate reduced production by frackers in the oil and gas sector. This was followed by shareholder meetings with CEOs and public announcements from firms such as Anadarko committing to limit capacity expansion. Similarly, common owners such as T. Rowe Price, Fidelity, and Wellington Management pressured top pharmaceutical executives to defend their pricing strategies better (Chen, 2016; Shekita, 2022). In another instance, Albert J. Wilson, vice president of the private pension fund TIAA-CREF in 1992, admitted in an informal Wharton Business

Category	Mechanisms	Examples	Transparency	Strat. differentiation	Exemplary literature
Direct engagement	Formal meetings	One-on-one meetings to cultivate relations with senior executives	Covert	Yes	DesJardine, Grewal, and Viswanathan (2023) and Goranova and Ryan (2014)
		Management meets portfolio managers who decide on firm positions	Covert	Yes	DesJardine, Grewal, and Viswanathan (2023) and DesJardine, Shi, and Cheng (2023)
		Formation of teams tasked to engage with management	Covert	Yes	DesJardine, Grewal, and Viswanathan (2023) and DesJardine, Shi, and Cheng (2023)
	Informal meetings	Dinners, one-on-one meetings with management and board members	Covert	Yes	McCahery et al. (2016) and Bushee et al. (2018)
Public advocacy	Proxy actions	Proxy filings and voting	Overt	No/rare	Campbell et al. (2012)
	Shareholder advocacy	Filing shareholder proposals	Overt	No/rare	Reid and Toffel (2009)
		Voting for proposals	Overt	No/rare	Iliev et al. (2015)
		Writing letters to management	Overt	No/rare	Chowdhury and Wang (2009)
		Launching media campaigns	Overt	No	Chowdhury and Wang (2009)
Further corporate governance influence	Obtaining board representation	Holding tightly interconnected board positions in various companies (overt), member's influence itself (covert)	Overt/covert	Yes	Rubin (2006)
	Affecting compensation mechanisms	Less fierce pay- for-performance packages	Overt	No/rare	Antón et al. (2023)
	Promoting public disclosure as a collusion mechanism	Increased disclosure, for example, in earnings calls, quarterly earnings announcements, production forecasts, SEC filings	Overt/covert	Yes	Pawliczek et al. (2022) and Park et al. (2019)

TABLE 1 Mechanisms to align management with institutional owner's preferences.

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Category	Mechanisms	Examples	Transparency	Strat. differentiation	Exemplary literature
Financial influence	Exit or withholding funding	"Vote with feet"— divesting or threatening to divest	Overt (threat covert)	No/rare	DesJardine, Grewal, and Viswanathan (2023) and Bushee et al. (2018)
Passive strategies	Do nothing or less than engaged investors	Voting favorably on executive compensation Avoid promoting competitive aggressiveness.	Overt	No	Antón et al. (2023) and Schmalz (2021)

Note: For further discussions of the mechanisms, see Schmalz (2021) and Shekita (2022).

School talk to using shareholder influence to settle lawsuits between commonly held firms (Lott, 2007; Shekita, 2022). DesJardine, Grewal, and Viswanathan (2023) further reveal that common owners maintain specialized teams to engage with management on specific topics. Moreover, interview data reveals that common owner's portfolio managers will "be very open about what they think management should do on a variety of fronts: use of capital, bonus structures, approach to a market or a competitor, who to buy or what to sell, what they own or have an interest in" (DesJardine, Shi, & Cheng, 2023, p. 9). Consistent with these examples, BlackRock, Vanguard, or StateStreet publicly report actively engaging with their holdings to influence corporate strategy (Shekita, 2022).

Common owners may also draw on more overt mechanisms such as public advocacy strategies (e.g., voting behavior, correspondence to management, and media campaigns). Beyond BlackRock's influence on Deutsche Bank (as described in Section 1), other examples illustrate common owners voicing their opinions publicly. For instance, managers of Hodges Capital Management openly advocated raising airline fares (Shekita, 2022). Institutional investors also expand their influence through corporate governance mechanisms, such as securing board positions and leveraging divestment threats or actual divestments to penalize unfavorable behavior. For example, Aldan Global Capital already owned two board seats at Tribune Publishing when appointing its president as Tribune Publishing CEO in 2021 (DesJardine, Shi, & Cheng, 2023). Finally, passive strategies, such as exerting less pressure on competitive aggressiveness than single-firm investors, are another way to shape firm behavior.

Table 1 also displays whether investors' alignment mechanisms enable strategic differentiation, allowing the common owner to recommend different strategies to each firm rather than using a uniform approach across all firms. This differentiation is crucial for achieving competitive dissimilarity. Notably, covert mechanisms appear particularly effective for common owners to influence their firms distinctively. Differentiation through overt mechanisms may risk heightened visibility of investor involvement in market strategies, potentially constraining the possibility of affecting competitive dissimilarity.

Although originating from various fields and ongoing debates, prior research on common ownership has focused primarily on domestic markets. However, increasing globalization and market liberalization underscore the need to examine common ownership effects in globally competing, publicly listed companies (Dunning & Lundan, 2008; Rugman & Verbeke, 2004) and in markets with growing foreign investor presence (Desender et al., 2016; Ferreira & Matos, 2008; Steinberg et al., 2023). We now build on this global perspective to theorize how and when common owners influence the competitive dissimilarity among their firms.

3 | HYPOTHESES

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3.1 | Common ownership and competitive dissimilarity in a global competitive context

Competitive actions are a typical way for firms to gain an edge over rivals and maximize profits. However, in a shared principal-agent model (Connelly et al., 2019), a common owner's focus on portfolio maximization may misalign with the profit-maximization goals of individual firms, leading to goal conflict (cf., Eisenhardt, 1989). For instance, assume Firm A increases its market share by 5% (from 30% to 35%) at Firm B's expense (decrease in market share by 5%, from 25% to 20%). Suppose Firm A generates an additional \$10 million in revenue from this market share gain but incurs \$3 million in additional competitive costs. In that case, its profits rise by \$7 million. Firm B will face a decrease in revenue by \$10 million, ceteris paribus. However, from the common owner's perspective, aggregate profits for both firms would decrease. This is because the total aggregated market share and revenue of both firms remain constant (e.g., revenue gains and losses offset each other), while aggregated competitive costs for both firms rise (in this example by \$3 million), eroding overall portfolio profitability.

This dynamic extends globally, where globalization and market liberalization intensify competition among large, publicly listed firms (Dunning & Lundan, 2008). Competitive actions intended to maximize individual profits can cannibalize global market shares of international rivals. For example, competitive actions by SAP will affect IBM, Oracle, and vice versa, highlighting the interconnectedness of MNEs (Rugman & Verbeke, 2004). Globally, investors typically hold shares in multiple firms across national boundaries (Ferreira & Matos, 2008), often covering the largest stock-listed companies in the major world economies. As common owners of globally competing firms, they are incentivized to reduce aggressive competition to protect overall portfolio value. Thus, they are *motivated* to reduce goal conflict by aligning their firms' objectives with their own, ultimately limiting competition and preventing market cannibalization (Antón et al., 2023; Azar et al., 2018; Schmalz, 2018).

Nuancing the previously established logic, commonly owned firms may face competition from rivals not influenced by a common owner. MNEs, for example, need to develop unique advantages to compete with domestic firms, such as national champions and SMEs, in local markets (Dunning & Lundan, 2008; Poulis et al., 2012). Additionally, international markets often have lower industry concentration and stronger competition (Bikker & Haaf, 2002), increasing the risk of losing market share to non-commonly owned competitors. To address this, common owners might direct their firms to maintain competitive intensity but employ distinct strategies not to cannibalize the profits of other commonly owned agents (Connelly et al., 2019). For instance, one commonly owned firm may focus on competitive pricing and another on high-quality products through R&D (Fuentelsaz & Gómez, 2006). This approach preserves overall market competitiveness without cannibalizing shares among commonly owned rivals. Thus, in the global context, common owners are likely motivated to influence their firms' competitive behavior by promoting competitive dissimilarity rather than direct competition, ensuring their firms remain competitive against non-commonly owned rivals.

While a common owner's motivation to resolve goal conflicts among agents is crucial, it is not sufficient on its own. The owner must also have the *ability* to influence competitive strategies. Information asymmetries, a key aspect of agency theory (Eisenhardt, 1989), are significant in common ownership but interestingly in favor of the principal: owners often possess privileged, industry and firm-specific insights that their agents do not (Fich et al., 2015; Kacperczyk et al., 2005). This information advantage, gained through formal and informal interactions with managers or other shareholders and board participation (Westphal & Bednar, 2008; Yan & Zhang, 2009), allows common owners to bridge information gaps and foster competitive dissimilarity (Connelly et al., 2019; Massa & Žaldokas, 2017). International investors, such as BlackRock and Vanguard, can engage in formal and informal interactions at the local level through their regional branch offices and local experts. In the global context, where cross-national barriers hinder knowledge flow (Berry et al., 2010; Beugelsdijk et al., 2018), common owners may, on average, leverage their broader perspectives and aggregated data from multiple firms and industries to enable competitive dissimilarity between their firms.

Common owners could also utilize various influence mechanisms to guide firms in opposing strategic directions. Institutional investors gain firm-specific insights through informal discussions with management and board members (DesJardine, Grewal, & Viswanathan, 2023; DesJardine, Shi, & Cheng, 2023; McCahery et al., 2016), enabling them, for instance, to direct one firm towards M&As and another towards R&D investments in those meetings. Common ownership-induced increased disclosure, such as in conference calls (Pawliczek et al., 2022), helps commonly owned firms better understand rivals' strategies and avoid "red queen" competitionⁱⁱ in anticipation of their common owners' objectives. On rare occasions, common owners may use overt public mechanisms to steer firms like public advocacy through voting rights and proxy actions. However, this is likely less frequent due to potential regulatory scrutiny. Rare examples might be BlackRock's vice chairman supporting Deutsche Bank's merger strategy (Shekita, 2022) and SoftBank's promotion of merger talks between Uber and DoorDash. Conversely, BlackRock, Vanguard, and State Street opposed Nelson Peltz's push for DuPont to increase R&D investments (Shekita, 2022).

Concluding the above argumentation on common owners' motivation to resolve goal conflict, the ability to leverage information advantages and influence their firms, we formulate the following hypothesis from a global perspective on competition:

Hypothesis 1. Common ownership in firms from the same global industry is positively associated with these firms' competitive dissimilarity.

3.2 | The role of competitive region overlap: intensity of rivalry as a motivation to limit direct competition between agents

Next, we refine our model by exploring how contextual factors influence the theorized mechanisms. Continuing to draw upon agency theory, we identify the core concepts of goal alignment and information asymmetries as pivotal in this contextual refinement. First, we examine how the common owner's goal of fostering competitive dissimilarity among commonly-owned firms is contingent upon the nature of market competition. Specifically, we examine the impact of competitive region overlap on the common owner's goal and its *motivation* to influence the investee firms' competitive dissimilarity. WILEY SMS Global Strategy Journal

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In examining common owners' motivation to influence competition among rival investee firms, research in competitive dynamics has investigated how executives' perceptions of rivalry shape strategic decision-making (see Marcel et al., 2010, for an overview). Specifically, managers are more inclined to respond to competitive actions from another firm when such actions are visible and executed by a legitimate competitor in the same market. We extend this argument to an investor's perspective. Investors must perceive their firms as genuine rivals to pursue the objective of steering them towards competitive differentiation. The intensity of rivalry among these firms drives common owners' motivation and goal to influence competition as it impacts their perception of potential profit cannibalization within the firms. We argue that this perception is driven by two key factors: the overlap of competitive regions between rival firms, defined by their shared sales territories in a given geographic region and industry, and the overall intensity of competition within that region and industry. If the overlap of competitive regions between two investee firms is minimal-either due to their operation in distinct geographical areas or because the markets where they compete jointly are not highly contested common owners may be less motivated to allocate resources towards fostering their competitive dissimilarity.

For investors to determine whether their firms are indeed competing against each other, they can refer to the concept of geographic regions. Research shows that the majority of firms commonly perceived as global fall short of a truly global status, as evidenced by the lack of complete alignment between their relative sales distribution and the GDP proportions of specific world regions.ⁱⁱⁱ This misalignment is often attributed to biases favoring the firm's home region (Asmussen, 2009; Verbeke & Asmussen, 2016). Such limits to a truly global company, which would also imply full global competition with other global companies, may, for instance, come from different consumer preferences, diverging regulations, and language barriers. These institutional differences hinder MNEs from making their products equally attractive and accessible to consumers worldwide (Asmussen, 2009). Moreover, firm-specific advantages such as technology and brand name might not be easily transferable to other regions (Rugman & Verbeke, 2004). In turn, firms must carefully determine their geographic scope (Banalieva & Dhanaraj, 2013), and many firms focus on specific geographic markets. For example, the two major international players in the fast-food industry, McDonald's and Yum! Brands share a strong presence in certain markets (e.g., North America) while also differing in their geographic region focus. McDonald's has a significant presence in Europe, while Yum! Brands have a strong presence in China and significant operations in other parts of Asia. Consequently, common owners may perceive competition between these firms in Europe and China as less fierce.

However, mere coexistence in geographic markets is not the only factor to consider. When two firms operate within the same region, common owners will further differentiate the level of competition intensity in that region to conclude on the rivalry between those firms (and the need to influence their competitive actions). In markets with low concentration, many firms compete for market share, leading to greater price competition, innovation, and efficiency. Thus, low concentration is typically associated with increased competition (e.g., Bikker & Haaf, 2002). In turn, perceived rivalry between two agent firms will be higher in markets with low concentration.

In summary, since it is costly for common owners to gather detailed information on their investment objects and steer strategic decision-making, they prioritize their resources and use them where they can achieve the greatest benefit. Cannibalization poses a more legitimate threat to common owners' asset values, requiring competitive dissimilarity if two companies operate with high competitive region overlap, that is, operating within the same geographic

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region *and* a highly competitive industry. Consequentially, we expect that common owners are less motivated to foster competitive dissimilarity if firms have lower competitive region overlaps.

Hypothesis 2. The relationship between common ownership and competitive dissimilarity is positively moderated by competitive region overlap, such that the positive relationship becomes more (less) pronounced with increasing (decreasing) competitive region overlap.

3.3 | The role of cross-national distance: information advantage drives common owners' ability to intervene

To further elucidate the role of contextual factors, we focus on the information asymmetry within our agency model. Specifically, we examine common owners' *ability* to curb investee firms' competition by acting as informational bridges. In the global context, however, even if institutional investors possess superior information in certain areas compared to their owned firms, foreign common owners may face challenges due to cross-national distances between their home country and the investee's home country. These challenges include limited access to information, high verification costs, and their ability to serve as informational bridges.

Cross-national distance, which includes geographic and institutional distances between firms' home and potential host countries (Berry et al., 2010), prevents information and knowledge flows between countries (cf., Berry et al., 2010; Beugelsdijk et al., 2018). Geographic distance increases transportation and communication costs (Berry et al., 2010), and institutional investors benefit from being in close geographic proximity to their held firms (Ferreira et al., 2017). This advantage stems from various factors: reduced communication and information-gathering costs, the ability to personally visit local firms to inquire about internal operations, heightened coverage by local media, and an overlap of social networks among managers and investors (Chhaochharia et al., 2012). Leveraging their proximity, institutional investors can access private information more effectively, enabling enhanced monitoring of investee firms (Ayers et al., 2011). Van Nieuwerburgh and Veldkamp (2009) suggest that domestic investors initially possess an information advantage regarding local assets, benefiting from greater transparency in asset prices compared to the average investor. As a result, investors often opt to capitalize on excess returns generated from their domestic information advantage rather than diverting resources to learn about foreign assets, leading to concentrated portfolios (Choi et al., 2017).

Nevertheless, distance is not a one-dimensional phenomenon. It should be considered from a multi-dimensional perspective (Berry et al., 2010; Beugelsdijk et al., 2018), including other *institutional* dimensions of distance. In our context, administrative, cultural, economic, financial, and political distance affect the potential information advantages of foreign common owners (e.g., Kang & Kim, 2010). Administrative distance may negatively influence a common owner's ability to access and interpret information related to their agents, caused, for instance, by language barriers (Ferreira et al., 2017). Differences in shareholder rights (e.g., La Porta et al., 2000) may influence how well a common owner can use information to influence an investee firm. Cultural distance may hinder effective communication between foreign investors and local stakeholders, making it challenging to gather accurate information regarding agents and their potentially effective competitive actions. Gathering information on their firms

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is more challenging if heterogeneous cultural norms guide divergent management styles and accounting standards (Han et al., 2010). Economic distance limits the foreign investor's familiarity with the local market dynamics, making obtaining comprehensive and up-to-date information to find the correct competitive actions more challenging. Financial distance may cause challenges for foreign institutional owners in assessing the reliability and comparability of financial information due to variations in financial reporting frameworks and disclosure requirements across countries. As such, the verification cost of private information increases with institutional distance (Bhaumik et al., 2018). Moreover, costs of comprehension and interpretation of accounting information from investee firms with foreign home countries are likely to increase (Kim et al., 2019). Lastly, political differences, such as corruption and government policy changes, can create uncertainties and additional information disadvantages (Ferreira et al., 2017).

The above arguments entail that investors are likely to suffer from an information disadvantage regarding more distant assets within their portfolio. Hence, we theorize that international common owners are less able to encourage indirect competition in foreign markets via competitive dissimilarity because it is harder for them to gather the necessary information, test its reliability, and serve as informational bridges for commonly owned rival firms. Hence, we expect that the relationship between common ownership and competitive dissimilarity is negatively affected by the cross-national distance between common owners and their rival firms.

Hypothesis 3. The relationship between common ownership and competitive dissimilarity is negatively moderated by the cross-national distance between common owners and the rival agent firms, such that the positive relationship becomes less (more) pronounced with increasing (decreasing) distance between shared principal common owners and the rival agent firms.

4 | RESEARCH DESIGN

4.1 | Data and sample

Our initial sample covers all firms listed in the MSCI All Country World Index from 2008 to 2017. This index draws from around 2500 large- and mid-cap stocks across 45–50 developed and emerging markets each year, representing about 85% of the free-float adjusted market capitalization.^{iv} We pulled the corresponding ownership data from the Thomson Reuters Institutional Holdings Database and used RavenPack News Analytics to download information on firms' competitive actions (Connelly et al., 2019; Steinberg et al., 2023). Financial data was extracted from Thomson Financial Datastream, and board data was extracted from BoardEx. Country-level data stem from various sources (Berry et al., 2010). We included all firms listed on the index at least once during the sample period. Following prior research, we eliminated institutional owners with equity positions smaller than 1% (Connelly et al., 2019).

Rival dyads, consisting of two firms operating in the same industry as defined by the same four-digit standard industry classification (SIC) code, served as the unit of analysis (Ferrier et al., 1999). After excluding firms without complete data on ownership or competitive actions, firms with headquarters in tax havens (Dharmapala & Hines, 2009), and firms from the financial industry (SIC code 6000-6999), 1574 entries from 46 countries and 214 distinct industries (defined by the four-digit SIC code) remain in the sample (see Appendix A1). The total number of distinct dyads is 14,816, while the number of dyad–years equals 74,930.

4.2 | Dependent variable—competitive dissimilarity

Following previous research (Connelly et al., 2019), we used competitive dissimilarity to study the effects of common ownership on firms' competitive behavior. *Competitive dissimilarity* is calculated as the Euclidean distance between the competitive action repertoires of the two firms in the dyad. Competitive actions are defined as "all externally directed, specific, and observable newly created moves initiated by a firm to enhance its competitive position" (Ferrier et al., 1999, p. 378). The definition further postulates that the actions must be implemented and observable to outsiders, for example, by being reported in the business press.

RavenPack News Analytics is an excellent source of data on competitive actions (Connelly et al., 2017; Steinberg et al., 2023). Using an algorithm, they scan over 19,000 international media outlets for reports on over 40,000 listed companies worldwide and classify the information into different categories. We grouped 354,874 first-reported actions into seven different action categories: product, capacity, pricing, marketing action, acquisitions, strategic alliances, and market expansions. Those categories, the focus on actual actions, and the average of 12.4 annual actions per firm align with prior research (Connelly et al., 2017, 2019).

Competitive dissimilarity of dyads reflects the overlap between the action repertoires via Euclidean distance. The portfolio vector P counts actions per firm, category, and year, with i and j being the two companies, k referring to each of the seven action categories, and t is the year. E equals zero if the competitive repertoires are identical (Connelly et al., 2019).

$$E(P_{it},P_{jt}) = \sqrt{\sum_{k=1}^{7} \left(p_{ikt} - p_{jkt}\right)^2}$$

4.3 | Independent variables and moderators

4.3.1 | Common ownership

We operationalize common ownership as the percentage overlap of institutional owners of a dyad (Connelly et al., 2019). We calculate this measure for each rival pair of two firms in the same four-digit SIC industry. First, we distinguish between common and disjoint institutional owners by searching for investors who hold shares in both or only one of the firms. Second, we determine the amount of ownership holdings allotted to both groups of owners, respectively. Third, we calculate the ratio of common ownership holdings to total institutional ownership holdings, employing the following formula:

Common Ownership_{ij} =
$$\frac{\sum_{k}^{C_{ij}} \text{COH}_{k}}{\sum_{k}^{C_{ij}} \text{COH}_{k} + \sum_{k}^{D_{ij}} \text{DOH}_{l}}$$

where C_{ij} is the total number of common institutional owners between firms *i* and *j*, while D_{ij} is the total number of disjoint institutional owners between firms *i* and *j*. COH and DOH denote the holdings by common and disjoint owners, respectively. The resulting number can range from 0—meaning no common ownership—to 1, indicating a full overlap (Connelly et al., 2019). We follow existing practices to aggregate the common ownership of several



FIGURE 1 Exemplary calculation of common ownership of two rival firms for three common owners.

institutional investors for a dyad of two rivals (e.g., Connelly et al., 2019). This practice also aligns with our theorizing as different common owners should all be aligned in their objective to maximize joint asset value—an argument that is central to our theory development. It is important to note that this number refers to the ratio of common ownership in relation to the institutional ownership of free-floating stock. This means that, for example, a high value of common ownership does not necessarily entail total control over the two firms by these common owners: there could be little free float, and/or many of the free-floating shares are held by individuals and do not count as institutional ownership. See Figure 1 for an exemplary illustration of calculating the common ownership measure in a case with three common owners.

4.3.2 | Competitive region overlap

Our second hypothesis focuses on the *motivation* of common owners to influence their firms' strategic actions. We argue that the motivation depends on the degree of competition in the geographical segments and whether the commonly owned firms operate in the same geographical segments. We create a variable that considers both of these aspects. First, based on all available domestic sales data in Datastream, we calculate the Herfindahl–Hirschman index per geographical region, industry segment, and year.^v Second, we reverse the Herfindahl–Hirschman index so that higher values indicate higher levels of competition. Third, we calculate the percentage of sales that originates from geographical regions where both commonly owned firms operate and thus compete. Fourth, we multiply the previously obtained scores and obtain our variable for *competitive region overlap*.^{vi}

4.3.3 | Cross-national distance

In our third hypothesis, we argue that institutional investors, in their role as informational bridges, will experience disadvantages when they are further away from the commonly owned firm,

thus reducing their *ability* to influence the strategic repertoire. As the nature of our theoretical argument outlined in the hypothesis section concerns distance in general (geographic and institutional), we create a composite index aligned with our theorizing (see Beugelsdijk et al., 2018). We create a variable to capture the distance between firms and owners based on the locations of their respective headquarters. Using data from Berry et al. (2010), we chose the administrative, cultural, economic, financial, political, and geographic distances relevant for institutional investors. Per dyad, we calculate two means for every type of distance, one between the common owners and firm A and one between the common owners and firm B. Next, we take the maximum value of these two means to capture the largest possible distance between the owner and the firm to reflect the greater difficulty of gathering information. Finally, we create one composite measure per dyad that sums up the six maximum values stemming from the distinct types of distances resulting in *cross-national distance*.^{vii}

4.4 | Control variables

We include a set of control variables from various levels that prior research has found to determine firms' strategies. At the firm level, we include firm size, defined as the natural logarithm of the number of employees; *board size* as the natural log of the number of board members; board independence, defined as the percentage of outside directors on each board; the financial indicators return on assets (ROA), sales growth, and Tobin's Q; as well as blockholder as the number of investors that hold at least 10% of the firm, ownership concentration measured as the Herfindahl-Hirschman index across all investors of the firm in a given year, and the share of foreign investors to take into account the general ownership structure. Following Connelly et al. (2019), we calculate these controls on a dyadic level, that is, as the sum of the values of the two rival firms. As a robustness check, we also calculated the quadratic differences for the financial control variables and firm size to account for potential consequences of disparities between the dyadic firms. Furthermore, we used firm resources as a variable to capture the differences in endowment with three different categories between the two dyadic firms (e.g., Connelly et al., 2019): first, financial capital (free cash flow); second, physical capital (property, plant, and equipment); and three, social capital (board members with multiple mandates). We calculated the Euclidean distance D_{ii} between firm i and firm j based on the standardized scores of the financial capital (F), the physical capital (P), and the social capital (S)according to the following formula:

$$D_{ij} = \sqrt{\left[\left(F_{i} - F_{j}\right)^{2} + \left(P_{i} - P_{j}\right)^{2} + \left(S_{i} - S_{j}\right)^{2}\right]}$$

At the industry level, we capture industry-specific effects by including dummies at the twodigit SIC level. We also control for the Herfindahl–Hirschman index, calculated based on firms' domestic sales in the given year grouped according to their two-digit SIC code (HHI main market). At the investor level, we include indicators of whether at least one investor of the dyad firms belongs to one of the three common types of institutional investors: *pension fund*, *foundation*, or *investment fund*. At the country level, we employ dummy variables for the *country* of origin for both dyadic firms. For every country within the sample, the dummy variable takes the value one if at least one of the two firms is from the respective country and zero otherwise. In addition, we control for whether one of the firms is from a *common law* country. Finally, we use a dummy variable for each *year* of observation to control for time effects and account for potential contemporaneous correlation (Certo & Semadeni, 2006). All continuous variables are winsorized at the 1% and 99% level.

4.5 | Method

To test our hypotheses, we follow prior literature and run 2SLS models (Connelly et al., 2019; Ochmichen et al., 2021). 2SLS models are an effective method for tackling endogeneity concerns (Semadeni et al., 2014). Since we predict that common ownership is positively associated with firms' competitive dissimilarity, it could be possible that investors choose the firms because they do not compete directly (Connelly et al., 2019). The Wooldridge test of endogeneity confirms this concern. For the validity of the 2SLS, the choice of the instruments is critical, and this is commonly assessed by several post-estimation tests (see Section 5). In choosing instrument variables, we follow Connelly et al. (2019), who instrument common ownership and present supporting post-estimation tests for the instruments' quality. The instrument variables are: lagged common ownership, portfolio scope, and squared portfolio scope. While we acknowledge that lagged versions of the endogenous variables are not ideal, they are regular choices when it is difficult to obtain fully exogenous instrument variables (Kesavan et al., 2014). We complement lagged common ownership with additional instruments, as this may improve the quality of the estimations (Hill et al., 2008). Thus, we include portfolio scope, which captures the average number of firms every investor owns, again averaged on a dyad level. Portfolio scope is likely to be positively correlated with common ownership as investors with large portfolios (e.g., BlackRock, Vanguard) are shareholders in most of the firms in the original sample and, thus, are more inclined to be common owners. However, the portfolio scope of investors is unlikely to have a direct, causal relationship with firms' competitive actions. In addition, we also include squared portfolio scope given that portfolio scope also has a quadratic relationship with common ownership (Connelly et al., 2019). We instrument the interaction of common ownership and the moderator variables in Hypotheses 2 and 3 using the interactions of the three instruments and the corresponding moderator variables. To attenuate concerns about reverse causality, we implement a one-year gap between the dependent and the other variables by lagging all variables besides competitive dissimilarity by 1 year. Finally, we cluster standard errors at the dyad level to account for within-dyad correlation across time (Petersen, 2009).

5 | RESULTS

5.1 | Descriptive statistics

Table 2 reports the means and standard deviations (SD) for the variables used in our regression analysis, and their pairwise correlations. Compared to Connelly et al. (2019), who use a domestic U.S. setting, we find a higher competitive dissimilarity likely due to greater differences between firms and strategies in our international setting. We can observe the opposite for common ownership, namely less common ownership in our international setting compared to the U.S. setting in Connelly et al. (2019). The correlation between common ownership and competitive dissimilarity is positive at 0.13, which provides a first indication for Hypothesis 1. At the same time, the correlations reveal that larger firms with more independent boards and more

TABLE 2 D	escrip	otive sta	tistics a	nd corr	elations	ċ															
		Mean	SD	1	2	3	4	S	9	7	80	6	10	п	12	13]	4	15	16	5	18
Comp. diss.	1	16.90	36.59																		
Comm. own.	7	0.17	0.19	0.13																	
Comp. reg. overlap	3	-0.23	1.22	-0.02	-0.08																
Cross-reg. distance	4	-0.34	1.14	-0.12	-0.46	0.11															
Firm size	5	18.53	2.64	0.28	0.02	-0.17	0.09														
Board size	9	17.00	4.29	0.10	0.12	-0.07	-0.10	0.28													
Board indep.	7	0.69	0.44	0.05	0.16	-0.05	-0.14	0.01	0.15												
ROA	8	0.09	0.14	0.09	0.00	-0.04	0.05	0.18	-0.02	-0.01											
Sales growth	6	1.03	3.38	0.01	0.00	0.02	-0.04	-0.17	-0.08	-0.02	-0.03										
Tobin's Q	10	3.88	2.30	0.09	0.18	0.02	-0.09	-0.13	-0.15	0.00	0.25	0.21									
Firm resources	11	1.54	1.33	0.20	-0.05	0.05	0.07	0.16	0.07	-0.02	-0.04	-0.04	-0.19								
Blockholder	12	1.29	0.83	-0.02	-0.19	0.00	0.12	-0.02	-0.05	-0.07	-0.07	0.08	0.02	-0.04							
Ownership conc.	13	0.14	0.12	-0.06	-0.30	0.01	0.17	0.02	-0.01	-0.08	-0.01	-0.01	-0.08	0.04	0.41						
Foreign investors	14	0.01	0.07	0.01	-0.01	-0.01	-0.03	-0.05	-0.05	0.02	-0.04	0.01	0.02	-0.02	0.02	-0.02					
Pension fund	15	0.44	0.50	-0.01	0.04	-0.02	-0.11	-0.08	0.00	0.02	-0.01	-0.01	-0.01	-0.09	-0.05	-0.05 -	-0.01				
Foundation	16	0.00	0.06	-0.01	0.01	-0.08	-0.03	0.01	0.02	0.03	0.01	-0.01	0.00	-0.01	-0.01	-0.03	0.01	0.02			
Investment fund	17	0.99	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	00.0	0.00	0.00	0.00	0.00	0.00	-0.01	0.00		
HHI main market	18	-0.11	1.06	-0.05	-0.24	-0.12	0.21	0.15	0.11	-0.09	0.03	-0.06	-0.14	0.08	0.11	0.18	-0.03	-0.01	0.02	-0.01	
Common law	19	0.85	0.36	0.04	0.13	00.00	-0.10	-0.15	0.11	0.17	-0.01	0.06	0.14	-0.06	-0.16	-0.22	0.02	0.06	0.02	0.02	-0.19
<i>Note:</i> $N = 74,930$ d	yad-yea	trs. All coi	rrelations	s greater ti	han or eq	lual to an	absolute v	/alue of 0.	0083 are :	significan	t at the 59	ő level.									

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resources are more likely to display greater competitive dissimilarity. Intuitively, higher ownership concentration is related to less common ownership. On the national level, firms in common-law countries exhibit higher values of common ownership and competitive dissimilarity.

5.2 | First-stage regression results

Appendix A2 presents the first-stage regression results of the 2SLS, in which we estimate *common ownership* and the interactions using our instruments (*lagged common ownership*, *portfolio scope*, and *squared portfolio scope*) and control variables. Consistent with theory, all instrument variables load positively and significantly (p < .01) on common ownership. We further evaluate the choice of instruments drawn from Connelly et al. (2019). First, the Kleibergen–Paap rk LM test checks for underidentification by testing the H0 that instruments are underidentified. In all models, H0 is rejected, confirming model identification. Second, the weak instrument test estimates the relevance and strength of the instruments. The reported values from the Kleibergen–Paap rk Wald *F*-statistic clearly exceed the Stock and Yogo (2005) critical value of 22.30 based on a 10% Stock–Yogo maximum IV size, thus rejecting the null that the instruments are weak.

5.3 | Hypothesis testing

Hypothesis 1 suggests that common ownership is positively associated with competitive dissimilarity. Model 1 in Table 3 reports the 2SLS model to test this hypothesis. The resulting positive coefficient ($\beta = 16.27$) is significant at p < .01. Thus, we can confirm the positive relation between common ownership and competitive dissimilarity for a global sample.

Models 2 and 3 in Table 3 add the interaction effects of *competitive region overlap* and *cross-national distance* with *common ownership*. In Hypothesis 2, we propose that common owners are more motivated to increase indirect competition if the firms operate in the same highly competitive geographical regions. Model 2 shows a statistically significant interaction term of *common ownership* and *competitive region overlap* ($\beta = 4.11$, p < .01). Thus, increasing overlap in regions with higher competition positively moderates the relationship between common ownership and competitive dissimilarity, supporting Hypothesis 2. We also confirm Hypothesis 3, which posits that the relation between common ownership and competitive dissimilarity is weaker for higher informational distances between the common owners and their held firms. In this scenario, common owners' ability to act as an information bridge will likely be limited. We find a significant negative interaction term of *common ownership* and *cross-national distance* ($\beta = -5.57$, p < .01).

Figure 2 (Panel A) illustrates the moderation effect of competitive region overlap on the common ownership and competitive dissimilarity relationship. The slope for both lines (i.e., the level of competitive dissimilarity) increases with higher common ownership. However, the slope for the high competitive region overlap (mean + 1SD in *competitive region overlap*) is steeper. Figure 2 (Panel B) illustrates the moderating impact of cross-national distance on the common ownership and competitive dissimilarity relationship. The increase in the slope is more drastic for low cross-national distances (mean - 1SD in *cross-national distance*). Both results corroborate our arguments about the underlying mechanisms.

To facilitate the economic interpretation of our results, we consider the impact of a large institutional investor becoming a common owner in a dyad. Our sample shows that, on average,

TABLE 3 Results of hypothesis testing.

	Model 1	Model 2	Model 3
Method	2SLS	2SLS	2SLS
Dependent variable	Competitive	dissimilarity	
Common ownership	16.266***	17.092***	14.771***
	[.000]	[.000]	[.000]
Common ownership \times competitive region overlap		4.110***	
		[.000]	
Common ownership \times cross-national distance			-5.565***
			[.003]
Control variables			
Competitive region overlap		0.450***	0.321**
		[.001]	[.014]
Cross-national distance		-0.350	0.252
		[.216]	[.350]
Firm size	3.361***	3.381***	3.387***
	[.000]	[.000]	[.000]
Board size	0.432***	0.427***	0.415***
	[.000]	[.000]	[.000]
Board independence	0.484	0.460	0.453
	[.304]	[.330]	[.340]
Return on assets	-1.004	-0.779	-0.921
	[.443]	[.557]	[.485]
Sales growth	0.166***	0.167***	0.166***
	[.000]	[.000]	[.000]
Tobin's Q	0.693***	0.686***	0.685***
	[.000]	[.000]	[.000]
Firm resources	6.319***	6.312***	6.295***
	[.000]	[.000]	[.000]
Blockholder	-0.366	-0.365	-0.302
	[.235]	[.233]	[.318]
Ownership concentration	1.945	2.064	2.127
	[.309]	[.283]	[.268]
Foreign investors	-0.326	-0.209	-0.030
	[.916]	[.946]	[.992]
Pension fund	-1.469***	-1.454^{***}	-1.478^{***}
	[.001]	[.001]	[.001]
Foundation	-6.600***	-6.646***	-6.386**
	[.009]	[.007]	[.013]

FABLE 3 (Continue	d)
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	Model 1	Model 2	Model 3
Method	2SLS	2SLS	2SLS
Dependent variable	Competitive	dissimilarity	
Investment fund	15.017	14.829	16.234
	[.125]	[.128]	[.113]
HHI main market	0.130	0.117	0.132
	[.529]	[.570]	[.525]
Common law	1.858**	1.995**	2.053**
	[.034]	[.020]	[.017]
Constant	-92.180***	-92.441***	-93.379***
	[.000]	[.000]	[.000]
Year effects	Yes	Yes	Yes
Industry effects	Yes	Yes	Yes
Country effects	Yes	Yes	Yes
<i>R</i> -squared	0.312	0.312	0.312
# of observations	74,930	74,930	74,930

Notes: p-Values appear in parentheses below coefficients.

*, **, and *** denote statistical significance at the .1, .05, and .01 level, respectively.

BlackRock holds 4.95% of the stock in firms in which it is invested. In the following, we assess the hypothetical impact of BlackRock^{viii} becoming a common owner on the competitive dissimilarity in a dyad. For the average dyad, the resulting increase of common ownership by 4.95% is associated with an increase of 0.8 from 16.9 to 17.7 in competitive dissimilarity. This appears to be a significant increase as it would translate into 0.3 additional differing actions between two rival firms across all action categories (i.e., product, capacity, pricing, marketing action, acquisitions, strategic alliances, and market expansions) in case the dissimilarity results equally from all action categories.^{ix} For Hypothesis 2, when the commonly owned firms are operating in more of the same and highly competitive geographical segments (mean + 1SD in *competitive* region overlap), an additional common owner with the average investment size of BlackRock (mean + 4.95%) results in an increase of about 1.08 in competitive dissimilarity, which is 35% ((1.08 - 0.8)/0.8) larger than when competitive region overlap is at its mean.^x For Hypothesis 3, for firms with common owners located in more distant countries (mean + 1SD in cross-national distance), we find that for additional common ownership in the size of the average BlackRock investment (mean + 4.95%), competitive dissimilarity increases by 0.41 and thus by 48.75% ((0.41 - 0.8)/0.8) less compared to holding cross-national distance at its mean.^{xi}

5.4 | Robustness checks

We conduct a battery of tests to validate our results. To begin with, we rerun our main tests using alternative regression techniques. Following prior research (Hennig et al., 2023), we first complement our 2SLS regressions with OLS regressions, which allows us to compare our results

(a) Competitive region overlap



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FIGURE 2 The moderating effects of competitive region overlap and cross-national distance on the common ownership and competitive dissimilarity relationship.

against the influence of weak instruments and further assess their robustness. The results (available upon request) broadly support our hypotheses and, thus, our results' robustness.

Second, given the structure of our longitudinal dataset in which dyads are nested within industries, they might be likely more similar to each other than to dyads from different industries since they deal with comparable external prerequisites. Consequentially, we rerun our analysis using panelized hierarchical linear modeling (HLM). This method allows us to model both within- and between-industry variance in our data, capture partial interdependency, and account for autocorrelation and heteroscedasticity (cf., Connelly et al., 2017; Hofmann, 1997). The results (available upon request) again support our hypotheses.

Third, we apply alternative specifications of our moderator variables. For *competitive region overlap*, we first apply an alternative categorization of the following geographical regions: North America, South America, Europe, Africa, Asia, and Oceania. Second, we apply one-digit SIC codes instead of categorizing industries along two-digit SIC codes. Third, we only consider firms' three largest geographical regions to determine relevant sales overlaps. Across all specifications, we find robust results (available upon request). For *cross-national distance*, we run tests using the types of distances individually. The results (available upon request) show negative and significant coefficients for the interactions between common ownership and the administrative, cultural, economic, political, and geographical distance, while only for financial distance, the coefficient becomes non-significant but stays negative.

Fourth, we ensure that our results are not driven by "joint" control variables, that is, the sum of the values of the respective dyadic firms. Instead of the joint financial firm variables, we include the quadratic difference between the dyadic firms for each variable. The results (available upon request) remain robust.

Fifth, in our main tests, we control for country effects of the firms' origins using country dummies and the variable *common law*. While the country dummy variables potentially capture a broad portfolio of influences, we now include a number of specific country-level variables that could affect firms' competitive dissimilarity. Given the highlighted importance of countries' legal systems and resulting rights and transparency for investors, we control for firms' home country's: (1) legal origin as proposed by La Porta et al. (1999) in the form of dummy variables

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(English, French, German, Socialist, and Scandinavian), (2) rule of law index by La Porta et al. (1998), and (3) anti-self-dealing index introduced by Djankov et al. (2008). The results (available upon request) are insensitive to these specifications.

Sixth, in our main analysis, we control for specific types of investors. In addition to the country dummy variables for the origin of the dyad firms, we now include country dummy variables for the home country of the largest investor to more broadly capture the influence of the investors' background on the competitive dissimilarity in the dyad. The results (available upon request) again provide consistent evidence in line with our main model.

Seventh, the observed effects could also result from selection effects of common owners investing in strategic dissimilar companies instead of common owners influencing their firms towards more strategic dissimilarity. To further attenuate such concerns about reverse causality beyond the one-year gap between our independent and dependent variables in our 2SLS regressions, we extended the time gap between the independent and dependent variables and reversed the independent and dependent variables (results available upon request). In the tests with the extended time lags, we continue to find support for the hypothesized relationship between common ownership and competitive dissimilarity. However, when we reverse the structure and use competitive dissimilarity as the independent variable and common ownership as the dependent variable, the results fail to report statistically significant relationships. These results suggest that the hypothesized direction will likely be the predominant one.

5.5 | Additional analysis—performance implications

While we do not directly hypothesize the performance effects of competitive dissimilarity induced by common ownership, our arguments follow the logic that principals aim to maximize their aggregated portfolio value. This results in the assumption that common owners' induced behavior increases the joint performance of the two rival firms; focusing only on one firm's performance would thus only have limited meaning. To test this assumption, we employ ROA as an accounting-based performance measure and Tobin's *Q* as a market-based performance measure. We regress competitive dissimilarity on a rival dyad's joint return on assets and joint Tobin's *Q*, using an HLM model including our standard set of control variables and industry, country, and year fixed effects (see Table 4). We find positive and significant relationships between competitive dissimilarity and both joint ROA and Tobin's *Q*, respectively.

5.6 | Additional tests—context analysis

We explore additional contexts to further examine the validity of our theoretical arguments linking common ownership with the dissimilarity of rival firms. We, thus, test these contexts as moderators for our main relationship. First, we consider country-based institutions that warrant investors with more influence regarding their owned firms. Specifically, we test whether investor protection in the form of the anti-director-rights index and the rule of law index by La Porta et al. (1998) positively moderate the main relationship. The results (available upon request) show the expected positive and significant moderating relationships with *p*-values ranging from .001 to .077, depending on the operationalization. Second, we focus on the common owners' relative presence in the countries of the dyad. A stronger relative presence should increase the likelihood of possessing specialists and, therefore, greater access to information channels. In

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TABLE 4 Additional tests.

	Model 1	Model 2
Method	HLM	HLM
Dependent variable	Joint ROA	Joint Tobin's Q
Competitive dissimilarity	0.135***	0.013***
	[.000]	[.000]
Control variables		
Firm size	-11.857***	0.618***
	[.000]	[.000]
Board size	-2.102***	-0.166***
	[.000]	[.000]
Board independence	-6.232***	-0.358***
	[.000]	[.003]
Sales growth	2.819***	-0.253***
	[.000]	[.000]
Firm resources	1.221***	-0.119***
	[.000]	[.009]
Blockholder	-3.539***	-1.628***
	[.000]	[.000]
Ownership concentration	-13.576***	1.972***
	[.000]	[.000]
Foreign investors	-17.202***	-8.553***
	[.000]	[.000]
Pension fund	7.579***	0.09
	[.000]	[.453]
Foundation	17.454**	0.443
	[.010]	[.650]
Investment fund	6.340	1.812
	[.890]	[.788]
HHI main market	4.103***	0.037
	[.000]	[.557]
Common law	16.139***	0.365*
	[.000]	[.078]
Constant	562.430***	-8.935
	[.000]	[.208]
Year effects	Yes	Yes
Industry effects	Yes	Yes
Country effects	Yes	Yes
Wald Chi-square	0.401	18,087
# of observations	74,930	74,930

Note: p-Values appear in parentheses below coefficients. Variables of interest are scaled by 100.

*, **, and *** denote statistical significance at the .1, .05, and .01 level, respectively.

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turn, it should positively moderate our main relationship. Per common owner, we aggregate all investments in the investee's country and scale it by all investments of the common owner to obtain the relevance of a specific country in the common owner's portfolio. We then compute the mean of this ratio across all common owners in the dyad. The results (available upon request) show a positive and marginally significant moderating relationship, suggesting a stronger influence of common ownership when the common owners are more present in the countries of the dyad. Third, we investigate the role of non-common blockholders as they can severely limit the influence of other investors and, thus, also of common owners. We, thus, expect a negative moderation effect. We operationalize blockholders as a dummy variable indicating whether, in both firms, there are investors holding more than 20% (10%) of the shares. We especially focus on the existence of blockholders in both firms, as common owners could still achieve competitive dissimilarity by only influencing the strategy of one of the two rival firms. The results (available upon request) show negative and highly significant moderating relationships for both operationalizations of blockholders. Collectively, we find results that align with our expectations across all contexts.

6 | DISCUSSION AND CONCLUSION

In this study, we suggest that a global perspective provides a unique opportunity to enrich our understanding of the relationship between common institutional ownership and the competition between rival firms. We build on the core concepts of agency theory, goal alignment, and information asymmetries (e.g., Eisenhardt, 1989; Kim et al., 2019; Oxelheim & Randøy, 2005). Based on these concepts, we theorize how the shared-principal framework of rival agents (Connelly et al., 2019) can be adapted to a global competition context. We leverage the global context to theoretically refine the mechanisms of the shared principal-agent framework. Specifically, we discuss mitigating effects we draw from IB literature (related to the level of competition and cross-national distance) influencing common owners' motivation and ability to curb rivals' competition. We, thus, expand our understanding of whether and under which conditions shared principals encourage competitive dissimilarity between their rival agents on a global scale.

Our findings indicate that common ownership positively influences rival firms' competitive dissimilarity in global markets. Moreover, this positive effect is amplified by increasing competitive region overlap between two rivals. This positive moderation effect is driven by common owners' perception of potential cannibalization between the rivals. Investors are only *motivated* to foster indirect competition if they perceive the firms (agents) to be rivals—with too intense competition between them potentially harming the joint asset value due to cannibalization. Lastly, we provide evidence that greater geographic and institutional distance between common owners and their firms also mitigates the positive relation between common owners face information asymmetry and disadvantages, making them less *able* to influence their agents' strategizing.

6.1 | Theoretical contributions

We contribute to the literature in the following ways. First, we contribute to the literature on agency theory (e.g., Hill & Jones, 1992; Oehmichen et al., 2021) and specifically the shared

principal-agent model (Connelly et al., 2019). Integrating a motivation-ability perspective (e.g., Chang et al., 2012) into the shared principal-agent model offers an intuitive way to theorize about investor heterogeneity and the potential mechanisms through which common ownership influences competition within firms. As such, we address calls "to uncover boundary conditions to the agency relationships" (Connelly et al., 2019, p. 16) by showcasing that crossnational distance curbs shared principals' *ability* to influence their agents and that perceived competition affects their *motivation* to do so. Moreover, while agency theory is well-established in IB literature, much of our knowledge of its global applications comes from studies on MNE-subsidiary relationships (e.g., Kostova et al., 2018) or the roles of managers, their compensation, and their relationships with boards and owners (e.g., Hüttenbrink et al., 2014; Oehmichen et al., 2022; Oxelheim & Randøy, 2005). We, thus, advance this line of research by increasing the yet limited understanding of how principals' strategic goals and access to information may vary depending on institutional owner type (location) and owners' investment portfolio.

Second, we contribute to the literature on ownership and strategy in the global context (Cuervo-Cazurra et al., 2023; Ferreira et al., 2017; Kacperczyk et al., 2021; Shi et al., 2021) by integrating the phenomenon of common institutional ownership (e.g., Antón et al., 2023; Azar et al., 2018; DesJardine, Grewal, & Viswanathan, 2023; Qiang et al., 2024; Schmalz, 2018, 2021) and expanding the underlying theory to reflect a broader global perspective. The analysis of common ownership was theoretically and empirically focused on domestic market competition with relatively narrow definitions of rivalry, for example, around specific product markets (Antón et al., 2023; Azar et al., 2018) and domestic industry classifications (Connelly et al., 2019; Ramalingegowda et al., 2021). We theorize and provide empirical evidence that the effects of common ownership expand beyond national borders as long as the common owner perceives a threat of cannibalization between rival agents, as is the case with global competition. We, thus, show that common owners' influence as strategists can be more far-reaching than generally expected. Our study also highlights the common owner as a unique type of owner-strategist with valuable insights beyond those of typical global owners, enabling distinctive strategic actions. At the same time, this type of owner shapes the focal firm's strategy to align with the overarching investment portfolio, even if it contradicts the focal firm's interests. In that sense, our findings on a potentially sub-optimal influence of certain types of foreign owners on competition provide an important complement to studies highlighting the efficiencyenhancing benefits of foreign ownership (e.g., Albuquerque et al., 2009; Kacperczyk et al., 2021).

Moreover, we emphasize investor heterogeneity as an important factor in common ownership studies. In doing so, we align with recent research examining domestic common owners' heterogeneity, particularly regarding their long-term commitment (DesJardine, Grewal, & Viswanathan, 2023; DesJardine, Shi, & Cheng, 2023). We extend this discussion by focusing on the cross-national distance between common owners and their firms. We explain that with increasing distance, investors face greater information disadvantages and information asymmetry, reducing their ability to influence their agents. Emphasizing information asymmetry, a core element in agency conflicts (see, e.g., Oehmichen et al., 2021), is integral to the debate on the generalizability of the common ownership findings to other country contexts (Boot et al., 2022; Hennig et al., 2022), particularly as many common owners in non-U.S. markets are headquartered in the U.S. From a broader perspective, treating common owners as a homogenous group may obscure nuances of common ownership effects. This suggests the need for future research to explore other investor heterogeneities than those caused by distance, such as the distinctions between private investors, including corporates and financial institutions versus state-owned investors (Cuervo-Cazurra et al., 2023) or the distinction between different investors' investment horizons (DesJardine et al., 2022).

6.2 | Managerial and policy implications

Our academic insights present implications for both managers and policymakers. For instance, managers of firms in industries with active common owners should be aware that common ownership may influence competitive strategies between rival firms, particularly in global markets. Accordingly, firms should expand their competitor analysis to include not only the competitive actions of rivals but also their ownership structures to understand competitive dynamics in the global market better.

Furthermore, policymakers from various jurisdictions should enhance collaboration to increase transparency in the ownership structures of large public firms, particularly in global sectors where common ownership is common. Policymakers, other investors, and consumers could better understand the possible ramifications for global market competition and strategic behavior with clear disclosures, especially in cross-border settings.

6.3 | Limitations and directions for future research

Our study has limitations that provide opportunities for future research. We empirically investigate an aggregate of common ownership by several institutional investors as is commonly done in the literature (e.g., Connelly et al., 2019). In line, our theoretical framework assumes that all common owners share an equal interest in maximizing the overall value of their assets. However, this approach may overlook a more multifaceted nature of ownership goals and potential conflicts between owners. For instance, we did not consider owner heterogeneity in prioritizing economic versus ecological and social goals (Desender & Epure, 2021) or different investment horizons (DesJardine et al., 2022). Future studies could uncover how the heterogeneity and interactions among common owners affect markets' competitive dynamics.

Secondly, while we conducted several tests to strengthen the reliability of our empirical evidence, such as the 2SLS estimation and tests for reverse causality, we cannot entirely ascertain the causality of the effects observed. Future research could explore additional methods to establish causality, such as utilizing exogenous shocks (e.g., Antón et al., 2023; DesJardine, Grewal, & Viswanathan, 2023) in global equity markets or directly testing the theorized causal mechanisms in settings that allow so. While we are unable to test causal mechanisms directly and must rely on initial evidence from interviews or public examples (e.g., DesJardine, Grewal, & Viswanathan, 2023; DesJardine, Shi, & Cheng, 2023; Shekita, 2022), certain empirical settings, such as venture capital, might be more suitable for identifying and testing these often covert mechanisms.

Thirdly, our study faces data-related constraints. Our measure of regions is rather broad and serves as a rough proxy for competition. This is because companies operating in the same region may not directly compete if they are operating in different countries. Unfortunately, our data from Datastream does not allow us to resolve this issue, as it gathers regional activity information from firms' annual reports, which is often non-standardized and lacks specificity regarding activity per country on a global scale. Future research could benefit from accessing more granular data, enabling a finer analysis of competitive overlap. Furthermore, our dataset lacks

adequate information regarding potential regional offices operated by institutional investors, which likely play a crucial role in reducing information disadvantages due to distance. While incorporating local offices into our distance measures could refine accuracy, their absence likely leads to underestimating distance effects, as firms with nearby local offices are treated as if they face the full headquarter distance. Thus, the observed effects are rather conservative and would likely strengthen with a more precise measure. Lastly, our sample, based on the MSCI All Country World Index, consists of the largest publicly listed companies globally, resulting in a predominance of U.S. and Japanese firms. Although robustness checks mitigate concerns about these firms disproportionately influencing our results (available upon request), it is important to recognize the significant presence of companies from these two institutional backgrounds in our analysis. This might also be crucial since, depending on the country context, different types of owners, such as the state (Cuervo-Cazurra et al., 2023) or families (Kano & Verbeke, 2018), might complement the common institutional investors of our study. As these different owner types tend to follow different goals, for example, concerning their investment horizon, they likely represent boundary conditions influencing the impact of common institutional investors.

Finally, we focus on how distance affects information asymmetry, finding that distance has a greater impact than other factors in our context. However, many studies emphasize foreign investors' information advantages over local investors (e.g., Albuquerque et al., 2009; Steinberg et al., 2023). Accordingly, future research should explore contexts where foreign common ownership could be an asset rather than a liability (e.g., Steinberg et al., 2023).

ACKNOWLEDGEMENTS

We thank our editor, Prof. Anna Grosman, and two anonymous reviewers for their thoughtful and constructive feedback during the revision process, as well as reviewers and participants at the Academy of Management Annual Meeting 2020 for their insights on an earlier version.

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ENDNOTES

ⁱ For example, in 2014, both Facebook and LinkedIn which have shared several investors, aimed to expand their user base. However, their approaches diverged significantly. Facebook pursued growth via diverse acquisitions, while LinkedIn prioritized expansion within its core business and through internationalization (cf., Arruda, 2014; Dickey, 2014; Hartung, 2014; Kelly, 2014). Please note that this is solely an illustrative example and does not assume causality.

ⁱⁱ "Req queen" competition refers to a competitive dynamic where firms continually adapt and intensify competition to keep up with their rivals (Derfus et al., 2008).

- ⁱⁱⁱ For instance, if China's economy accounts for just under 18% of global GDP a truly global firm's sales in China relative to its aggregated worldwide sales should be about 18%.
- ^{iv} The index provides us with a clear logic to construct our sample. However, about 10% of the observations in our final sample have no foreign sales and are therefore likely to mostly operate domestically. When we exclude these observations, our results (available upon request) become stronger as we would have expected due to a closer alignment with our theorizing.
- ^v The geographical regions are North America, Central America, South America, Europe, Africa, Middle East, Central Asia, East Asia, South Asia, Southeast Asia, and Oceania.

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- ^{vi} In unreported tests, we test several alternative operationalizations of this measure. First, we apply an alternative categorization of the following geographical regions: North America, South America, Europe, Africa, Asia, and Oceania. Second, instead of categorizing industries along two-digit SIC codes, we apply one-digit SIC codes. Third, we only consider firms' three largest geographical regions to determine relevant overlaps in their sales. Throughout all analyses, our results support our hypotheses and remain highly significant.
- ^{vii} In unreported tests, we run the distances based on the individual types of distances and find consistent results with our main analysis. Only for the interaction term including financial distance we find that the effect does not remain significant.
- viii For those that prefer interpretation of effect sizes in SD-variation: We find that an increase in common ownership of one SD from the mean results in an increase of about 7.9% of the SD of competitive dissimilarity for H1. For H2, when the commonly owned firms are operating in more of the same and highly competitive geographical segments (mean + 1SD in *competitive region overlap*), a higher share of common ownership (mean + 1SD) even results in an increase of about 10.7% of the SD of competitive dissimilarity. For H3, for firms with common owners from countries further away (mean + 1SD in *cross-national distance*), we find that for a higher share of common ownership (mean + 1SD) competitive dissimilarity only increases by 4.1% of its SD.
- ^{ix} For the case where the dissimilarity results equally from all action categories between two rival firms, the calculation based on our variable definition looks as follows: $\sqrt{\frac{17.7^2}{7}} \sqrt{\frac{16.9^2}{7}} = 0.30$.
- ^x For the case where the dissimilarity results equally from all action categories between two rival firms, the increase of common ownership would result in 0.64 additional differing action $(\sqrt{\frac{18.6^2}{7}} \sqrt{\frac{16.9^2}{7}} = 0.64)$.
- ^{xi} For the case where the dissimilarity results equally from all action categories between two rival firms, the increase of common ownership would result in 0.04 additional differing action $(\sqrt{\frac{17^2}{7}} \sqrt{\frac{16.9^2}{7}} = 0.04)$.

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How to cite this article: Steinberg, P. J., Hennig, J. C., Oehmichen, J., & Heigermoser, J. (2025). Common ownership and competitive dissimilarity: A global perspective on competition and institutional ownership. *Global Strategy Journal*, 1–36. <u>https://doi.org/10.1002/gsj.1519</u>

APPENDIX A

т	A	BL	Е	A1	Country	overview.
-	1 2		-	1	country	0,01,10,00

Argentina 1 0.06% 0.00 38.19 Australia 48 3.03% 0.13 9.03 Austria 6 0.38% 0.07 15.28 Belgium 7 0.44% 0.18 19.50 Brazil 14 0.88% 0.13 4.85 Canada 72 4.55% 0.10 6.50 Chile 6 0.38% 0.06 9.21 China 19 1.20% 0.16 14.82 Colombia 4 0.25% 0.02 1.10 Czech Republic 1 0.06% 0.07 42.40 Denmark 14 0.88% 0.12 12.98 Finland 12 0.76% 0.13 9.20 France 64 4.04% 0.11 18.84 Germany 41 2.59% 0.17 30.18 Greece 4 0.25% 0.10 8.60 Hong Kong SAR 24 1.	Country	# of firms	% of firms	Mean CO	Mean CD
Australia 48 3.03% 0.13 9.03 Austria 6 0.38% 0.07 15.28 Belgium 7 0.44% 0.18 19.50 Brazil 14 0.88% 0.13 4.85 Canada 72 4.55% 0.10 6.50 Chile 6 0.38% 0.06 9.21 China 19 1.20% 0.16 14.82 Colombia 4 0.25% 0.02 1.10 Czech Republic 1 0.06% 0.07 42.40 Denmark 14 0.88% 0.12 12.98 Finland 12 0.76% 0.13 9.20 France 64 4.04% 0.11 18.84 Germany 41 2.59% 0.17 30.18 Greece 4 0.25% 0.10 8.60 Hong Kong SAR 24 1.52% 0.11 3.82 India 5 0.32% </td <td>Argentina</td> <td>1</td> <td>0.06%</td> <td>0.00</td> <td>38.19</td>	Argentina	1	0.06%	0.00	38.19
Austria60.38%0.0715.28Belgium70.44%0.1819.50Brazil140.88%0.134.85Canada724.55%0.106.50Chile60.38%0.069.21China191.20%0.1614.82Colombia40.25%0.021.10Czech Republic10.06%0.0742.40Denmark140.88%0.1212.98Finland120.76%0.139.20France644.04%0.1118.84Germany412.59%0.1730.18Greece40.25%0.108.60Hong Kong SAR241.52%0.113.82India50.32%0.115.34Ireland191.20%0.2817.28	Australia	48	3.03%	0.13	9.03
Belgium 7 0.44% 0.18 19.50 Brazil 14 0.88% 0.13 4.85 Canada 72 4.55% 0.10 6.50 Chile 6 0.38% 0.06 9.21 China 19 1.20% 0.16 14.82 Colombia 4 0.25% 0.02 1.10 Czech Republic 1 0.06% 0.07 42.40 Denmark 14 0.88% 0.12 12.98 Finland 12 0.76% 0.13 9.20 France 64 4.04% 0.11 18.84 Germany 41 2.59% 0.17 30.18 Greece 4 0.25% 0.10 8.60 Hong Kong SAR 24 1.52% 0.11 3.82 India 68 4.29% 0.09 17.63 Indonesia 5 0.32% 0.11 5.34 Ireland 19 1.20%<	Austria	6	0.38%	0.07	15.28
Brazil 14 0.88% 0.13 4.85 Canada 72 4.55% 0.10 6.50 Chile 6 0.38% 0.06 9.21 China 19 1.20% 0.16 14.82 Colombia 4 0.25% 0.02 1.10 Czech Republic 1 0.06% 0.07 42.40 Denmark 14 0.88% 0.12 12.98 Finland 12 0.76% 0.13 9.20 France 64 4.04% 0.11 18.84 Germany 41 2.59% 0.17 30.18 Greece 4 0.25% 0.10 8.60 Hong Kong SAR 24 1.52% 0.11 3.82 India 68 4.29% 0.09 17.63 Ireland 19 1.20% 0.28 17.28 Israel 10 0.63% 0.09 19.64	Belgium	7	0.44%	0.18	19.50
Canada 72 4.55% 0.10 6.50 Chile 6 0.38% 0.06 9.21 China 19 1.20% 0.16 14.82 Colombia 4 0.25% 0.02 1.10 Czech Republic 1 0.06% 0.07 42.40 Denmark 14 0.88% 0.12 12.98 Finland 12 0.76% 0.13 9.20 France 64 4.04% 0.11 18.84 Germany 41 2.59% 0.17 30.18 Greece 4 0.25% 0.10 8.60 Hong Kong SAR 24 1.52% 0.11 3.82 India 68 4.29% 0.09 17.63 Indonesia 5 0.32% 0.11 5.34 Ireland 19 1.20% 0.28 17.28 Israel 10 0.63% 0.09 19.64	Brazil	14	0.88%	0.13	4.85
Chile60.38%0.069.21China191.20%0.1614.82Colombia40.25%0.021.10Czech Republic10.06%0.0742.40Denmark140.88%0.1212.98Finland120.76%0.139.20France644.04%0.1118.84Germany412.59%0.1730.18Greece40.25%0.108.60Hong Kong SAR241.52%0.113.82India684.29%0.0917.63Indonesia50.32%0.115.34Ireland191.20%0.2817.28	Canada	72	4.55%	0.10	6.50
China191.20%0.1614.82Colombia40.25%0.021.10Czech Republic10.06%0.0742.40Denmark140.88%0.1212.98Finland120.76%0.139.20France644.04%0.1118.84Germany412.59%0.1730.18Greece40.25%0.108.60Hong Kong SAR241.52%0.113.82India684.29%0.0917.63Indonesia50.32%0.115.34Ireland191.20%0.2817.28	Chile	6	0.38%	0.06	9.21
Colombia40.25%0.021.10Czech Republic10.06%0.0742.40Denmark140.88%0.1212.98Finland120.76%0.139.20France644.04%0.1118.84Germany412.59%0.1730.18Greece40.25%0.108.60Hong Kong SAR241.52%0.113.82India684.29%0.0917.63Indonesia50.32%0.115.34Ireland191.20%0.2817.28Israel100.63%0.0919.64	China	19	1.20%	0.16	14.82
Czech Republic 1 0.06% 0.07 42.40 Denmark 14 0.88% 0.12 12.98 Finland 12 0.76% 0.13 9.20 France 64 4.04% 0.11 18.84 Germany 41 2.59% 0.17 30.18 Greece 4 0.25% 0.10 8.60 Hong Kong SAR 24 1.52% 0.11 3.82 India 68 4.29% 0.09 17.63 Indonesia 5 0.32% 0.11 5.34 Ireland 19 1.20% 0.28 17.28 Israel 10 0.63% 0.09 19.64	Colombia	4	0.25%	0.02	1.10
Denmark140.88%0.1212.98Finland120.76%0.139.20France644.04%0.1118.84Germany412.59%0.1730.18Greece40.25%0.108.60Hong Kong SAR241.52%0.113.82India684.29%0.0917.63Indonesia50.32%0.115.34Ireland191.20%0.2817.28	Czech Republic	1	0.06%	0.07	42.40
Finland120.76%0.139.20France644.04%0.1118.84Germany412.59%0.1730.18Greece40.25%0.108.60Hong Kong SAR241.52%0.113.82India684.29%0.0917.63Indonesia50.32%0.115.34Ireland191.20%0.2817.28Israel100.63%0.0919.64	Denmark	14	0.88%	0.12	12.98
France644.04%0.1118.84Germany412.59%0.1730.18Greece40.25%0.108.60Hong Kong SAR241.52%0.113.82India684.29%0.0917.63Indonesia50.32%0.115.34Ireland191.20%0.2817.28Israel100.63%0.0919.64	Finland	12	0.76%	0.13	9.20
Germany412.59%0.1730.18Greece40.25%0.108.60Hong Kong SAR241.52%0.113.82India684.29%0.0917.63Indonesia50.32%0.115.34Ireland191.20%0.2817.28Israel100.63%0.0919.64	France	64	4.04%	0.11	18.84
Greece40.25%0.108.60Hong Kong SAR241.52%0.113.82India684.29%0.0917.63Indonesia50.32%0.115.34Ireland191.20%0.2817.28Israel100.63%0.0919.64	Germany	41	2.59%	0.17	30.18
Hong Kong SAR241.52%0.113.82India684.29%0.0917.63Indonesia50.32%0.115.34Ireland191.20%0.2817.28Israel100.63%0.0919.64	Greece	4	0.25%	0.10	8.60
India 68 4.29% 0.09 17.63 Indonesia 5 0.32% 0.11 5.34 Ireland 19 1.20% 0.28 17.28 Israel 10 0.63% 0.09 19.64	Hong Kong SAR	24	1.52%	0.11	3.82
Indonesia 5 0.32% 0.11 5.34 Ireland 19 1.20% 0.28 17.28 Israel 10 0.63% 0.09 19.64	India	68	4.29%	0.09	17.63
Ireland 19 1.20% 0.28 17.28 Israel 10 0.63% 0.09 19.64	Indonesia	5	0.32%	0.11	5.34
Israel 10 0.63% 0.09 19.64	Ireland	19	1.20%	0.28	17.28
	Israel	10	0.63%	0.09	19.64
Italy 19 1.20% 0.14 5.51	Italy	19	1.20%	0.14	5.51
Japan 174 10.98% 0.13 11.59	Japan	174	10.98%	0.13	11.59
Luxembourg 5 0.32% 0.11 2.34	Luxembourg	5	0.32%	0.11	2.34
Malaysia 16 1.01% 0.08 9.95	Malaysia	16	1.01%	0.08	9.95
Mexico 17 1.07% 0.15 3.47	Mexico	17	1.07%	0.15	3.47
Morocco 1 0.06% 0.00 21.83	Morocco	1	0.06%	0.00	21.83
Netherlands 28 1.77% 0.17 26.42	Netherlands	28	1.77%	0.17	26.42
New Zealand 5 0.32% 0.08 8.68	New Zealand	5	0.32%	0.08	8.68
Norway 7 0.44% 0.05 23.82	Norway	7	0.44%	0.05	23.82
Papua New Guinea 1 0.06% 0.09 1.95	Papua New Guinea	1	0.06%	0.09	1.95
Philippines 7 0.44% 0.10 12.68	Philippines	7	0.44%	0.10	12.68
Poland 13 0.82% 0.10 7.32	Poland	13	0.82%	0.10	7.32
Portugal 7 0.44% 0.10 9.76	Portugal	7	0.44%	0.10	9.76
Russia 2 0.13% 0.04 0.27	Russia	2	0.13%	0.04	0.27
Singapore 15 0.95% 0.03 10.68	Singapore	15	0.95%	0.03	10.68
South Africa 37 2.34% 0.14 8.15	South Africa	37	2.34%	0.14	8.15

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TABLE A1 (Continued)

Country	# of firms	% of firms	Mean CO	Mean CD
South Korea	32	2.02%	0.11	21.10
Spain	23	1.45%	0.14	10.13
Sweden	19	1.20%	0.07	19.92
Switzerland	30	1.89%	0.19	15.80
Taiwan	25	1.58%	0.19	30.26
Thailand	13	0.82%	0.03	4.71
Turkey	11	0.69%	0.09	13.04
United Arab Emirates	1	0.06%	0.00	0.71
United Kingdom	99	6.25%	0.17	14.36
United States	538	33.96%	0.29	22.27
Total	1574	100%	0.17	16.69

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TABLE A2 First-stage regression results.

	H1 CO	H2		H3	
		со	Interaction	со	Interaction
Lag of CO	0.749***	0.737***	0.000	0.734***	-0.043***
	[.000]	[.000]	[.933]	[.000]	[.000]
Portfolio scope	0.000***	0.000***	0.000**	0.000***	-0.000^{***}
	[.000]	[.000]	[.040]	[.000]	[.000]
Square portfolio scope	0.000***	0.000***	-0.000**	0.000***	0.000***
	[.000]	[.000]	[.019]	[.000]	[.000]
Lag CO \times CRO		-0.004**	0.857***		
		[.038]	[.000]		
Portfolio scope \times CRO		0.000*	0.000		
		[.072]	[.554]		
Square portfolio scope \times CRO		-0.000**	0.000***		
		[.013]	[.006]		
Lag CO \times CND				-0.014^{***}	0.792***
				[.000]	[.000]
Portfolio scope \times CND				-0.000***	0.000***
				[.000]	[.000]
Square portfolio scope \times CND				0.000***	-0.000^{**}
				[.006]	[.010]
Competitive region overlap		-0.001^{***}	-0.002	-0.001^{***}	0.000
		[.000]	[.298]	[.001]	[.484]
Cross-national distance		-0.010***	-0.001	-0.008***	0.010***
		[.000]	[.122]	[.000]	[.000]
Firm size	0.000	0.000	0.000	0.000	0.001***
	[.261]	[.266]	[.993]	[.293]	[.000]
Board size	0.000	0.000	0.000	0.000	0.000
	[.261]	[.388]	[.604]	[.928]	[.307]
Board independence	0.002**	0.002**	0.000	0.001*	-0.001
	[.019]	[.033]	[.762]	[.085]	[.248]
Return on assets	-0.010***	-0.010^{***}	-0.008***	-0.010***	0.018***
	[.000]	[.000]	[.001]	[.000]	[.000]
Sales growth	0.000**	0.000*	0.000	0.000**	-0.000**
	[.046]	[.055]	[.444]	[.047]	[.030]
Tobin's Q	0.000**	0.001***	0.000	0.001***	0.000
	[.014]	[.004]	[.929]	[.007]	[.436]
Firm resources	-0.001***	-0.001^{***}	0.000	-0.001***	-0.001^{***}
	[.000]	[.000]	[.813]	[.000]	[.001]

(Continues)

	H1 CO	H2		H3	
		со	Interaction	со	Interaction
Blockholder	-0.002***	-0.001***	0.001	-0.001^{***}	0.001***
	[.001]	[.003]	[.110]	[.005]	[.009]
Ownership concentration	-0.077***	-0.075***	0.018***	-0.075***	0.021***
	[.000]	[.000]	[.000]	[.000]	[.000]
Foreign investors	0.004	0.003	-0.004	0.005	-0.011
	[.390]	[.440]	[.315]	[.234]	[.102]
Pension fund	0.005***	0.006***	0.000	0.006***	0.000
	[.000]	[.000]	[.659]	[.000]	[.639]
Foundation	-0.005	-0.006	-0.006	-0.007	0.003
	[.342]	[.262]	[.695]	[.231]	[.721]
Investment fund	-0.093	-0.095^{*}	0.028	-0.099	0.144
	[.114]	[.097]	[.422]	[.109]	[.270]
HHI main market	0.001***	0.001**	0.001**	0.001**	-0.001^{***}
	[.009]	[.012]	[.036]	[.017]	[.001]
Common law	-0.025***	-0.019***	0.005***	-0.019***	0.008***
	[.000]	[.000]	[.004]	[.000]	[.000]
Constant	0.041	0.198***	-0.024	0.203***	-0.167
	[.496]	[.001]	[.522]	[.001]	[.203]
Year effects, industry effects, country effects	Yes	Yes	Yes	Yes	Yes
<i>R</i> -squared	0.81	0.81	0.81	0.81	0.81

Note: p-values in parentheses. N = 74,930 in all models.

Abbreviations: CND, cross-national dist.; CO, common owners; CRO, competitive region overlap.

*, **, and *** denote statistical significance at the .1, .05, and .01 level, respectively.