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RESEARCH ARTICLE

The impact of institutions on the competitive advantage of publicly listed family firms in emerging markets

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Research Summary: We develop an institutional explanation for the finding that the competitive advantage publicly listed family firms (PFFs) enjoy over other publicly listed firms varies across emerging markets. We propose that PFF performance is contingent on the state of four types of institutions—formal constraining, informal constraining, formal enabling, and informal enabling institutions. We test these ideas with a meta-analysis of 177 primary studies, situated in 49 countries. Our results show that the competitive advantage PFFs enjoy is stronger when formal constraining institutions are less developed and when suitable informal enabling institutions are present. However, their competitive advantage is weaker when formal enabling and informal constraining institutions are less developed. We conclude that the competitive advantage of PFFs in emerging markets is contingent on local institutional conditions.

Managerial Summary: We develop a framework to improve our understanding of how institutions impact the competitive advantage of publicly listed family firms (PFFs) in 49 emerging markets. The framework informs the decisions of PFF owners and managers concerning where to compete and when to invest in distinctive characteristics of family involvement, like a long-term orientation, familial control, stewardship, and reputational capital. While our baseline expectation is that PFFs enjoy a competitive advantage in emerging markets, the model also specifies in which contexts the competitiveness of PFFs will be compromised. Our framework offers guidance to policymakers interested in increasing the

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economic contribution PFFs make to their jurisdictions, which they can ensure by developing PFF-favoring institutions that strengthen the competitive advantage of these firms.

KEYWORDS

comparative institutional advantages, emerging markets, firm performance, meta-analysis, publicly listed family firms

1 | INTRODUCTION

Scholars have long recognized that publicly listed family firms (PFFs) outperform publicly listed nonfamily firms (PNFFs) in many emerging markets (EMs) (Baek, Kang, & Park, 2004; Chang, 2003; Luo & Chung, 2005, 2013). Several PFF-specific competitive advantages have therefore been suggested. First, due to their long-term orientation (Miller & Le Breton-Miller, 2006), PFFs can realize strategic goals even under conditions of high political uncertainty and economic upheaval, which are common in many EMs (Shinkle, Kriauciunas, & Hundley, 2013). Second, because the families behind PFFs are concerned about their reputation, business partners see them as trustworthy and reliable (Berrone, Cruz, Gomez-Mejia, & Larraza-Kintana, 2010). This is important in EM contexts with weak external enforcement regimes (Gilson, 2006). Third, due to the mutual trust that kinship ties breed, family members are often willing to create internal capital markets by pooling their wealth, thus realizing investments that are beyond the financial reach of many PNFFs dependent on shallow and illiquid external capital markets in resource-constrained EM environments (Friedman, Johnson, & Mitton, 2003).

But while our baseline expectation is that PFFs outperform PNFFs in EMs, in reality there is considerable variation around this positive mean across countries. To date, no integrative framework of PFF performance in EMs has been proposed that can adequately explain this contextual variance. Therefore, we draw on the institutional embeddedness perspective (Martin, 2014; Peng, Sun, Pinkham, & Chen, 2009) to introduce an institutional framework that integrates and brings clarity to a theoretically and empirically mixed literature. Specifically, we address the following research question: *Which institutional factors impact the competitive advantage PFFs enjoy over PNFFs in EM contexts?*

We address this question empirically with a cross-national meta-analysis of PFF performance. Specifically, we collect "comparative data from a multitude of different institutional settings" (Gedajlovic, Carney, Chrisman, & Kellermanns, 2012, p. 1024) and conduct multilevel research (Hitt, Beamish, Jackson, & Mathieu, 2007; McKenny, Payne, Zachary, & Short, 2014; Sharma, 2004) to better understand the behavior of PFFs in "younger, smaller, less protected markets" (Le Breton-Miller, Miller, & Lester, 2010, p. 718). Our study has a broader scope than prior meta-analyses on the topic, which either focus on establishing the strength of the relationship between family involvement and firm performance (e.g., O'Boyle, Pollack, & Rutherford, 2012; Wagner, Block, Miller, Schwens, & Xi, 2015) or on the behavior and outcomes of PFFs in particular markets, such as the U.S. (e.g., van Essen, Carney, Gedajlovic, & Heugens, 2015). We take a step forward by

developing a multilevel framework explicating how institutional factors impact the competitive advantage PFFs enjoy in many EMs.

Theoretically, we develop a model of institutional influences on PFFs' competitive advantage in EMs. Whereas PFFs are also a prevalent organizational form in developed economies (Carney, Duran, van Essen, & Shapiro, 2017), and while many studies rely on data from these contexts to test theoretical propositions about PFFs' behavior and outcomes (cf. Evert, Martin, McLeod, & Payne, 2016), we chose to focus on EMs for two reasons. First, EMs provide a suitable context for studying the institutional embeddedness of PFFs, due to their rapid pace of economic development, government policies of economic liberalization, and reliance on informal institutions (Hoskisson, Eden, Lau, & Wright, 2000; Hoskisson, Wright, Filatotchev, & Peng, 2013). Second, because of their different initial conditions and pace of reform, EMs vary widely on a number of institutional dimensions, thus providing the necessary heterogeneity for examining how institutions impact the competitive advantage of PFFs. Furthermore, we focus on PFFs rather than private FFs to ensure a strict test of our ideas. More than private firms, PFFs are subjected to external scrutiny and pressures from constituents like regulators, investors, creditors, employees, and the general public. Moreover, in EMs, publicly listed firms are often the primary target of country-level institutional reform initiatives (Yildirim-Oktem & Usdiken, 2010). Finally, since PFFs have floated part of their equity on public stock markets, they enjoy less discretion than private FFs to pursue family goals (Carney, van Essen, Gedajlovic, & Heugens, 2015; Le Breton-Miller & Miller, 2013). Any evidence suggesting that institutions differentially impact PFFs and PNFFs is, thus, derived from a very strict test, given the strong homogenizing forces at play in public equity markets.

We make two contributions. First, to strategy scholars, we offer an understanding of why PFF performance varies across EMs. Our results suggest that these scholars should shift from the question of *whether* PFFs outperform PNFFs (Carney et al., 2015) to *where and under what contextual conditions* they do so (cf. Chua, Chrisman, Steier, & Rau, 2012; Luo & Chung, 2013). Specifically, we show that PFFs can achieve an "institutional competitive advantage" (Martin, 2014, p. 59) by interacting with local institutions in ways that PNFFs cannot easily copy. Second, to the global strategy literature, we offer a further enrichment of the institutional embeddedness perspective (Martin, 2014; Peng et al., 2009). Specifically, we develop a typology consisting of four types of institutional factors by juxtaposing the formal and informal (Klein, 1985; North, 1990) and constraining and enabling (Carney, 2013; Nelson, 1986) institutional dimensions. This framework complements extant typologies of institutional factors (e.g., Knack & Keefer, 1995; Kostova, 1999; Li & Qian, 2013; Scott, 2013; Stiglitz, 2000), in that it better explains PFF performance in EM contexts.

2 | THEORY AND HYPOTHESES

PFFs are enterprises of which equity is traded over public capital markets and in which families participate significantly in ownership (Peng & Jiang, 2010), management (Miller, Le Breton-Miller, Lester, & Cannella Jr., 2007), or both (Gomez-Mejia, Larraza-Kintana, & Makri, 2003). We propose that institutional environments exert conditioning effects on PFFs' competitive advantage and performance (Martin, 2014; Meyer, Estrin, Bhaumik, & Peng, 2009; Peng & Jiang, 2010). We develop an institution-based model of PFF performance by first introducing a refined typology of institutions for analyzing country environments. Then we derive hypotheses on how specific types of institutions condition the competitive advantage of PFFs.

2.1 | Institutional context: a typology

While the literature conceptualizing institutional contexts is vast and diverse (Knack & Keefer, 1995; Kostova, 1999; Li & Qian, 2013; Scott, 2013; Stiglitz, 2000), no conceptual framework to date can accurately explain which institutional factors impact the competitive advantage PFFs enjoy over PNFFs in EM contexts. We reason that the literature is currently too coarse-grained, in that the institutional dimensions it proposes are frequently too blunt to capture the fine-grained institutional variations across EMs. Therefore, we craft a more refined typology by juxtaposing two dimensions: formal versus informal institutions (Holmes, Miller, Hitt, & Salmador, 2013; North, 1990) and constraining versus enabling institutions (Carney, 2013; Djélic & Quack, 2008; Martin, 2014; Mathias, Lux, Crook, Autry, & Zaretzki, 2015; Nelson, 1986).

2.1.1 | Formal and informal institutions

Formal institutions consist of rules that are devised to shape individual and organizational action, usually created and enforced by the state, which function by attaching sanctions to alternative courses of behavior (cf. van Essen, Heugens, Otten, & van Oosterhout, 2012, p. 399). Such institutions present authoritative guidelines enabling interactions between market participants by forming clear behavioral expectations (Holmes et al., 2013). Formal institutions include the law (La Porta, Lopez-de-Silanes, & Shleifer, 2008), the judiciary (Olson, 1997), and regulated private initiatives (Murtha & Lenway, 2007). They rely on third-party enforcement mechanisms (Kraakman, 1986), implying that when the imposed rules are breached, a dedicated apparatus will step in to administer sanctions.

Informal institutions "emerge spontaneously in response to repeatedly encountered social or economic problems, [and] are maintained through continuous re-enactment in behavior rather than through formal rules or decrees" (van Essen et al., 2012, p. 400). They include national culture (Hofstede, 1980), customs (Kostova, 1999) and societal organizations like NGOs (Levy, 2008; Teegen, Doh, & Vachani, 2004). They capture social norms, but instead of externalizing and objectifying them into formal rules, informal institutions induce actors to internalize these norms, which then guide their actions (Estrin & Prevezer, 2011). Informal institutions are self-enforcing and ensure compliance without external intervention, as actors realize that the long-term costs of breach outweigh the short-term costs of compliance.

Formal and informal institutions coevolve in interdependent ways: "As a society develops economically, its social capital must adapt as well, allowing the interpersonal networks to be partially replaced with the formal institutions of a market-based economy, such as a structured system of laws imposed by representative forms of governance" (Stiglitz, 2000, p. 59). Yet, they do constitute separate institutional spheres, which vary across time and space (Stiglitz, 2000). Countries with strong formal institutions can, therefore, either have weak or strong informal institutions. Similarly, while firms operating in contexts with weak formal institutions can sometimes fall back on strong informal institutions (Li & Qian, 2013; Peng & Khoury, 2008), the latter tend to be weak in such locales as well (Peng et al., 2009; Peng, Wang, & Jiang, 2008).

2.1.2 | Constraining and enabling institutions

Scholars have pointed out that institutions also differ regarding whether they constrain or enable action (Carney, 2013; Djélic & Quack, 2008; Martin, 2014; Mathias et al., 2015). Constraining institutions restrict the set of strategic options open to individuals and organizations to those aligned with the interests of the state or the public by applying negative sanctions to undesirable behaviors (Greif,

2005; North, 1990). They include the law and civil society organizations that ensure compliance, such as social movements and consumer watchdog organizations (Weber, Rao, & Thomas, 2009).

Enabling institutions expand the set of opportunities for actors by providing them with the resources they need to pursue initiatives that they would otherwise have to forego (Carney, 2013; Estrin, Meyer, Nielsen, & Nielsen, 2016; Mathias et al., 2015). They intervene in economic competition by providing different classes of actors with differential access to factor markets, thus stimulating heterogeneity in terms of "resource-provision by institutions or the enabling of resource accretion by institutional actors" (Martin, 2014, p. 60). Enabling institutions include equity, debt, and labor markets, which facilitate entrepreneurial activity by providing material resources (Fisman & Khanna, 2004; Nelson, 1986; Wan & Hoskisson, 2003). They also include market intermediaries such as securities analysts and credit rating agencies, which enable entrepreneurship indirectly by removing information asymmetries from the market (Khanna & Palepu, 2000; Oehmichen, Schrapp, & Wolff, 2017).

Constraining and enabling institutions exist side-by-side. While constraints and enablers are often theorized to be the twin faces of every institution (North, 1990, 1991), they do reflect different institutional spheres with different functions: one restricts bad behavior, and the other facilitates productive behavior. These institutional spheres are furthermore only weakly correlated: weak constraining institutions do not equal strong enabling institutions and vice versa. Thus, whereas some scholars argue that enabling institutions will develop more easily against a backdrop of strong constraining institutions (Levine, 2005), a number of EMs have failed to foster enabling institutions despite having strong institutional constraints (Glaeser, La Porta, Lopez-de-Silanes, & Shleifer, 2004). At the same time, other EMs have excellent enabling institutions despite having weak constraining institutions (Nee & Opper, 2012).

2.2 | A theory of PFF performance in EMs

We conceptualize institutions as mutually exclusive and collectively exhaustive *conjunctions* of constitutive properties (Emmet, 1985; Goertz, 2006): each formal or informal institution can simultaneously also be a constraining or enabling institution. Thus, we discern four types of institutions determining the competitive advantages of PFFs in EM settings: (a) formal constraining; (b) informal constraining; (c) formal enabling; and (d) informal enabling. Each institutional type represents an independent continuum, ranging from undeveloped to being fully developed, with each EM obtaining a unique score on that continuum. Figure 1 presents our typology.

	Formal institutions	Informal institutions
Constraining institutions	**Formal constraining institutions** • Test: Hypothesis 1 • Predicts: Negative moderation • Mechanism: Familial stewardship	**Informal constraining institutions** • Test: Hypothesis 2 • Predicts: Positive moderation • Mechanism: Family reputation
Enabling institutions	**Formal enabling institutions** • Test: Hypothesis 3 • Predicts: Positive moderation • Mechanism: PFF stigmatization	**Informal enabling institutions** • Test: Hypothesis 4 • Predicts: Positive moderation • Mechanism: Cultural receptiveness

FIGURE 1 Institutional typology

2.2.1 | Formal constraining institutions (FCIs)

FCIs connect state-enforced sanctions to behavioral options open to individuals and organizations (North, 1990). They consist of both legal rules and the judiciary apparatus designed to uphold them. The ones that matter most to publicly listed firms in EMs are those restricting predatory behaviors by the firm's controlling shareholders and professional managers (Li & Qian, 2013), through which these groups could otherwise disadvantage debt holders (Faccio, Lang, & Young, 2010), labor (Rogers & Streeck, 1995), and minority owners (Young, Peng, Ahlstrom, Bruton, & Jiang, 2008).

In markets with weak FCIs, the competitive advantage PFFs hold over PNFFs is likely to be larger (Liu, Yang, & Zhang, 2012). They incur fewer principal-agency costs when family owners are part of the senior management team, which reduces the separation between ownership and control (Anderson & Reeb, 2003). Family managers also tend to act as stewards rather than agents of the firm, "investing generously in capabilities, employees, and stakeholder relationships" (Miller, Washburn, & Glick, 2013, p. 1554). Family managers also observe self-imposed behavioral constraints, as "executives with family ties to owners receive lower total pay than professional managers" (Gomez-Mejia et al., 2003, p. 232) and invest less in potentially wasteful activities like diversification (Gomez-Mejia, Makri, & Larraza-Kintana, 2010) and acquisitions (Miller, Le Breton-Miller, & Lester, 2010). If the firm is run by nonfamily managers, blockholding families are still in control through their concentrated voting rights and access to top management (Chang & Shim, 2015; Luo & Chung, 2013). PFFs also incur fewer principal-principal problems than PNFFs (Miller et al., 2013; Young et al., 2008). Since families concentrate their wealth in the firms they own, they are less likely than transactional blockholders to jeopardize firm longevity by expropriating minority owners (Liu et al., 2012). Family owners are also keen to preserve the family's reputation (Gilson, 2007; Miller & Le Breton-Miller, 2005). Where FCIs are weaker, PFFs are likely to enjoy competitive advantages over PNFFs due to family stewardship and self-imposed behavioral constraints.

The advantages of familial stewardship diminish, however, as FCIs develop. Stronger creditor and labor protection laws limit possibilities for managerial opportunism, minimizing principal-agency problems even when there is separation of ownership and control. With regard to principal-principal problems, stronger rule of law and shareholder protection prevent all blockholders from expropriating minority owners (Young et al., 2008). This makes it more difficult for all blockholders to engage in self-serving behaviors like asset tunneling (Young et al., 2008) or foregoing lucrative divestment opportunities (Li & Qian, 2013). Stronger FCIs, thus, reduce the competitive advantage of PFFs, because familial stewardship is then no longer the only guarantee against minority shareholder expropriation (Gilson, 2007; Luo & Chung, 2013). Thus, we expect the competitive advantage of PFFs to level off in contexts in which there are strong FCIs that prevent agency problems from occurring in all publicly listed firms.

> **Hypothesis 1 (H1)** *The competitive advantage PFFs enjoy in EMs diminishes with the development of FCIs.*

2.2.2 | Informal constraining institutions (ICIs)

ICIs apply self-enforcing sanctions to social norm transgressions by individuals and organizations (Estrin & Prevezer, 2011; Klein, 1985). Institutions like free news media, civil society groups, and NGOs are especially important for publicly listed firms in EMs, because they have the capacity to monitor firms, even if the state is too weak to hold corporations accountable (Guay, Doh, & Sinclair, 2004).

ICIs affect PFFs because they target their core intangible assets: family reputation and social capital. Research has shown that these intangible assets are valuable to PFFs, as they form a basis for bonding with internal stakeholders like managers and employees, as well as for bridging with external stakeholders like clients and suppliers (Berrone et al., 2010; Dyer & Whetten, 2006; Gedajlovic & Carney, 2010; Salvato & Melin, 2008; Zahra, 2010). PFFs accumulate these assets because their leaders are representatives of the firm (Miller, Lee, Chang, & Le Breton-Miller, 2009), which provides a platform for developing long-term relationships and trust with outside parties (Chan, Makino, & Isobe, 2010). Deephouse and Jaskiewicz (2013) found, for example, that PFFs owe their good reputations to the ambassadorial roles family members take up in them. Moreover, Belenzon, Chatterji, and Daley (2017) found that eponymy—the practice of firms being named after the families who own them—signals firm quality and ability. PFF leaders are also less likely to cause principal-principal problems because they derive socioemotional wealth from preserving the family legacy (Deephouse & Jaskiewicz, 2013; Leitterstorf & Rau, 2014). In the words of Dyer and Whetten (2006, p. 797): "owners and managers, who see themselves and/or their families as personally identified with the firms they own and manage, may be more willing to encourage [stewardly behaviors] than those owners and managers who believe they can toil and reap firm benefits in relative anonymity, and need not accept personal responsibility for the firm's poor behavior." When ICIs are strong, PFFs can capitalize on these intangible assets, because a well-functioning information regime ensures that stewardly firms get credited, while opportunistic firms get disciplined.[1]

When strong ICIs are lacking, however, PFFs cannot transform their intangible assets into a competitive advantage. In such settings, shareholders face uncertainty concerning expropriation risks (Leuz, Nanda, & Wysocki, 2003), as information about self-benefiting transactions is unlikely to be brought out in public (Dyck & Zingales, 2004; Stiglitz, 2000). Furthermore, investors, debt holders, and workers cannot compare the results of a focal firm to those of others, to assess its managers' performance (Luo & Chung, 2013). In informationally opaque markets, it may even be impossible for outsiders to accurately distinguish between PFFs and PNFFs. PFFs then find it difficult to convince minority shareholders that they do not face the same expropriation risks with them as they do with other firms (Anderson, Duru, & Reeb, 2009).

> **Hypothesis 2 (H2)** *The competitive advantage PFFs enjoy in EMs increases with the development of ICIs.*

2.2.3 | Formal enabling institutions (FEIs)

FEIs rely on the state to provide actors with resources for starting and sustaining new initiatives (Martin, 2014; North, 1991). In countries with better-developed financial market institutions, firms have greater access to financial resources at a lower cost of capital (Levine, 2005; Wan & Hoskisson, 2003). This stimulates firm growth and investments in technology and increases stock market valuation (Oehmichen et al., 2017; Rajan & Zingales, 1998). Labor market and educational institutions regulating the supply of qualified managerial labor are also of critical importance to the initiation and sustenance of new business activities (Lam, 2000; Meyer et al., 2009). All these enabling institutions

[1]An interesting remark raised by one of our reviewers is that there is at least a theoretical possibility that PFFs generally may have poor reputations or ill-developed bonding and bridging social capital in comparison with PNFFs, in which case, weakly developed ICIs would help rather than hurt PFF performance. In the literature, however, the balance of evidence is decidedly in favor of the view that PFFs have positive intangible assets, so we opt for this view as our baseline assumption in this article (cf. Berrone et al., 2010; Dyer & Whetten, 2006; Gedajlovic & Carney, 2010; Salvato & Melin, 2008; Zahra, 2010).

are formal, in that they enforce appropriate behavior through state-monitored agencies like central banking systems, stock market authorities, and higher education accreditation bodies.

When FEIs are weak, the competitive advantage PFFs hold over PNFFs wanes. When financial markets are poorly capitalized and illiquid, the opportunities to raise capital externally are more limited for PFFs than for PNFFs (Bertrand & Schoar, 2006). To outside investors, familiness (Habbershon, Williams, & MacMillan, 2003) can act as a stigma tainting EM PFFs. Luo, Chung, and Sobczak (2009) found that U.S. investors avoided Taiwanese firms with family CEOs and high family ownership, whereas Luo and Chung (2013, p. 343) found that reducing familiness by appointing a nonfamily successor "can broaden the range of suppliers of factors of production and attract high quality suppliers." Furthermore, when external labor markets are shallow, PFFs often lose candidates to PNFFs. According to family-agency theory, this is because candidates expect attractive positions to be reserved for relatives of the controlling family and fear family-centered altruism (Carney, 2005; Chua, Chrisman, & Bergiel, 2009; Schulze, Lubatkin, & Dino, 2002; Schulze, Lubatkin, Dino, & Buchholz, 2001). PFFs can compensate for weak FEIs by drawing on their social capital with specific resource-controlling parties, but social capital is not costless. In EMs with weak FEIs, for example, resource-controlling parties such as politicians "make excessive demands for favors from firms with which they have established connections, usually by stipulating that a mandatory, specific monetary contribution be given to their political campaign and party, and also requesting that their relatives, who may not have the necessary qualifications, skills, and expertise, be employed by these firms" (Acquaah, 2012, p. 1225).

The competitive advantage of PFFs waxes again when FEIs develop (Peng & Jiang, 2010). Capital market development lowers the cost of raising debt and equity locally (Desai, Foley, & Hines Jr, 2005), which favors PFFs reliant on local capital. Furthermore, as local labor markets develop, the availability of managerial talent increases, making it easier for PFFs to meet their staffing needs even when PNFFs have the first pick (Khanna & Palepu, 2000).

> **Hypothesis 3 (H3)** *The competitive advantage PFFs enjoy in EMs increases with the development of FEIs.*

2.2.4 | Informal enabling institutions (IEIs)

IEIs are self-enforcing and provide actors with resources for taking and sustaining new initiatives (Klein, 1985). IEIs can legitimize the PFF and elevate its status above that of PNFFs. When such "soft" enabling institutions are in place, societal actors are more likely to accept that PFFs control considerable tracts of the economy. We suggest that cultural values and social norms that are congruent with PFFs' core properties and, thus, create a favorable view of family control, constitute such IEIs.

Compared to PNFFs, PFFs have longer decision horizons (Miller & Le Breton-Miller, 2006), emphasize the welfare of the family group (Berrone et al., 2010; Sharma & Manikutty, 2005), and foster higher levels of trust with stakeholders (Arregle, Hitt, Sirmon, & Very, 2007). PFFs, therefore, fit better with societies characterized by long-term orientations, collectivism, and interpersonal trust. Chang and Shim (2015) report that family firms are respected in Japanese society due to this country's emphasis on long-termism, referring to the departing founder of Matshushita leaving behind a 250-year strategic plan as a case in point. Banalieva, Eddleston, and Zellweger (2015) point to China's collectivistic culture to explain its receptiveness toward PFFs. China also happens to be the highest-ranking EM in terms of societal-level interpersonal trust, which likely explains why Chinese PFFs are able to foster high degrees of organizational social capital (Arregle et al., 2007). In societies

with such cultural values, PFFs will find it easier than PNFFs to obtain resources from debt, equity, and labor markets. This enhances their competitive advantage (Martin, 2014; Meyer & Rowan, 1977), especially in EMs where external capital markets are underdeveloped and qualified managerial labor is scarce.

In contrast, the competitive advantage of PFFs diminishes in societies that are oriented toward the shorter term, emphasize private gain over collective welfare, and rely on public institutions for dispute resolution, because there they are seen as archaic, opaque, and nepotistic (Stewart, 2003). Market participants operating in such contexts perceive PFFs to be risky organizations (Luo et al., 2009), possessing only weak constitutive legitimacy (Meyer & Rowan, 1977; Rao, 2002), which makes their position in financial and labor markets precarious. PNFFs with dispersed or transactional owners are looked upon more favorably and, as a result, usually find more resources made available to them (Acquaah, 2012; Luo & Chung, 2013). Under such institutional conditions, PFFs face an institutional disadvantage due to the poor cultural fit with their surrounding society (Bertrand & Schoar, 2006).

Hypothesis 4 (H4) *The competitive advantage PFFs enjoy in EMs increases with the development of IEIs.*

3 | METHODS

3.1 | Sample and coding

We followed established guidelines for meta-analytic research (Buckley, Devinney, & Tang, 2013; Gonzalez-Mule & Aguinis, in press). We selected EMs using the classification by Hoskisson et al. (2000, 2013), who identified 64 countries characterized by rapid economic growth and economic liberalization. We used five search strategies to identify primary studies. First, we read several review articles (Gedajlovic et al., 2012; Gomez-Mejia, Cruz, Berrone, & De Castro, 2011; Young et al., 2008) to: (a) identify relevant search terms, (b) develop a coding protocol (Lipsey & Wilson, 2001), and (c) collect the studies cited in them. Second, we used the search terms, which included keywords like: "blockholder," "families," "family business," "family control," "family firm," "family ownership," "founder," "founding family," "lone founder," and "ownership," to collect papers from five electronic databases (ABI/INFORM Global, EconLit, Google Scholar, JSTOR, and SSRN). Third, we manually searched 25 top journals in accounting, economics, finance, and management. Fourth, we used two-way snowballing: backward-tracing all references in the retrieved articles and forward-tracing all articles citing the originals using Google Scholar and ISI Web of Knowledge. This broad strategy also allowed us to identify unpublished studies. Fifth, since 44 studies did not report effect sizes, we asked the authors for missing information, with a 57% response rate.

Only primary empirical studies were included in the final sample, so we excluded meta-analyses, conceptual articles, and book reviews. We then removed from our sample articles that: (a) used the same data as an earlier study, (b) reported a study lacking a control group (i.e., PNFFs), (c) used a sample of firms from non-EM contexts, or (d) included data on non-publicly traded firms (e.g., private family firms). Our final sample consisted of 177 studies (115 published and 62 unpublished papers) from 49 EMs, covering 77% of all EMs identified by Hoskisson et al. (2000). Bibliographic details are available from the authors. We then developed a coding protocol (Lipsey & Wilson, 2001) for extracting effect sizes, sample sizes, and moderating variables. One author coded all effect sizes. To ensure reliable information extraction, another author independently coded a subsample of 200 random effect sizes, reaching a high degree of interrater reliability (Cohen's kappa: 0.98; Cohen, 1960).

3.2 | Variables

3.2.1 | Dependent variable

We conceptualize our dependent variable, *firm financial performance*, as a latent construct comprised of two main dimensions (accounting- and market-based performance), each encompassing several indicators retrieved from primary studies (Miller et al., 2013). The indicators for *accounting-based performance* are: (a) return on assets (ROA); (b) return on equity (ROE); (c) return on sales (ROS); (d) return on investment (ROI); (e) earnings per share (EPS); (f) profit margin; and (g) sales growth. The indicators for *market-based performance* are: (a) stock returns; (b) Tobin's Q; and (c) market-to-book value (MBV). Both dimensions capture different facets of performance and are commonly recognized manifestations of how well a firm is doing financially (Combs, Crook, & Shook, 2005).

3.2.2 | Independent variable

We also conceptualize our independent variable, *family control*, as a latent construct, because the literature has not yet converged on a singular definition of PFFs (cf. Miller et al., 2007; Nordqvist, Sharma, & Chirico, 2014). Its indicators are: (a) *ownership*, that is, a family is a major blockholder (Peng & Jiang, 2010); (b) *management*, that is, family members hold significant management positions (Miller et al., 2007); (c) *ownership and management*, that is, families are represented both as blockholders and as managers (Gomez-Mejia et al., 2003); and (d) *ownership or management*, that is, families are either represented as blockholders or in management positions (Anderson & Reeb, 2003).

3.2.3 | Moderator variables

To advance the institution-based view, the development of stronger measures of institutional effects is paramount (Peng et al., 2009). Authors commonly focus on measures that are available through worldwide public sources (Garrido, Gomez, Maicas, & Orcos, 2014). The downside of this approach is that it mainly captures the quality of generic institutions and is less equipped to measure the quality of dedicated institutions affecting more specific organizational forms (cf. Garrido et al., 2014). Therefore, we set out to develop finer-grained institutional measures for each of our moderating variables (*FCI*, *ICI*, *FEI*, and *IEI*). Following established criteria (Jarvis, MacKenzie, & Podsakoff, 2003), we measured each variable with a formative index. In contrast to (psychometric) reflective scales, indicators need not covary, are not interchangeable, and are defining characteristics of the construct. Each index was computed as the sum of the standardized *z*-scores of its indicators (Diamantopoulos & Winklhofer, 2001).

We used four indicators to measure FCI. The *creditor protection index* measures the rights of secured lenders defined in laws and regulations (Djankov, McLiesh, & Shleifer, 2007). Creditor protection laws offer debtors state-enforced protection against defaults on loans (Claessens, Djankov, & Klapper, 2003). The *labor protection index* measures the legal protection of worker rights (Botero, Djankov, La Porta, Lopez-de-Silanes, & Shleifer, 2004). Labor protection laws shield workers from unwarranted layoffs, regulate their rights and benefits, and occasionally allow for codetermination (Botero et al., 2004; van Essen, van Oosterhout, & Heugens, 2013). The *anti-director rights index* measures how strongly the legal system protects shareholder voting rights (Spamann, 2010). Strong anti-director laws prevent insiders from engaging in self-benefitting transactions (Li & Qian, 2013). The *rule of law index* reflects the extent to which people have confidence in, and abide by, the formal rules of society (Kaufmann, Kraay, & Mastruzzi, 2008). It proxies for the overall effectiveness of the judiciary (Carney, Gedajlovic, Heugens, van Essen, & van Oosterhout, 2011).

We measured ICI using three variables. *Freedom of the press* assesses the degree of print, broadcast, and internet freedom (Freedom House). It allows journalists to investigate and report on corporate wrongdoing (Dorobantu, Kaul, & Zelner, 2017; Dyck & Zingales, 2004). *Political freedom* measures political rights and civil liberties (Freedom House). It reflects whether civil society can counterbalance organized corporate interests (Ireland, Tihanyi, & Webb, 2008; Kaufmann et al., 2008). *NGO count* measures the number of NGOs operating in a given country (World Association of Non-Governmental Organizations) and reflects the extent to which corporate activities are likely to be monitored, reported, and publicly criticized (Guay et al., 2004; Teegen et al., 2004).

To measure FEI, we used four variables. *Private credit to GDP* is the amount of credit available to the private sector (World Bank). It is known to "positively predict growth, capital accumulation, and productivity improvements" (Levine & Zervos, 1998, p. 537; Lee, Peng, & Lee, 2008). *Stock market capitalization to GDP* (World Bank) reflects the willingness of institutional investors, entrepreneurial families, and the general public to participate in the equity financing of public corporations (Deng & Yang, 2015; La Porta et al., 2008). *Business school count* is the number of AACSB accredited business schools in each country (AACSB International). *Business school quality* assesses the quality of a country's business schools (Global Competitiveness Report, 2012). Business schools are important for economic vitality, as they supply the managerial labor market (Peng et al., 2009; van Essen et al., 2013).

We used three indicators for IEI. The *future orientation practices index* measures the degree to which a culture encourages long-term oriented behaviors like planning and delaying gratification (House, Hanges, Javidan, Dorfman, & Gupta, 2004). People in future-oriented societies tend to save and reinvest a larger share of their income, which facilitates investments in long-term growth opportunities (Holmes et al., 2013; Stephan & Uhlaner, 2010). The *societal in-group collectivism practices index* captures the degree to which individuals express pride, loyalty, and cohesiveness in their organizations and families (House et al., 2004). It reflects a cultural orientation that emphasizes collective interests, social networks, and societal cohesion (Bruton, Ahlstrom, & Obloj, 2007; Stephan & Uhlaner, 2010). The *interpersonal trust index* measures peoples' perception of others' reliability in a country (ASEP/JDS). It captures a societal orientation toward trusting close-knit groups over public institutions (Bertrand & Schoar, 2006; Jia & Wang, 2013).

We used an expert panel to assess the content validity of our formative indexes (cf. Crossland & Hambrick, 2011). We sent a forced-choice survey to 223 family firm scholars, obtaining 49 completed responses (22%).[2] We first presented scholars with definitions of our four institutional variables. Next, we provided them with a list of 14 indicators, asking them to assign each indicator to the best-fitting institutional variable (respondents could also choose to discard an indicator). Finally, we asked them to state on a 10-point scale how well each indicator captured the underlying institutional variable (1 = not at all; 10 = extremely well). The majority of respondents assigned 11 out of the 14 items to the institutional variable that we projected. Three items (*in-group collectivism*, *political freedom*, and *freedom of the press*) were frequently assigned to different institutional variables. While keeping all 14 items in our main analysis, we performed a series of robustness tests in which we dropped the disputed items.

3.3 | HOMA procedure

We used Hedges and Olkin-type meta-analysis (HOMA; Hedges & Olkin, 1985) to compute the meta-analytic mean correlation between family control and firm performance. As effect sizes, we

[2]This section reports only major outcomes. Full survey results can be obtained directly from the authors.

used Pearson product–moment correlations (*r)* and partial correlation coefficients ($r_{xy.z}$). We used *r* because it is the most commonly reported effect size statistic in management (Geyskens, Krishnan, Steenkamp, & Cunha, 2009). $r_{xy.z}$ captures the association between family control ($_X$) and firm performance ($_Y$), given a set of *n* control variables ($_Z$). $r_{xy.z}$ can be computed from the t-statistics and degrees of freedom reported in primary studies (Stanley & Doucouliagos, 2012).[3] $r_{xy.z}$ is comparable to *r*, as both are standardized measures of linear association, invariant to sample size fluctuations, and expressed on a dimensionless scale ranging from −1 to 1. Exploring $r_{xy.z}$ is useful for several reasons: It can provide insights on the direction of causality between two variables when primary study authors correct for endogeneity. In 19% of our primary studies, the *z*-vector included endogeneity controls in the form of instrumental variables. $r_{xy.z}$ can also inform about nonlinearity when authors incorporate squared transformations of linear terms in their regression work (e.g., for family ownership percentages). $r_{xy.z}$ can also be used to detect omitted variable bias, by testing whether the noninclusion of specific variables in prior studies has caused systemic distortions of $r_{xy.z}$ (Stanley & Doucouliagos, 2012). In recognition of these benefits, $r_{xy.z}$ are increasingly used as effect sizes in published academic studies (e.g., Carney et al., 2011).

When the focal effect was measured multiple times in a single study, we included all effects. Monte Carlo simulations show that procedures using all measurements outperform those using a single value for each study in parameter significance testing and parameter estimation accuracy (Bijmolt & Pieters, 2001). Following current conventions, we used random-effects HOMA (Raudenbush & Bryk, 2002). We weighted effect sizes by their inverse variance weight *w*, the inverse of their squared standard error (Hedges & Olkin, 1985). We also used *w* to compute the standard error of the mean effect size and its corresponding confidence interval.

3.4 | MARA procedure

We tested our hypotheses using meta-analytical regression analysis (MARA), a weighted least squares-based technique that assesses the relationship between effect size and moderator variables (Lipsey & Wilson, 2001). We use $r_{xy.z}$, such that we can incorporate dummy variables coding for *z*-vector content. We weighted by *w* to account for differences in precision across effect sizes (Hedges & Olkin, 1985). We included our four institutional variables as hypothesized moderators. Each effect size was matched to the temporally closest preceding measurement of each institutional variable.

We included several control variables to account for measurement artifacts. We coded for two types of firm financial performance—accounting and market-based (reference group)—and for PFF definition categories—ownership (reference group), management, ownership *and* management, and ownership *or* management. We further distinguished between PFFs controlled by first generation (reference group), after first generation, and mixed generation. We also coded whether the firm performance variable was adjusted for industry or not (reference group) and whether the firm performance variable was logarithmically transformed or not (reference group).

As methodological artifacts, we tested for the file drawer problem using a dummy variable indicating whether a study was published or not (reference group). To capture the effect of journal status, we used journals' 5-year ISI impact factors. To assess time effects, we controlled for median year of the sample window. A dummy variable was included indicating whether effect sizes were based on

[3]Partial correlations are computed as follows: $\sqrt{\frac{t^2}{(t^2+df)}}$, where t is the t-statistic and df is degrees of freedom. As this will always produce a positive number, it is necessary to convert it to a negative number if the regression coefficient is negative (Greene, 2008). t-values result from the scaling of primary coefficients by their respective standard errors. They are, by definition, standardized and defined on a dimensionless scale.

panel or cross-sectional (reference group) data. Finally, we coded whether effect sizes were derived from a study controlling for endogeneity or not (reference group), for year effects or not (control group), and for industry effects or not (control group).

For model specification artifacts, we included a dummy indicating whether the regression equation from which $r_{xy.z}$ was derived included an interaction term involving the independent variable, since primary study authors did not always grand-mean-center interaction terms (Raudenbush & Bryk, 2002). To account for omitted variables, we controlled for the number of variables included in the regression and entered the following dummy variables: advertisement expenditures, capital expenditures, diversification, dividend payouts, dual listing, age, growth, risk, size, free cash flow, percentage of internationalization, debt, market risk, prior performance, percentage of R&D expenditures, percentage of outside directors, board size, CEO duality, corporate ownership, foreign ownership, government ownership, inside ownership, institutional ownership, percentage ownership of largest owner, presence of second blockholder, and presence of dual class shares. Each of these variables was included in at least 45 samples. Since business groups are prevalent in EMs and known to affect affiliates' performance (Carney et al., 2011; Khanna & Palepu, 2000), we controlled for business group affiliation. We also controlled for prevalence of PFFs in a country, GDP per capita, and physical infrastructural development (Wan & Hoskisson, 2003).

4 | RESULTS

We report $r_{xy.z}$- and r-based HOMA analyses in Table 1. Our baseline expectation is that PFFs enjoy a competitive advantage over PNFFs in EMs. The mean $r_{xy.z}$ of the focal relationship is indeed 0.02 and significant, indicating that PFFs outperform PNFFs in EMs by a small margin (Hedges & Olkin, 1985). The r-based results show a slightly different pattern. The mean is 0.01, but the effect is insignificant. Thus, in EMs, there is a modestly positive but occasionally insignificant association between family control and firm performance. These findings need to be nuanced in two ways. First, the retrieved effect sizes are very small by conventional standards (cf. Cohen, 1992). More importantly, both effect size distributions are highly heterogeneous.

Table 1 also reports several robustness tests. The results are similar across different operationalizations of firm performance (mean $r_{xy.z} = 0.01$ vs. 0.03; mean $r = 0.02$ vs. −0.02). Furthermore, whether PFFs are defined by ownership (mean $r_{xy.z} = 0.02$; mean $r = 0.01$), management (mean $r_{xy.z} = 0.01$; mean $r = -0.02$), ownership *and* management (mean $r_{xy.z} = 0.03$; mean $r = 0.02$), or ownership *or* management (mean $r_{xy.z} = 0.05$; mean $r = 0.07$) makes no material difference. Generational effects are modest, but first generation PFFs (mean $r_{xy.z} = 0.04$; mean $r = 0.02$) outperform successor-led PFFs (mean $r_{xy.z} = 0.01$; mean $r = -0.01$). PFFs with professional CEOs significantly outperform PNFFs (mean $r_{xy.z} = 0.09$; mean $r = 0.08$). $r_{xy.z}$-based HOMA shows that endogeneity is not driving our results (mean $r_{xy.z}$ for studies including endogeneity controls is = 0.01). Table 1 furthermore shows that the relationship between family ownership and firm performance is non-monotonic. The linear term is negative and insignificant (mean $r_{xy.z} = -0.01$), while the squared term is positive and significant (mean $r_{xy.z} = 0.02$). The positive effects of family ownership are, thus, offset at low levels of ownership, but accumulate at higher levels.

We assessed whether PFF performance differs across EMs. Table 2 presents country-specific $r_{xy.z}$-based HOMA results. All subsequent analyses are $r_{xy.z}$-based, because in our sample, $r_{xy.z}$ offers greater statistical power than r (cf. Stanley & Doucouliagos, 2012). Table 2 includes primary observations from 49 EMs. We were able to conduct country-specific HOMA analyses for 24 of these, which reveal considerable variation. The mean effect is positive and significant in Bangladesh,

TABLE 1 HOMA meta-analytic results[a,b]

	Partial linear correlation coefficient ($r_{xy.z}$)							Pearson product–moment correlation (r)						
Predictor	***k***	***N***	**Mean**	**SE**	**CI 95%**	***Q* test**	***I*²**	***k***	***N***	**Mean**	**SE**	**CI 95%**	***Q* test**	***I*²**
PFF to performance	938	453,268	0.02*	0.00	0.01/0.03	2999.63 (0.00)	0.69	463	175,272	0.01	0.00	−0.00/0.02	1365.18 (0.00)	0.66
Accounting performance	426	154,126	0.01*	0.00	0.00/0.02	1302.70 (0.00)	0.67	305	104,953	0.02*	0.01	0.01/0.03	718.25 (0.00)	0.58
Market performance	512	299,142	0.03*	0.00	0.02/0.03	1696.36 (0.00)	0.70	158	70,319	−0.02*	0.01	−0.03/−0.00	605.37 (0.00)	0.74
Endogeneity control	175	80,442	0.01	0.01	−0.00/0.02	447.76 (0.00)	0.61							
Ownership definition	563	273,971	0.02*	0.00	0.02/0.03	1882.42 (0.00)	0.70	266	113,087	0.01*	0.00	0.00/0.02	743.47 (0.00)	0.64
Family blockholder	106	52,919	0.03*	0.01	0.01/0.05	404.25 (0.00)	0.74	55	33,161	0.01	0.01	−0.01/0.04	287.76 (0.00)	0.81
Percentage family ownership	457	221,052	0.02*	0.00	0.01/0.03	1467.76 (0.00)	0.69	211	79,926	0.01*	0.01	0.00/0.03	452.40 (0.00)	0.54
Nonlinear power quadratic														
Linear term	48	31,048	−0.01	0.01	−0.03/0.01	125.21 (0.00)	0.62							
Quadratic term	48	31,048	0.02*	0.01	0.01/0.04	81.31 (0.00)	0.42							
Management definition	327	164,903	0.01*	0.00	0.00/0.02	985.13 (0.00)	0.67	159	49,413	−0.02*	0.01	−0.03/−0.00	447.63 (0.00)	0.65
Family CEO	116	69,937	0.02*	0.00	0.01/0.03	174.65 (0.00)	0.34	47	13,413	0.01	0.01	−0.01/0.03	49.92 (0.32)	0.08
Founder CEO	36	17,102	0.04*	0.01	0.02/0.06	66.75 (0.00)	0.48	19	7,537	0.01	0.02	−0.02/0.04	29.97 (0.04)	0.40
Board of firm	124	56,748	−0.01	0.01	−0.03/0.01	480.24 (0.00)	0.74	74	21,734	−0.05*	0.01	−0.08/−0.02	280.18 (0.00)	0.74
Professional CEO	18	6,876	0.09*	0.03	0.02/0.15	109.02 (0.00)	0.84	2	456	0.08	0.05	−0.01/0.18	0.56 (0.45)	0.00
Mixed	33	14,240	0.00	0.01	−0.02/0.02	36.11 (0.28)	0.11	17	6,273	0.01	0.01	−0.02/0.04	19.41 (0.25)	0.18
Ownership and management definition	26	8,849	0.03	0.02	−0.00/0.07	79.16 (0.00)	0.68	17	5,972	0.02	0.01	−0.01/0.04	7.79 (0.95)	0.00
Ownership or management definition	22	5,545	0.05*	0.01	0.02/0.07	19.83 (0.53)	0.00	21	6,800	0.07*	0.02	0.02/0.12	70.90 (0.00)	0.72
Generation														
First generation	38	18,654	0.04*	0.01	0.02/0.06	70.68 (0.00)	0.48	24	10,321	0.02	0.01	−0.00/0.05	38.23 (0.02)	0.40
After first generation	24	10,358	0.01	0.01	−0.00/0.03	8.14 (0.99)	0.00	9	2,345	−0.01	0.02	−0.05/0.03	8.23 (0.41)	0.03
Mixed generation	876	424,256	0.02*	0.00	0.01/0.02	2,912.20 (0.00)	0.70	430	162,606	0.01	0.00	−0.00/0.02	1,313.62 (0.00)	0.67

[a] Mean effect sizes marked with an asterisk (*) are statistically significant ($p < .05$).

[b] k = number of samples; N = firm observations; SE = standard error of the mean correlation; CI 95% = 95% confidence interval around the meta-analytic mean; Q test = Hedges and Olkin (1985) chi-square test for homogeneity; I^2 = scale-free index of heterogeneity.

Brazil, Colombia, India, Mexico, Pakistan, Poland, South Korea, Taiwan, and Turkey, negative and significant in Egypt, Indonesia, Iran, and Peru, and insignificant in Chile, China, Croatia, Greece, Israel, Malaysia, Nigeria, Sri Lanka, Thailand, and Venezuela.

4.1 | MARA results

Table 3 presents means, standard deviations, and correlations for all main variables.[4] The highest variance inflation factor is well below the cutoff of 10.0, suggesting that multicollinearity is not a concern. While some correlations between institutional variables are significant, all are below 0.67, and some are negative (Haggard & Tiede, 2011), suggesting that the four institutional types cover empirically distinct domains. Table 4 shows country-level scores for each institutional variable, suggesting high levels of variation in terms of institutional development.

Table 5 shows the MARA results. Model 1 includes control variables. Model 2 reports the hypotheses tests. Models 3, 4, and 5 contain robustness checks. Model 2 supports Hypothesis 1. FCI negatively moderates the focal relationship ($\beta = -0.05$, $p < .01$). Thus, the competitive advantage of PFFs is lower in countries with weaker anti-director rights, labor protection laws, and rule of law. Hypothesis 2 is also supported. The strength of ICI positively moderates the focal relationship ($\beta = 0.04$, $p < .01$). Thus, PFFs enjoy a greater competitive advantage in countries characterized by freedom of the press, political liberties, and an active civil society. Hypothesis 3 is supported as well. The competitive advantage of PFFs is larger in contexts with high quality FEI ($\beta = 0.01$, $p < .01$). The MARA results also *tentatively* support Hypothesis 4. Specifically, PFFs' competitive advantage appears to be greater in countries with more fitting IEIs, like long-term orientation, collectivism, and interpersonal trust ($\beta = 0.01$, $p < .01$). However, as additional analyses will show, Hypothesis 4 results are not fully robust.

4.2 | Robustness checks and control variables

In Model 3, Table 5, we unpack the institutional variables into individual indicators. The results show that specific FCFs like anti-director rights and creditor and labor protection laws are more consequential than generic institutions like rule of law. Furthermore, the competitive advantage of PFFs improves with stronger formal enabling labor market institutions, suggesting that they benefit from abundant talent (cf. Acquaah, 2012). However, PFF performance *declines* when equity markets are more liquid and deeply capitalized. This suggests that the families behind PFFs can compensate for underdeveloped capital markets by pooling their wealth when external finance is scarce (Bertrand & Schoar, 2006), but PPFs lose such resource-based advantages when all firms enjoy more opportunities to access capital markets. In Model 4, we exclude effects from the 10 countries that Hoskisson et al. (2013) classify as "newly developed economies" (Chile, China, Estonia, Israel, Malaysia, Mauritius, Portugal, Saudi Arabia, Taiwan, and Tunisia), because the institutions of these countries have recently become more similar to those of developed markets. Excluding these countries also reduces the threat of bias due to an overrepresentation of effects drawn from China and Taiwan. Model 4 results are comparable to Model 2 results. Model 5 excludes mixed-country cases (effect sizes based on a sample drawn from more than one country). In all other models, these effect sizes are given an averaged score, based on the mean institutional scores of the countries included in the mixed sample, weighted by the number of firm-year observations for each country. Excluding mixed-sample observations is non-consequential.

[4]Omitted from Table 3 are 27 dummy variables indicating which specific strategy and governance factors were included in z-vector contents. A full correlation table is available upon request from the authors.

TABLE 2 HOMA country-specific meta-analytic results[a,b]

Predictor: PFF to performance					Partial linear correlation coefficient ($r_{xy.z}$)				
Country	***Prevalence FF***	***FF ownership***	***k***	***N***	**Mean**	**SE**	**CI 95%**	***Q* test**	I^2
Bangladesh	0.33	-	2	1,446	**0.15***	0.03	0.09/0.20	0.03 (0.86)	0.00
Brazil	0.43	0.35	23	4,180	**0.04***	0.01	0.01/0.07	9.14 (0.99)	0.00
Chile	0.67	-	12	2,564	0.03	0.03	−0.03/0.09	29.75 (0.00)	0.63
China	0.34	0.09	99	108,891	0.00	0.01	−0.01/0.01	333.63 (0.00)	0.71
Colombia	0.23	-	71	27,852	**0.03***	0.01	0.02/0.04	41.03 (1.00)	0.00
Croatia	-	-	6	714	0.06	0.04	−0.01/0.13	0.50 (0.99)	0.00
Egypt	-	0.20	34	3,128	**−0.17***	0.02	−0.21/−0.13	37.97 (0.25)	0.13
Greece	0.71	-	4	496	0.12	0.11	−0.10/0.34	19.19 (0.00)	0.84
India	0.59	0.39	96	96,134	**0.04***	0.01	0.02/0.05	353.42 (0.00)	0.73
Indonesia	0.50	0.58	42	7,151	**−0.20***	0.03	−0.25/−0.14	245.61 (0.00)	0.83
Iran	-	-	4	272	**−0.57***	0.08	−0.72/−0.42	4.96 (0.17)	0.39
Israel	0.65	-	8	1,292	0.16	0.09	−0.01/0.34	66.95 (0.00)	0.89
Jordan	-	-	1	39	0.19	-	-	-	-
Malaysia	0.35	0.22	23	6,873	−0.00	0.01	−0.03/0.02	25.38 (0.30)	0.13
Mexico	0.62	0.31	28	2,718	**0.26***	0.05	0.17/0.35	157.78 (0.00)	0.83
Nigeria	0.26	-	4	356	0.07	0.05	−0.03/0.18	2.43 (0.49)	0.00
Pakistan	0.77	0.57	29	2,663	**0.15***	0.03	0.09/0.22	66.90 (0.00)	0.58
Peru	0.44	-	15	885	**−0.07***	0.03	−0.13/−0.00	8.31 (0.87)	0.00
Poland	0.27	0.17	30	6,688	**0.06***	0.01	0.04/0.09	9.02 (1.00)	0.00
South Korea	0.79	0.46	52	24,226	**0.02***	0.01	0.00/0.03	57.66 (0.24)	0.11
Sri Lanka	-	-	2	424	−0.04	0.05	−0.14/0.05	0.00 (1.00)	0.00
Taiwan	0.55	0.20	196	105,256	**0.02***	0.00	0.01/0.03	394.06 (0.00)	0.50
Thailand	0.69	0.33	48	14,375	0.01	0.01	−0.01/0.04	85.63 (0.00)	0.45
Turkey	0.56	0.07	8	1,480	**0.08***	0.03	0.03/0.13	2.51 (0.93)	0.00
Venezuela	-	-	2	102	0.07	0.10	−0.12/0.27	0.00 (1.00)	0.00
(Mixed)[c]	-	-	99	33,063	**0.05***	0.01	0.03/0.06	224.57 (0.00)	0.56

[a] Mean effect sizes marked with an asterisk (*) are statistically significant ($p < .05$).

[b] k = number of samples; N = firm observations; SE = standard error of the mean correlation; CI 95% = 95 percent confidence interval around the meta-analytic mean; Q test = Hedges and Olkin (1985) chi-square test for homogeneity; I^2 = scale-free index of heterogeneity.

[c] Countries included in mixed sample are: Algeria, Argentina, Bahrain, Botswana, Brazil, Cameroon, Cape Verde, Chile, China, Colombia, Côte d'Ivoire, Egypt, Ghana, India, Indonesia, Jordan, Kenya, Malawi, Malaysia, Mauritius, Mexico, Morocco, Mozambique, Namibia, Nigeria, Oman, Peru, Philippines, Qatar, Saudi Arabia, South Africa, South Korea, Taiwan, Tanzania, Thailand, Tunisia, Uganda, United Arab Emirates, Venezuela, and Zambia.

We performed additional robustness tests.[5] First, we split the sample into effect sizes based on accounting ($k = 426$) and market performance ($k = 512$). This did not affect the results for Hypotheses 1–3, but Hypothesis 4 was rejected. Second, we ran a model with separate dummy variables for all performance indicators. None of these variables were significant, so we rule out dependent variable moderating effects. Third, we reran the analyses using the amended versions of the formative institutional indexes, dropping the three items rejected by the expert survey. While results for Hypotheses 1–3 remained robust, Hypothesis 4 again was rejected. Fourth, we retested the hypotheses against a subsample containing effect sizes drawn only from published studies ($k = 463$) to assess

[5] All unreported analyses are available from the authors upon request.

whether unobservable quality differences between published and unpublished were biasing the results. All results were robust, except for Hypothesis 4. Fifth, to test whether we had unduly stretched the range of EMs, we compiled a dataset excluding effect sizes drawn from the eight least developed EMs (Bangladesh, Cote d'Ivoire, Kenya, Kyrgyzstan, Nigeria, Pakistan, Philippines, and Venezuela), based on institutional and infrastructural development (Hoskisson et al., 2013). Similar to other reduced-sample tests ($k = 898$), this affected results only for Hypothesis 4 (n.s.). Sixth, we reran our analyses using the Hunter and Schmidt (2004) random-effects meta-analytic mean estimator with artifact corrections. These results were nearly identical to our HOMA results (e.g., corrected mean effect size $\bar{r}_c$ for all PFFs = 0.03; $\bar{r}_c$ for family-owned PFFs = 0.03; $\bar{r}_c$ for family-managed PFFs = 0.09; $\bar{r}_c$ for PFFs with a family CEO = 0.04; and $\bar{r}_c$ for PFFs with a professional CEO = 0.06). Seventh, to correct for stochastic dependencies between multiple effects harvested from a single study, we ran a hierarchical linear modeling meta-analysis (HiLMMA; Raudenbush & Bryk, 2002). Each effect was interpreted as a level 1 observation, using the study from which it derived as the level 2 observation. Since this did not influence model parameters, we conclude that stochastic dependencies are not driving the results. Finally, we corrected for outliers in both HOMA and MARA models (Buckley et al., 2013), using Cook's distance metric D (Cook, 1977) for identifying influential observations. Eliminating outliers did not affect our results. In short, results for Hypotheses 1–3 are robust, but Hypothesis 4 had to be rejected *post hoc*.

Table 5 reports control variable results. At the country level, we find a negative and significant effect of PFF prevalence. In environments with fewer PFFs, there is apparently less competition for resources. We found no significant effect of business group affiliation. GDP per capita is weakly significant in Model 2. Physical infrastructural development has a positive and significant effect on the focal relationship, indicating that PFFs benefit disproportionately from public investments in supporting infrastructure (Wan & Hoskisson, 2003). At the study level, we find a significant negative effect for published studies and significant positive effects for journal impact factor and panel data designs. Controlling for endogeneity does not change the results, consistent with the HOMA results reported in Table 1. We also find that first generation-led PFFs outperform those led by a successor generation (Villalonga & Amit, 2006). We also note a positive and significant effect for log-converted performance, indicating that the focal relationship is sensitive to outliers on the dependent variable. Finally, in terms of z-vector content, we find significant moderating effects for advertisement expenditures, capital expenditures, CEO duality, corporate ownership, dual class shares, dual listing, firm age, firm debt, firm dividends, firm growth, firm size, foreign ownership, free cash flow, government ownership, market risk, prior performance, and second blockholder. Future studies of PFF performance in EMs should include these variables to mitigate the risk of omitted variable bias.

4.3 | *Post hoc* analysis

To illustrate how different *configurations* of institutional conditions affect the competitive advantage of PFFs in EMs, we performed a comparative analysis. Specifically, we conducted a hierarchical cluster analysis to divide countries into groups that were internally homogeneous in terms of their scores on our institutional indicators (based on the data presented in Table 4). The cluster analysis maximizes the multidimensional variance across groups, such that each group represents different combinations of institutional conditions. This yielded six country groupings, based on countries' high or low scores on our four institutional types. Five of these groups consisted of countries that had: (a) high scores on none of the four institutional types; (b) a high score on one type; (c) high scores on two types; (d) high scores on three types; and (e) high scores on all institutional types. One country

TABLE 3 Means, standard deviations, and correlations

Variables	Mean	s.d.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1. Effect size	0.02	0.14																							
2. Formal constraining institutions	0.00	1.00	−.03																						
3. Informal constraining institutions	0.00	1.00	**.23****	**.49****																					
4. Formal enabling institutions	0.00	1.00	**.07***	**.39****	**−.18****																				
5. Informal enabling institutions	0.00	1.00	−.02	**.30****	**−.15****	**.67****																			
6. Prevalence of PFFs in country	0.48	0.20	**−.09****	**.47****	**.29****	**.11****	**.27****																		
7. Ln GDP per capita	8.23	1.23	**.11****	**.38****	**.23****	**.32****	**.10****	**.09****																	
8. Physical infrastructure development	0.00	1.00	**.16****	**.54****	−.02	**.71****	**.34****	**.08***	**.52****																
9. Published study	0.66	0.47	**−.10****	**.18****	**−.07***	**.23****	**.42****	**.24****	**.13****	**.17****															
10. ISI impact factor	0.96	1.99	.01	**.43****	**.16****	**.26****	**.24****	**.22****	**.14****	**.33****	**.33****														
11. Median year sample window	2002	3.80	.02	**−.35****	**−.27****	**.17****	**.09****	**−.16****	**.12****	**.12****	**−.12****	**−.35****													
12. Panel design	0.57	0.49	.06	.04	**.16****	**−.31****	**−.24****	**.15****	**.24****	.00	.02	**.16****	−.06												
13. Endogeneity check	0.19	0.39	−.05	**−.11****	**−.07***	**−.11****	−.03	**−.14****	**−.17****	.02	.06	**.14****	.01	.02											
14. Ownership definition	0.60	0.49	.00	**.22****	−.02	−.04	**−.08***	.05	**−.23****	**.09****	**−.09****	**−.07***	**−.12****	**−.23****	.01										
15. Management definition	0.35	0.48	−.01	**−.22****	.01	.02	**.08***	**−.07***	**.23****	**−.10****	**.08***	**.08***	**.11****	**.19****	.01	**−.90****									
16. Management and ownership definition	0.03	0.16	.03	.01	.02	.03	.05	.04	−.02	**.09****	.04	.00	.00	.03	.02	**−.21****	**−.12****								
17. Ownership or management definition	0.02	0.15	−.01	−.01	.01	.03	−.02	.03	.03	−.06	.02	−.01	.05	**.11****	**−.07***	**−.19****	**−.11****	−.03							
18. First generation	0.04	0.20	.04	−.06	.05	−.04	−.03	−.02	**.18****	−.05	**.07***	−.06	**.09****	**.11****	**−.07***	**−.25****	**.26****	−.03	.04						
19. After first generation	0.03	0.16	−.01	−.06	.02	−.04	−.04	−.04	**.12****	−.01	.02	**−.08***	.05	**.14****	−.04	**−.20****	**.22****	−.03	−.03	−.03					
20. Mixed generation	0.93	0.25	−.02	**.08***	−.05	.06	.05	.04	**−.22****	.04	−.06	**.10****	**−.10****	**−.18****	**.08***	**.33****	**−.35****	.04	−.02	**−.77****	**−.61****				
21. Accounting performance	0.45	0.50	**−.09****	**−.15****	.04	**−.30***	**−.10****	**.09****	**.09****	**−.23****	.04	**.10****	**−.07***	**.32****	.06	**−.17****	**.18****	−.05	.04	.04	**.11****	**−.10****			
22. Market performance	0.55	0.50	**.09****	**.15****	−.04	**.30***	**.10****	**−.09****	**−.09****	**.23****	−.04	**−.10****	**.07***	**−.32****	−.06	**.17****	**−.18****	.05	−.04	−.04	**−.11****	**.10****	**−1.00****		
23. Industry adjusted	0.09	0.28	.02	**−.18****	−.02	**−.08***	**−.07***	.01	**.09****	**−.07***	**−.07***	**.17****	−.05	**.21****	−.02	**−.19****	**.21****	−.05	.00	**.13****	**.09****	**−.16****	**.24****	**−.24****	
24. Log transformation	0.01	0.10	**.10****	**.09****	.02	.02	.06	.04	**.07***	**.08***	**.07***	−.04	**−.07***	.06	−.05	−.05	.02	−.02	**.13****	.04	−.02	−.02	**−.09****	**.09****	−.03

*Correlation is significant at the 0.05 level for a two-tailed test. **Correlation is significant at the 0.01 level for a two-tailed test.

TABLE 4 PFF-favoring institutions by country[a]

Country	Formal constraining institutions	Informal constraining institutions	Formal enabling institutions	Informal enabling institutions	Std. dev. in countries	PFF favorable institutions (Rank)
Algeria	0.42	0.20	0.08	0.18	0.15	0.26 (47)
Argentina	0.32	0.54	0.27	0.12	0.17	0.40 (21)
Bahrain	0.70	0.18	0.42	0.22	0.24	0.28 (43)
Bangladesh	0.38	0.48	0.10	0.68	0.24	0.47 (15)
Botswana	0.80	0.53	0.13	0.02	0.36	0.22 (48)
Brazil	0.57	0.56	0.39	0.27	0.15	0.41 (19)
Cameroon	0.35	0.29	0.38	0.16	0.10	0.37 (27)
Cape Verde	0.59	0.45	0.32	0.00	0.25	0.30 (42)
Chile	0.85	0.61	0.73	0.30	0.23	0.45 (18)
China	0.48	0.12	0.89	1.00	0.40	0.63 (2)
Colombia	0.19	0.37	0.15	0.19	0.10	0.38 (24)
Côte d'Ivoire	0.30	0.22	0.13	0.16	0.08	0.30 (40)
Croatia	0.71	0.56	0.30	0.25	0.22	0.35 (32)
Egypt	0.57	0.26	0.08	0.50	0.22	0.32 (37)
Ghana	0.48	0.78	0.16	0.05	0.33	0.38 (26)
Greece	0.52	0.68	0.38	0.32	0.16	0.47 (16)
India	0.68	0.76	0.48	0.81	0.15	0.59 (3)
Indonesia	0.50	0.47	0.20	0.39	0.13	0.39 (23)
Iran	0.46	0.08	0.17	0.40	0.18	0.30 (41)
Israel	0.94	0.68	0.44	0.38	0.25	0.39 (22)
Jordan	0.22	0.34	0.41	0.51	0.12	0.51 (11)
Kenya	0.35	0.53	0.23	0.07	0.20	0.37 (29)
Malawi	0.35	0.33	0.04	0.04	0.17	0.27 (46)
Malaysia	0.73	0.28	0.89	0.70	0.26	0.54 (7)
Mauritius	0.75	0.67	0.34	0.16	0.28	0.36 (31)
Mexico	0.27	0.56	0.44	0.55	0.14	0.57 (5)
Morocco	0.41	0.27	0.33	0.21	0.09	0.35 (33)
Mozambique	0.50	0.36	0.16	0.29	0.14	0.33 (36)
Namibia	0.49	0.50	0.07	0.23	0.21	0.33 (35)
Nigeria	0.25	0.55	0.09	0.56	0.23	0.49 (13)
Oman	0.54	0.00	0.13	0.22	0.23	0.20 (49)
Pakistan	0.38	0.47	0.21	0.79	0.24	0.52 (9)
Peru	0.39	0.58	0.33	0.28	0.13	0.45 (17)
Philippines	0.49	0.67	0.36	0.69	0.15	0.56 (6)
Poland	0.64	1.00	0.14	0.14	0.42	0.41 (20)
Qatar	0.68	0.11	0.67	0.37	0.27	0.37 (30)
Saudi Arabia	0.00	0.03	0.45	0.55	0.28	0.51 (12)
South Africa	0.88	0.77	1.00	0.66	0.15	0.64 (1)
South Korea	1.00	0.66	0.77	0.65	0.16	0.52 (10)
Sri Lanka	0.55	0.46	0.27	0.72	0.19	0.47 (14)
Taiwan	0.70	0.70	0.55	0.75	0.09	0.57 (4)
Tanzania	0.51	0.47	0.00	0.11	0.25	0.27 (45)

TABLE 4 (Continued)

Country	Formal constraining institutions	Informal constraining institutions	Formal enabling institutions	Informal enabling institutions	Std. dev. in countries	PFF favorable institutions (Rank)
Thailand	0.65	0.61	0.54	0.59	0.04	0.52 (8)
Tunisia	0.41	0.13	0.26	0.11	0.14	0.27 (44)
Turkey	0.49	0.37	0.26	0.33	0.09	0.37 (28)
Uganda	0.39	0.45	0.06	0.15	0.18	0.32 (38)
United Arab Emirates	0.67	0.13	0.58	0.22	0.26	0.32 (39)
Venezuela	0.44	0.30	0.17	0.30	0.11	0.33 (34)
Zambia	0.31	0.35	0.11	0.36	0.12	0.38 (25)

[a] The value for each type of institution ranges from 0 (low institutional development) to 1 (high institutional development).

(Saudi Arabia) was so institutionally distinct that it immediately formed a cluster of its own (f) (see Appendices A and B).

We found that PFFs located in countries with low scores on all institutional types (Group 1) show negative and significant $r_{xy.z}$- and *r*-based mean effect sizes for the focal relationship. Under this configuration of institutions, PFFs' competitive advantage is significantly impaired. In contrast, the competitive advantage of PFFs located in countries with high scores on 2 or 3 institutional types (Groups 3 and 4) is much more pronounced: we report a positive and significant mean for the focal relationship in Group 3 for both $r_{xy.z}$- and *r*-based mean effect sizes and in Group 4 for the *r*-based mean effect size. For PFFs located in countries with only one highly developed institutional type (Group 2), the focal relationship is positive but insignificant, corroborating this group's intermediate position. Finally, for PFFs located in countries with high scores on all institutional types (Group 5), the relationship becomes insignificant again, possibly because institutional development in this group has progressed sufficiently to provide a level playing field for PFFs and PNFFs alike. The upshot of this comparative analysis is twofold. First, it reconnects our conceptual description of institutional types with the countries that have developed and maintained these institutions in practice, thus providing a powerful illustration of the institutional makeup of contemporary EMs. Second, it shows that these country groupings are consequential, in that institutional conditions produce different outcomes for PFFs across EMs.

5 | DISCUSSION

Motivated by the critical importance of PFFs in EMs and the inconclusive findings in past research about the strength of their competitive advantage, we set out to provide a better explanation of PFFs' performance variation across EMs. Starting from the perspective that PFFs are institutionally embedded (Peng & Jiang, 2010), we developed and tested four hypotheses concerning the institutional factors impacting the competitive advantage PFFs enjoy over PNFFs in many EMs (Baek et al., 2004; Chang, 2003; Luo & Chung, 2005, 2013). Our study makes several theoretical contributions to the global strategy and strategic management literatures.

5.1 | An institution-based view of PFF performance

To the global strategy literature, we offer a further enrichment of the institution-based view (Peng et al., 2009) by scrutinizing the institutional embeddedness of PFFs (cf. Kostova & Zaheer, 1999).

TABLE 5 Results of mixed-effects WLS regression[a]

Variable	Model 1	Model 2	Model 3	Model 4	Model 5
Constant	−2.08 (2.59)	6.44 (2.71)	−3.98 (0.20)	4.81 (4.11)	**7.21 (2.96)****
Study characteristics					
Published study	**−0.03 (0.01)*****	**−0.03 (0.01)*****	−0.01 (0.01)	**−0.05 (0.01)*****	**−0.03 (0.01)*****
ISI impact factor	**0.01 (0.00)*****	**0.02 (0.00)*****	**0.01 (0.00)*****	**0.02 (0.00)*****	**0.02 (0.00)*****
Median year of sample window	0.00 (0.00)	**−0.00 (0.00)****	0.00 (0.00)	−0.00 (0.00)	**−0.00 (0.00)****
Panel design	**0.02 (0.01)****	**0.02 (0.01)*****	0.00 (0.01)	**0.06 (0.02)*****	0.01 (0.01)
Endogeneity check	−0.01 (0.01)	−0.01 (0.01)	0.00 (0.01)	0.01 (0.01)	**−0.01 (0.01)***
Family firm definition					
Management definition	−0.00 (0.01)	**−0.02 (0.01)****	**−0.01 (0.01)***	−0.02 (0.01)	**−0.02 (0.01)****
Ownership and management definition	0.01 (0.02)	**−0.05 (0.02)****	0.00 (0.02)	−0.01 (0.04)	−0.02 (0.02)
Ownership or management definition	0.00 (0.02)	0.01 (0.02)	−0.02 (0.02)	−0.02 (0.05)	0.02 (0.02)
Generation					
After first generation	**−0.05 (0.02)****	**−0.04 (0.02)****	**−0.05 (0.02)*****	**−0.05 (0.03)***	**−0.04 (0.02)****
Mixed generation	**−0.03 (0.02)****	**−0.03 (0.01)***	**−0.02 (0.01)***	−0.03 (0.02)	−0.02 (0.01)
Performance definition					
Market performance	**0.02 (0.01)****	0.00 (0.01)	−0.01 (0.01)	−0.02 (0.01)	−0.00 (0.01)
Adjusted for industry	−0.01 (0.01)	**−0.02 (0.01)***	−0.00 (0.01)	−0.00 (0.02)	**−0.03 (0.01)****
Logarithmically transformed	**0.12 (0.04)*****	**0.21 (0.04)*****	**0.28 (0.04)*****	−0.23 (0.20)	**0.25 (0.04)*****
Firm characteristics					
Firm advertisement expenditures	**0.07 (0.02)*****	**0.03 (0.02)****	**0.04 (0.02)****	**0.11 (0.03)*****	0.02 (0.02)
Firm capital expenditures	**−0.09 (0.02)*****	**−0.08 (0.01)*****	**−0.07 (0.01)*****	**−0.09 (0.02)*****	**−0.08 (0.02)*****
Firm diversification	**−0.05 (0.02)****	**−0.04 (0.02)***	**−0.03 (0.02)***	−0.04 (0.04)	**−0.05 (0.02)****
Firm dividends	0.02 (0.02)	**0.05 (0.02)****	0.02 (0.02)	**0.13 (0.03)*****	0.03 (0.02)
Dual listing	**−0.12 (0.02)*****	**−0.06 (0.02)*****	**−0.06 (0.02)*****	−0.00 (0.04)	**−0.05 (0.03)***
Firm age	−0.01 (0.01)	**−0.03 (0.01)*****	−0.02 (0.01)	−0.02 (0.01)	**−0.04 (0.01)*****
Firm growth	**−0.10 (0.03)*****	**−0.07 (0.03)****	**−0.05 (0.03)****	**−0.15 (0.04)*****	**−0.06 (0.03)****
Firm risk	**0.03 (0.02)***	0.01 (0.02)	0.03 (0.02)	**−0.07 (0.03)*****	0.01 (0.02)
Firm size	−0.00 (0.02)	**−0.03 (0.01)****	**−0.04 (0.01)*****	0.01 (0.02)	**−0.05 (0.02)*****
Firm free cash flow	**−0.06 (0.03)****	**−0.11 (0.02)*****	**−0.07 (0.02)*****	−0.11 (0.08)	**−0.12 (0.02)*****
Percentage of firm internationalization	−0.03 (0.03)	−0.01 (0.02)	−0.02 (0.02)	**−0.15 (0.04)*****	−0.02 (0.03)
Firm debt	**0.05 (0.01)*****	**0.05 (0.01)*****	**0.05 (0.01)*****	0.01 (0.02)	**0.07 (0.01)*****
Market risk	**0.05 (0.01)*****	**0.06 (0.01)*****	**0.02 (0.01)***	**0.13 (0.02)*****	**0.07 (0.01)*****
Prior firm performance	**−0.07 (0.01)*****	**−0.09 (0.01)*****	**−0.08 (0.01)*****	**−0.07 (0.01)*****	**−0.10 (0.01)*****
Percentage of R&D expenditure	−0.01 (0.01)	0.00 (0.01)	0.00 (0.01)	0.03 (0.03)	0.01 (0.01)
Governance characteristics					
Affiliated with a business group	−0.00 (0.01)	−0.01 (0.01)	−0.00 (0.01)	−0.01 (0.01)	−0.01 (0.01)
Percentage of outside directors	−0.00 (0.01)	**−0.02 (0.01)***	**−0.02 (0.01)***	**−0.05 (0.02)*****	**−0.03 (0.01)*****

TABLE 5 (Continued)

Variable	Model 1	Model 2	Model 3	Model 4	Model 5
Board size	**0.02 (0.01)***	−0.01 (0.01)	0.01 (0.01)	0.01 (0.02)	−0.01 (0.01)
CEO duality	−0.00 (0.01)	**0.05 (0.01)*****	**0.03 (0.01)*****	**0.11 (0.02)*****	**0.03 (0.01)****
Corporate ownership	**0.07 (0.02)*****	**−0.04 (0.02)****	**−0.05 (0.02)*****	−0.01 (0.02)	**−0.06 (0.02)*****
Foreign ownership	**0.10 (0.01)*****	**0.14 (0.01)*****	**0.13 (0.02)*****	**0.12 (0.02)*****	**0.15 (0.02)*****
Government ownership	**−0.03 (0.01)*****	**−0.02 (0.01)****	**−0.03 (0.01)****	**−0.02 (0.01)***	**−0.03 (0.01)*****
Inside ownership	**−0.06 (0.02)*****	−0.02 (0.02)	−0.01 (0.02)	**−0.11 (0.02)*****	−0.02 (0.02)
Institutional ownership	**−0.02 (0.01)****	0.01 (0.01)	**0.03 (0.01)*****	**0.03 (0.01)****	0.01 (0.01)
Percentage ownership of largest owner	−0.01 (0.01)	0.00 (0.01)	0.01 (0.01)	−0.02 (0.01)	0.00 (0.01)
Second blockholder	−0.02 (0.01)	**−0.06 (0.01)*****	−0.02 (0.01)	−0.01 (0.02)	**−0.06 (0.01)*****
Dual class shares	**−0.07 (0.01)*****	**−0.04 (0.01)*****	**−0.04 (0.01)*****	−0.00 (0.03)	**−0.03 (0.02)***
Number of variables in regression	**0.00 (0.00)*****	**0.00 (0.00)****	−0.01 (0.00)	−0.00 (0.00)	**0.00 (0.00)***
Independent variable included in interaction	**−0.02 (0.01)****	−0.00 (0.01)	0.01 (0.01)	0.02 (0.02)	0.00 (0.01)
Industry effects	**−0.03 (0.01)****	−0.01 (0.01)	0.00 (0.01)	**−0.03 (0.01)***	−0.01 (0.01)
Year effects	**0.03 (0.01)*****	**−0.03 (0.01)*****	−0.00 (0.01)	**−0.05 (0.02)****	−0.02 (0.01)
Institutional variables					
Formal constraining institutions		**−0.05 (0.00)*****		**−0.04 (0.01)*****	**−0.05 (0.01)*****
Creditor protection index			**−0.09 (0.01)*****		
Labor protection index			**−1.31 (0.16)*****		
Anti-director rights index			**−0.07 (0.01)*****		
Rule of law index			0.01 (0.02)		
Informal constraining institutions		**0.04 (0.00)*****		**0.03 (0.00)*****	**0.05 (0.00)*****
Freedom of the press			**0.01 (0.00)*****		
Political freedom			−0.00 (0.01)		
NGO count			**0.02 (0.01)****		
Formal enabling institutions		**0.01 (0.00)*****		**0.01 (0.00)***	**0.02 (0.00)*****
Private credit to GDP			**−0.00 (0.00)*****		
Stock market capitalization to GDP			0.00 (0.00)		
Business school count			**0.02 (0.00)*****		
Business school quality			0.03 (0.02)		
Informal enabling institutions		**0.01 (0.00)*****		**0.05 (0.01)*****	**0.01 (0.00)*****
Future orientation practices index			**0.11 (0.02)*****		
Societal in-group collectivism practices index			0.01 (0.02)		
Interpersonal trust index			**0.00 (0.00)*****		
Prevalence of PFFs in country	**−0.09 (0.02)*****	**−0.17 (0.02)*****	**−0.22 (0.03)*****	**−0.43 (0.05)*****	**−0.19 (0.03)*****
Ln GDP per capita	**0.01 (0.00)*****	0.01 (0.00)	**0.04 (0.01)*****	**0.07 (0.01)*****	**0.01 (0.00)***

TABLE 5 (Continued)

Variable	Model 1	Model 2	Model 3	Model 4	Model 5
Physical infrastructure development	0.01 (0.01)	**0.03 (0.01)*** **	0.00 (0.01)	−0.00 (0.01)	**0.03 (0.01)*** **
R^2	0.26	0.42	0.48	0.61	0.44
k	938	938	938	588	839
$Q_{model}(p)$	401.34 (0.00)	722.10 (0.00)	877.81 (0.00)	916.80 (0.00)	663.09 (0.00)
$Q_{residual}(p)$	1163.15 (0.00)	1016.01 (0.00)	964.45 (0.02)	583.15 (0.08)	914.10 (0.00)
v	0.00327	0.00249	0.00206	0.00170	0.00262

[a] Unstandardized regression coefficients are presented with standard errors in parentheses. k is the number of samples; Q is the homogeneity statistic with its probability in parentheses; v is the random effects variance component. *$p < .10$, **$p < .05$, ***$p < .01$.

Some prior research has explored how institutions affect PFFs (Peng & Jiang, 2010), but most studies have been limited to FCIs. We add to this literature by proposing a more comprehensive typology of institutional factors, which distinguishes between formal and informal and constraining and enabling institutions. The typology is based on well-established theoretical distinctions (Carney, 2013; Klein, 1985; Martin, 2014; Nelson, 1986; North, 1990) and is particularly relevant for EMs, where all four types of institutional factors exhibit significant variation. Our framework complements extant typologies of institutional factors (e.g., Knack & Keefer, 1995; Kostova, 1999; Li & Qian, 2013; Scott, 2013; Stiglitz, 2000) and provides a better explanation of PFF performance variation across EMs. Furthermore, the integration of different country characteristics into a parsimonious set of conceptually meaningful categories (e.g., formal constraining, informal enabling) provides a stronger base for robust theory building and measurement. This is notably different from the common approach of relying on a single or a few unrelated country-level indicators, such as bankruptcy laws (Lee, Yamakawa, Peng, & Barney, 2011), creditor protection laws (Faccio et al., 2010), or economic freedom (Shinkle et al., 2013). Such focused studies may overlook other relevant institutional elements. More importantly, using a theoretically derived classification device allows for developing hypotheses at the conceptual level, while at the same time allowing for better operationalization and measurement. This theory-driven approach helps streamline institution-based research, which is currently using many different and sometimes arbitrarily chosen country-level measures.

5.2 | Institutional competitive advantages of PFFs

To the strategic management literature, we offer a contextualized explanation of PFF performance variation across EMs. We hereby respond to a recent call by Garrido and her associates: "the opportunities for research in the intersection between strategic management and the institution-based view seem to be promising. (…) Of special interest is its potential power to explain why firm performance differs" (Garrido et al., 2014, p. 98). We show that all institutional types, with the occasional exception of IEIs, significantly impact PFFs' competitive advantage. For example, PFFs thrive in countries with weak FCIs because they can strategically put their reputational capital at risk, which makes outsiders view them as more reliable business partners (Dyer & Whetten, 2006; Miller et al., 2009). Similarly, PFFs benefit from high quality FEIs, as it reduces their relative disadvantage in factor markets (Acquaah, 2012; Luo & Chung, 2013). PFF traits like long-termism, reputational capital, stewardship, and unified control, thus, translate more easily into competitive advantages against a backdrop of PFF-favoring institutions. These findings suggest shifting family firm research away from the more general question of whether PFFs outperform PNFFs, toward more nuanced questions such as where, when, and under what contextual conditions PFFs are likely to have competitive advantages

(Chua et al., 2012; Luo & Chung, 2013). Specifically, our findings suggest that by interacting with specific institutions in their environments in ways that PNFFs cannot copy, PFFs can develop an "institutional competitive advantage" (Martin, 2014, p. 59) over their PNFF rivals.

5.3 | Managerial implications

Our work has managerial implications, especially for PFFs' global strategy processes and location choices. It provides a better understanding of the competitive advantage PFFs enjoy in certain EMs and, thus, can inform PFF location decisions. To PFF decision makers, we suggest that they protect and sustain the distinctive characteristics of family ownership, while being aware that these characteristics might bring about diminished competitive advantage in certain contexts. In addition, they should be cognizant of the dynamic changes in institutional conditions in their home and host markets, as such developments may erode their competitive advantage over time (Li & Qian, 2013). Our results inform the global strategy process in PFFs, especially when firms are choosing to expand internationally. In addition to other factors identified in the literature, we recommend considering the PFF favorability of the host country institutional environment. Entering new EMs does not automatically guarantee an advantage, due to the heterogeneity in PFF-favoring institutions across countries. Thus, we urge PFF owners and managers to critically assess the institutional factors affecting their competitive advantage in potential host environments as they develop their internationalization strategies.

5.4 | Limitations

Our study has several limitations.[6] First, we tested our institutional typology on PFFs operating in the context of EMs. EMs provide unique opportunities for examining the effects of variability of institutions that are taken for granted in stable and institutionally mature environments. However, by focusing on EMs, we are observing only a fraction of the variance in institutional variables, which limits the generalizability of our model and findings. Future work could extend the institutional embeddedness perspective of PFFs by exploring institutional configurations in more developed economies (Tsui, 2007). Second, although meta-analysis is a suitable technique for assessing the balance of evidence for a focal relationship, multiple alternative (and sometimes contradictory) theoretical arguments for such associations can be present simultaneously (Carney et al., 2015; Thompson and Sharp, 1999). In our study, we draw on prevalent theories in the field of family business (e.g., agency theory, behavioral agency theory, and the resource-based view of the firm; cf. Chrisman, Kellermanns, Chan, & Liano, 2009) to predict the relative performance of PFFs. Future research might examine the performance advantages of PFFs from alternative theoretical and disciplinary perspectives to fully capture the complexity and uniqueness of family firms (Zahra, 2016). Third, we have treated our control group of PNFFs as a homogenous class of organizations. However, PNFFs' resources and influence on public policy vary substantially across ownership structures (e.g., state-owned, foreign-owned, or institutional investor-owned PNFFs) and nations. Future research is needed to open up the black box of PNFFs and to gain deeper insights into the relative competitive (dis) advantages of PFFs versus other dominant organizational forms in EMs, like state-owned enterprises (Mesquita, 2016). Fourth, our study is constrained by the scope of the primary studies comprising our sample. While our study covers 77% of all EMs identified by Hoskisson et al. (2000), some countries are represented by just one study or were part of a multiple-country research study. This

[6]We thank our anonymous reviewers for bringing several of these limitations to our attention.

suggests opportunities for future research in underexplored contexts such as Africa and Latin America. Fifth, potential limitations in the design of primary studies might bias our findings. To limit this risk, our MARAs included a range of control variables to correct for measurement, methodological, and model specification artifacts. Finally, given the nature of meta-analysis, we had to exclude qualitative case studies and conceptual papers from our analyses, which therefore await narrative synthesis. Our meta-analysis nonetheless goes beyond prior literature syntheses and further enriches the institutional embeddedness perspective by developing an institutional framework that complements extant typologies of institutional factors explaining PFF performance in EM contexts.

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APPENDIX A

Average score of the PFF-favorable institutions by group of countries[a,b]

Group	Number of countries	Average score			
		Formal constraining institutions	Informal constraining institutions	Formal enabling institutions	Informal enabling institutions
1	22	0.40 (L)	0.39 (L)	0.16 (L)	0.31 (L)
2	9	0.62 (H)	0.29 (L)	0.32 (L)	0.18 (L)
3	13	0.59 (H)	0.65 (H)	0.43 (L)	0.44 (L)
4	2	0.74 (H)	0.39 (L)	0.83 (H)	0.83 (H)
5	2	0.81 (H)	0.53 (H)	0.95 (H)	0.68 (H)
6	1	0.00 (L)	0.03 (L)	0.45 (L)	0.55 (H)

[a]Countries included in group 1 are: Algeria, Argentina, Bangladesh, Cameroon, Colombia, Côte d'Ivoire, Egypt, Ghana, Indonesia, Iran, Kenya, Malawi, Morocco, Mozambique, Nigeria, Pakistan, Sri Lanka, Tanzania, Turkey, Uganda, Venezuela, and Zambia; countries included in group 2 are: Bahrain, Botswana, Cape Verde, Croatia, Namibia, Oman, Qatar, Tunisia, and United Arab Emirates; countries included in group 3 are: Brazil, Chile, Greece, India, Israel, Jordan, Mauritius, Mexico, Peru, Philippines, Poland, Taiwan, and Thailand; countries included in group 4 are: China and South Korea; countries included in group 5 are: Malaysia and South Africa; country included in group 6 is: Saudi Arabia.

[b]We classified the score obtained for each type of PFF-favorable institutions as low (L) (values lower than 0.50) or high (H) (valued greater or equal to 0.50). Information is provided between parentheses.

APPENDIX B

Homa group-specific meta-analytic results[a,b,c]

	Partial linear correlation coefficient ($r_{xy.z}$)							Pearson product–moment correlation (r)						
Predictor	***k***	***N***	**Mean**	**SE**	**CI 95%**	***Q* test**	***I*²**	***k***	***N***	**Mean**	**SE**	**CI 95%**	***Q* test**	***I*²**
PFF to performance														
Group 1	198	44,874	**−0.04***	0.01	−0.06/−0.02	950.97 (0.00)	0.79	47	7,710	**−0.09***	0.02	−0.13/−0.05	111.85 (0.00)	0.59
Group 2	6	714	0.06	0.04	−0.01/0.13	0.50 (0.99)	0.00	4	684	0.02	0.14	−0.26/0.30	37.17 (0.00)	0.92
Group 3	461	234,627	**0.04***	0.00	0.03/0.04	1,324.56 (0.00)	0.65	289	97,207	**0.02***	0.01	0.01/0.03	746.12 (0.00)	0.61
Group 4	151	133,117	0.01	0.00	−0.00/0.02	394.54 (0.00)	0.62	57	30,340	**0.02***	0.01	0.00/0.04	173.80 (0.00)	0.68
Group 5	23	6,873	−0.00	0.01	−0.03/0.02	25.38 (0.28)	0.13	21	8,376	−0.01	0.02	−0.04/0.02	32.10 (0.04)	0.38
Group 6	-	-	-	-	-	-	-	1	89	0.13	-	-	-	-

[a]For robustness purposes, we exclude effect sizes identified as outliers.

[b]Mean effect sizes marked with an asterisk (*) are statistically significant ($p < .05$).

[c]k = number of samples; N = firm observations; SE = the standard error of the mean correlation; CI 95% = 95% confidence interval around the meta-analytic mean; Q test = Hedges and Olkin (1985) chi-square test for homogeneity; I^2 = scale-free index of heterogeneity.