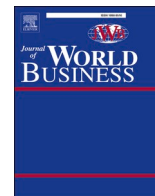




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Research Article

The Impact of International Mergers and Acquisitions on Rivals' Performance: The Role of Formal and Informal Institutions

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ABSTRACT

The article examines how firms' institutional environments influence rivals' expected performance following horizontal M&A announcements of competitors. Grounded in institutional economics, we propose that institutional distance affects M&As' economic efficiency by influencing deal completion and creating subsequent differential costs and benefits post-deal completion. Our analysis of 124 international M&A announcements reveals that rivals' performance is negatively affected by negative formal institutional distance between the acquirer and target, but positively affected by negative formal distance between the rival and acquirer. In addition, informal institutional distance between the acquirer and target has positive effect on rivals' performance—though this effect vanishes for high-status acquirers.

1. Introduction

Firms rely on mergers and acquisitions (M&As) to gain an edge over their rivals (Chatterjee, 1986; Grimpe & Hussinger, 2008; Jeon et al., 2011) by accessing new markets and expanding their resource endowments through the acquisition of valuable complementary assets or novel technologies (Hitt et al., 2001). Yet the large body of research that has explored the performance effects of M&As has consistently found that these transactions often result in financial losses for acquirers and financial gains for targets (e.g., Halebian et al., 2009; Pinelli et al., 2022). Whether M&As create or destroy value for rival firms, however, is still unclear, as theoretical arguments and empirical findings are mixed.

Some studies suggest that horizontal M&As may generally have a positive effect on rivals' performance. Acquisitions, in fact, can lead to industry consolidation and collusion, which may benefit rivals (Eckbo, 1985; Fee & Thomas, 2004) and signal growth opportunities that may also be advantageous to rivals through future M&As (Cai et al., 2011; Gaur et al., 2013; Song & Walkling, 2000). In addition, rivals may also benefit when horizontal M&As weaken the acquirer, either because the target captures most of the acquisition's value or due to common coordination and integration challenges in the post-acquisition phase

(Andrade et al., 2001; Moeller et al., 2005; Birkinshaw et al., 2000; Larsson & Finkelstein, 1999; Larsson & Lubatkin, 2001; Maguire & Phillips, 2008; Vaara, 2003). The empirical findings of other studies, however, show that about one in four rival firms lose market value (Clougherty & Duso, 2011) and that nearly 50 % of rival firms do not experience any positive performance effect (Akdoğan, 2009; Song & Walkling, 2000).

A possible explanation for this inconsistency is the prevailing focus of past research on firm- and industry-level factors and the consequent under-examination of the effect that the institutional context has on M&A outcomes. Organizational and transaction success, in fact, does not depend solely on a firm's agency (Heugens & Lander, 2009) but also on the institutional environment in which firms operate (Garrido et al., 2014). Consequently, in this paper we aim to investigate the effect that the institutional context has on rival firms' performance following horizontal M&A announcements by competitors. To this end, we adopt the theoretical lens of Institutional Economics (Klein, 1998; Posner, 2010; Lloyd & Lee, 2018) to examine how the institutional environments of the acquiring, target, and rival firms affect the expected performance of rivals upon acquisition announcements. Generally defined, Institutional Economics posits that the economic efficiency of transactions and organizational arrangements depends on the effectiveness of

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surrounding institutions – i.e., on their capacity to eliminate or reduce market frictions and transaction costs (North, 1990) – and, in an international context, on the distance between the formal (e.g., laws and codes) and informal institutions (e.g., cultural values, social norms) of the acquiring, target, and rival firms' countries (Hernández et al., 2018; Kostova et al., 2020).

Building on this perspective, we argue that institutional distance affects the economic efficiency of M&As – and thus the extent of their capacity to threaten rival firms' prospects – because it can alter the likelihood of completion of M&A deals and can create differential costs and benefits for acquirer-target dyads. More specifically, by aligning with previous studies we rely on a conceptualization that acknowledges the importance of both the magnitude and the direction of formal institutional environments (Hernández & Nieto, 2015; Hernández, Nieto & Boellis, 2018). Thus, we argue that negative formal institutional distance between acquiring and target firms – when the host country's formal institutions are less developed than those of the acquiring country – increases an acquisition's economic efficiency. This increase in efficiency stems from two key sources. First, gains deriving from the combination of institutionally driven flexibility advantages in the host country (Degbey, Eriksson, Rodgers & Oguji, 2021). Second, stability advantages deriving from the developed formal institutions of the acquirers' home countries. Because of the greater value-creating potential of horizontal M&As under negative formal institutional distance, we expect these acquisitions to be threatening for rivals, which should be reflected in their expected performance. We also suggest, however, that such M&As are less threatening for rivals in the case of negative institutional distance between rivals and acquirers. In effect, when the rival's country has formal institutions at least as strong as those of the acquirer's, rivals could pursue the same institutionally driven advantages through future M&As, which makes the original M&A between the acquirer and the target less threatening. Finally, we propose that institutional distance in the informal institutions of acquirers and targets may reduce the economic efficiency of M&As because it may complicate the post-acquisition organizational integration, although we expect this effect to be weaker for acquirers with high status. We thus expect that informal institutional distance positively affects rivals' expected performance, but that this effect is negatively moderated by the acquirer's status.

We tested our hypotheses by examining the stock market reactions, as a proxy for expected performance, of rival firms, relying on a set of horizontal M&As announced between 1999 and 2014 within the manufacturing industry. While we found only partial support for the prediction that negative formal institutional distance between rivals and targets positively affects rivals' expected performance, we did find substantial support for the rest of our hypotheses.

These results contribute significantly to both strategy and international business literature in various ways. First, we add to research in international business that applies Institutional Economics to explore the effect institutions have on firm performance (e.g., Devarakonda et al., 2021; Buchner et al., 2018; Kafouros & Aliyevm, 2016; Peng, 2002; Peng et al., 2009) by showing that institutional distance affects rival firms' expected performance. In addition, by showing that the formal institutions of rivals' countries and an acquirer's status moderate the effect of institutional distance on rivals' expected performance, we also identify important boundary conditions to these relationships. Second, we support the strategy literature that looks at the effect M&As have on rivals' performance (Cartwright & Schoenberg, 2006; Clougherty & Duso, 2009; Gaur et al., 2013, 2011; Shahrur, 2005; Song & Walkling, 2000) by bringing in concepts from Institutional Economics. While most research has focused on resources and capabilities as the primary factors affecting rival firms' performance upon M&As by competitors, our study reveals that it is also affected by the formal and informal institutional settings of the acquirer, the target, and the rival.

2. Theory and hypotheses

2.1. M&As and Rival performance

By way of M&As, companies aim to obtain competitive advantages and enhanced market performance by accessing assets and competences of strategic value and by realizing synergies through the combination of resources and capabilities (Ahmadd et al., 2017; Chatterjee, 1986; Chatterjee et al., 1992; Du et al., 2016; Porrini, 2004; Saxton & Dollinger, 2004; Testoni, 2021; Cartwright & Schoenberg, 2006; Ranft & Lord, 2002). Additionally, cross-border M&As also allow firms to enter foreign markets and exploit local resources or take advantage of market imperfections (e.g., Buckley & Casson, 1976; Morck & Yeung, 1992; Wilson, 1980), thus potentially creating wealth for both acquiring and target companies (e.g., Fani et al., 2023; Kang, 1993; Markides & Ittner, 1994; Morck & Yeung, 1991, 1992).

Despite these favorable arguments, empirical findings show that acquirers often lose value during horizontal M&As, which for the most part is captured by targets (Cartwright & Schoenberg, 2006; Clougherty & Duso, 2009; Gaur et al., 2013; Haleblan et al., 2009; King et al., 2004; Saxton & Dollinger, 2004; Zaheer et al., 2013). Regarding the effects that horizontal M&As have on rivals' performance, scholarly consensus is indefinite. Some strategy scholars have proposed that rivals might, generally, benefit when competing firms engage in M&As. Firstly, horizontal M&As increase industry concentration, thereby encouraging collusion and increasing the performance of all players in a given industry (Chatterjee, 1986; Clougherty & Duso, 2011; Stigler, 1950). Secondly, horizontal M&As signal the presence of location-specific opportunities (e.g., a growing foreign market, cheaper labor, an abundance of resources) or of industry-level synergies, both of which rivals can pursue through their own future M&As (Gaur et al., 2013; Shahrur, 2005; Song & Walkling, 2000). Thirdly, as M&As often happen in waves, rivals may become the targets of future acquisitions (e.g., Song & Walkling, 2000), thereby benefiting from the positive performance effect that targets often experience (Haleblan et al., 2009). Despite these arguments, however, almost half of rivals experience negative effects on their expected performance following horizontal M&A announcements (Song & Walkling, 2000).

Another stream of research, instead, suggests that the performance effects that M&As have on rivals may not be universally positive or negative but rather depend on whether acquirers gain or lose from these transactions. Rivals may benefit from M&As that weaken acquirers and can be harmed by those that strengthen their prospects. For instance, rivals can gain when their competitors' M&As are driven by managerial self-interest, hubris, and overconfidence, as in these cases acquirers are more likely to incur economic losses (Clougherty & Duso, 2009; Jemison & Sitkin, 1986; Haleblan et al., 2009; Malmendier & Tate, 2008). On the other hand, rivals are more likely to be damaged when M&As strengthen acquirers' competences and market positions (Garcia-Sanchez et al., 2014; Hitt et al., 2001) or when M&As take away rivals' potential opportunities, such as valuable acquisition targets (Akdogu et al., 2009).

2.2. Institutional economics

Whereas standard Neoclassical economics assumes a world with perfect information, Institutional Economics posits one in which individuals face imperfect information and are given limited decision-making capabilities, or bounded rationality. In this latter world, institutions, formal or informal, play an important role because they determine the level of uncertainty that economic actors have to deal with when they make decisions and, thus, how efficient and effective these decisions can be (North, 1990). Higher quality institutions build on stability and thus provide repeatability and favor information diffusion, the development of markets, and overall collective wealth creation (Lloyd & Lee, 2018). On the other hand, lower quality institutions often generate *ad hoc* situations in which decisions involve difficult bargaining

and sometimes corruption, leading to slower market development (Khanna & Palepu, 1997).

More precisely, the efficient functioning of a given market depends on the extent to which its formal and informal institutions are capable of reducing frictions and the economic costs of transactions and organizational arrangements (Posner, 2010), such as the costs associated with, among other things, acquiring and processing information, information asymmetry, risk, uncertainty, opportunistic behavior, monitoring, and goal misalignment (e.g., agency costs) (Kostova et al., 2020). Importantly, as different countries are characterized by different sets of formal and informal institutions, nations differ both in terms of the extent to which and the way in which existing institutions foster economic activity and coordination among agents (Berrone et al., 2020; Pinelli et al., 2024a). Such cross-national distance in institutions has two important implications. The first one is that the relative efficiency (i.e., the cost) of a given organizational arrangement or transaction varies across countries depending on its fit with local institutions and on local institutions' capacity to support economic actors' value-creating activities (Gedajlovic & Carney, 2010; Pinelli et al., 2024b). Consequently, how actors can most effectively organize, coordinate, act, and interact to conduct value-creating activities also varies across countries. Relatedly, the second implication is that companies that expand to foreign countries sustain a cost that increases with institutional distance – i.e., with the degree to which the institutions of home and host countries differ (Dikova et al., 2010; Henisz & Williamson, 1999), due to unfamiliarity with the local 'rules of the game' (Hymer, 1960; Perkins et al., 2014; Pinelli et al., 2022; Pinelli et al. 2024b; Zaheer, 1995; Zhou & Guillen, 2016).

In addition, institutional distance may have an asymmetric effect on internationalization's efficiency due to differences between the relative effectiveness of home and host institutions, so that the direction of foreign expansion may also imply costs of different kind and magnitude (Kostova et al., 2020). In this regard, Hernández, Nieto and Boellis (2018) remarked that – in the case of formal institutions^e – it is also possible to distinguish between positive and negative institutional distance. Negative institutional distance – i.e., expanding from higher-quality to lower-quality institutional settings – might be costlier due to greater risks (Khanna & Palepu, 1997, 2000; Trapczynski & Banalieva, 2016) but it may also lead to greater rewards (Fani et al., 2023). In fact, firms from institutionally developed countries can take advantage of the greater stability offered by such high-quality home institutions, which thus act as 'institutional anchors', to seize opportunities in developing markets with institutions of lower quality. The institutional void literature (Khanna & Palepu, 1997), in fact, remarks that in less developed markets poorly functioning institutions can create opportunities that are available only to companies from more institutionally developed countries (Mudambi, 1999).

In other words, Institutional Economics implies that, in cross-national settings, the economic efficiency of transactions and

^e It's important to underscore that formal and informal institutions cannot be conceptualized in the same way when it comes to distance. In the case of formal institutions, distance can be either positive or negative, whereas this kind of distinction isn't applicable to informal institutions. For instance, a policy that lowers transaction costs is considered "better" from an economic standpoint than one that raises them. If two countries adopted these different laws, they'd both have the same degree of formal "distance". Yet, as one piece of legislation increases economic efficiency and the other one reduces it, the two countries would also have institutional "difference" thus pointing to the existence of both magnitude and direction with respect to formal institutions (Hernández & Nieto, 2015; Hernández, Nieto, & Boellis, 2018). In contrast, it's inappropriate to rank cultures, ideologies, or religions as superior or inferior within the context of informal institutions. The same principle applies to interorganizational settings, where individuals interact regardless of their geographic location. As such we – and the literature that we know of – generally does not speak of "difference" but only "distance" when it comes to informal institutions.

organizational arrangements depends on how much home and host institutions differ in absolute terms (absolute institutional distance) and on whether host institutions are of better (positive institutional distance) or worse quality than home institutions (negative institutional distance) (Hernández et al., 2018; Kostova et al., 2020). Building on this theoretical perspective, we argue that absolute and negative institutional distance affects M&As' economic efficiency in two ways: they cause differential costs and benefits for acquirers and rivals, and they affect the likelihood that M&A deals are actually completed (Bell et al., 2012; Miller & Parkhe, 2002; Zaheer & Mosakowski, 1997; Cuervo-Cazurra & Genc, 2008; Gaur & Lu, 2007; Yu & Cannella, 2007; Karolyi & Taboda, 2015; Rossi & Volpin, 2004). In so doing, absolute and negative institutional distance affect the value-creating potential of M&As and the extent to which they represent a threat for rivals of acquirer-target dyads, which would be reflected in their expected performance.^f

2.3. Negative formal institutional distance between acquirers and targets, and rivals' expected performance

The formal institutional environment comprises the set of policies and legal prescriptions and proscriptions that a national government intentionally designs to foster economic transactions (e.g., shareholder and property rights protection, legal enforcement, the containment of corruption). Formal institutions thus comprise the key attributes of a country that make it a good place to conduct business (e.g., the court's independence from politics, the stability of the national government, the frequency of violent crime) (Kaufmann et al., 2007). As this set of rules and nation-level qualities varies across countries, doing business abroad implies extra costs and risks due to unfamiliarity with the local institutional environment (Hymer, 1960; Pinelli et al., 2022; Pinelli et al., 2024a; Zaheer, 1995; Zhou & Guillen, 2016). As such, a significant portion of the risk that acquirers may not realize financial gains from M&As stems from institutional distance.

Yet, as previously illustrated, Institutional Economics maintains that economic costs and frictions stem not just from the magnitude of institutional distance but also from the direction of international expansion (Kostova et al., 2020). This is because expanding to weaker (negative institutional distance) or stronger institutional environments (positive institutional distance) implies differential costs. For instance, information asymmetries arise because foreign firms have limited awareness of potential economic and legal problems that may emerge in the host country and a limited understanding of the legal tools to anticipate, prevent, or solve them in a timely fashion (Perkins et al., 2014). Under negative formal institutional distance, however, information asymmetries are likely to be amplified due to lower quality information and higher transaction uncertainty in countries with weak formal institutions (Pinelli et al., 2024a). Nevertheless, negative formal institutional distance can also be attractive for internationalizing firms because host environments with weaker but more permissive formal institutions allow them to take advantage of, for example, preferential tax treatments, more favorable labor policies, or less stringent rules on anti-competitive agreements (e.g., Li & Resnick, 2003; Zhang, 2001). In addition, positive formal institutional distance may also cause various kinds of risks and costs. In fact, while strong formal institutions enforce clearly codified regulatory mechanisms that enhance the transparency and predictability of market interactions (McMillan, 2007), such greater stability also makes markets more rigid due to regulatory constraints on corporate behavior (Khanna & Palepu, 2000) that limit the extent to which companies can gain from foreign expansion. As such, strong

^f M&As, compared to other entry modes, are the choice of governance structure that international firms make when they face high transaction costs in foreign countries (Brouthers & Hennart, 2007). Nonetheless, during M&As, distance between the acquirer's and the target's home institutions may be highly consequential.

formal institutions in the host country can also be detrimental for the performance of internationalizing firms and may thus discourage inward internationalization (Bell et al., 2012; Miller & Parkhe, 2002; Zaheer & Mosakowski, 1997).

While it is beyond the purpose of this paper to ascertain whether it is always more profitable to internationalize in countries with weaker or stronger institutions, there are good reasons to contend that – in the specific case of M&As – rivals may be more threatened by acquisition announcements under negative formal institutional distance due to the higher economic efficiency of such M&As. Negative formal institutional distance, in fact, may create additional benefits for acquirer-target dyads due to flexibility advantages deriving from weak formal institutions in the host country and to advantages deriving from the stability of acquirers' home countries' higher-quality formal institutions (Cuervo-Cazurra & Genc, 2008; Gaur & Lu, 2007; Testoni, 2021; Yu & Cannella, 2007).

First, M&As with targets in countries with weaker formal institutions allow acquirers to take advantage of opportunities and practices that can enhance their productive efficiency in ways that are not available in their home country (Bhaumik & Dimova, 2013), e.g., access to cheaper strategic assets (such as labor and natural resources), easier business restructuring (such as plant closures or renovations), and more favorable workforce conditions (such as wage negotiation and layoffs) (Li, 2013; Maksimovic et al., 2011). In addition, foreign acquirers may also benefit from significant tax reductions (Crow, 2015; Raice, 2014; Politi et al., 2014; Ward et al., 2014). Second, under negative formal institutional distance the merged entity can benefit from additional comparative advantages over local competitors that are a direct result of the M&A. On the one hand, in fact, the previously described opportunities often cannot be exploited by domestic companies (Mudambi, 1999) and are available only to local companies that are acquired by foreign companies. On the other hand, after an M&A, the value of strategic assets and intangibles owned by targets can be more effectively protected by the stronger home institutions of the acquirer (e.g., more comprehensive property rights protection and stricter legal enforcement) (Foss & Foss, 2005; Hall, 1993). In addition, with the help of acquirers from countries with stronger institutions, targets can also benefit from easier access to more developed financial markets (Khanna & Rivkin, 2001), thus reducing their dependence on unreliable sources of credit in the host country (Ayyagari et al., 2010). Finally, targets may also accrue differential gains due to positive governance, legitimacy, and innovation spillovers when acquired by companies from countries with stronger formal institutions (Liu et al., 2008; Yildiz, 2014). Owing to these benefits and advantages, M&As are more economically efficient in case of negative formal institutional distance. In fact, empirical works have found that acquisitions in emerging countries, or in countries with weak national governance, are more frequent (Karolyi & Taboda, 2015; Rossi & Volpin, 2004) and associated with positive performance effects (Chari et al., 2010; Ellis et al., 2017). Conversely, acquirers have been found to pay significant premiums for targets' equity and to experience negative performance effects when the acquisition is in countries with stronger formal institutions (Kuipers et al., 2009; Starks & Wei, 2013).

In sum, since acquisitions of targets in countries with weaker formal institutions are more economically efficient due to specific benefits that emerge with negative formal institutional distance, we contend that these transactions are a more daunting threat to rivals, which should negatively affect their expected performance. Hence, we argue that:

Hypothesis 1. *Upon an acquisition announcement, the expected performance of rival firms is negatively affected by the negative formal institutional distance between the acquirer and the target.*

2.4. Negative formal institutional distance between rivals and acquirers, and rivals' expected performance

M&A announcements often signal the presence of business

opportunities that other players in the industry can also exploit (Gaur et al., 2013). As we argued above, undertaking acquisitions under negative formal institutional distance is more economically efficient because acquirers can gain from the attractive opportunities available in weaker host institutional environments and at the same time benefit from the stability and informational advantages of their home institutions (Cuervo-Cazurra & Genc, 2008; Gaur & Lu, 2007; Testoni, 2021; Yu & Cannella, 2007). Such gains, however, are institutionally driven and not exclusive to the acquirers that announce the M&A, so that other companies in developed institutional environments – including the acquirers' rivals – can also pursue the same opportunities through similar M&As. Therefore, as long as rivals operate in countries with formal institutions at least as strong as those of the acquirers, they are likely to be threatened to a lower extent by such M&As because they too may accrue gains through similarly efficient acquisitions. Since this potential for economic gains from prospective M&As would be reflected in rivals' expected performance, we hypothesize that:

Hypothesis 2. *Upon an acquisition announcement, the expected performance of rival firms is positively affected by the negative formal institutional distance between the rival and the acquirer.*

2.5. Informal institutional distance between acquirers and targets, and rivals' expected performance

Informal institutions reflect the norms, values, practices, and beliefs normally shared by the individuals of a given society (North, 1990; Dau, Chacar, Lyles & Li, 2022). For this reason, they affect how people act and interact, thus shaping the functioning of organizations (e.g., Abdi & Aulakh, 2012; Estrin et al., 2009). A large body of literature has investigated the effects of informal institutions on M&A outcomes (e.g., Bauer & Matzler, 2014; Teerikangas & Very, 2006), focusing in particular on the consequences of informal institutional distance between acquirers and targets (Boateng et al., 2019; Lim et al., 2016; Popli et al., 2016).⁸ While some studies emphasize that a certain degree of exposure to different informal institutions can have positive effects on knowledge acquisition, routine development, and access to valuable repositories (Chakrabarti et al., 2009; Ghoshal, 1987; Slangen & Hennart, 2008), scholars largely agree that informal institutional distance undermines M&A prospects. In fact, different informal institutions for acquirers and targets give rise to challenges and tensions that may reduce the economic efficiency of an M&A in two ways: by lowering the likelihood that the deal is completed; and by creating additional costs after the closing of the deal.

Firstly, in the evaluation phase, informal institutional distance increases the time and resources needed to assess the value of a target's tangible and intangible assets (Coff, 1999). Secondly, during the negotiation phase, it hinders the closing of favorable conditions or even of the whole deal (Dikova et al., 2010; Kogut & Singh, 1988; O'Grady & Lane, 1996; Zhang et al., 2011). Thirdly, and most importantly, since the value of M&As is unlocked during the integration stage (King et al., 2018, 2021), informal institutional distance complicates organizational blending (Sarala & Vaara, 2010; Stahl & Voigt, 2008) and limits the extent to which the resources of the merged entity can be combined and redeployed (Meyer & Altenborg, 2008). In comparison, similarity in informal institutions improves the ability to understand a partner (Greenwood et al., 2011), favors the recombination of resources (Fang, Jiang, Makino & Beamish, 2010), and decreases collaborative tensions (Weber, 1996). Empirical findings have consistently shown that

⁸ Differently from formal institutional distance, informal institutional distance is always absolute and cannot be distinguished as positive or negative (Hernández et al., 2018) because the elements that constitute the informal institutional environment (culture, norms, values, practices, beliefs, etc.) cannot be ranked.

informal institutional distance between acquirers and targets has negative effects on M&As' completion (Dikova et al., 2010; Zhang et al., 2011), longevity (Barkema et al., 1996), and survival (Zeng et al., 2013).

Given these extra risks and frictions, the value-creating potential of M&As is likely to be lower in the presence of informal institutional distance between acquirers and targets. In turn, such M&As would have a lower capacity to threaten rival firms, which leads us to hypothesize that:

Hypothesis 3. *Upon an acquisition announcement, the expected performance of rival firms is positively affected by the informal institutional distance between the acquirer and the target.*

2.6. Acquirers' status and rivals' expected performance

As previously remarked, while some studies stress that informal institutional distance can benefit an organization's capabilities and resource endowments (e.g., Chakrabarti et al., 2009; Ghoshal, 1987; Slangen & Hennart, 2008), their effect on M&A outcomes, for the most part, has been found to be negative (Krug & Hegarty, 2001; Larsson & Finkelstein, 1999), especially in terms of performance and successful organizational integration. Scholars, however, have warned against the theoretical danger of oversimplifying the organizational consequences of informal institutional distance (e.g., Shenkar, 2001) and noted the complexity of the relationship between informal institutional distance and M&A performance (Stahl & Voigt, 2008). In this regard, Yildiz (2014) proposed that the negative effect on post-acquisition organizational integration during M&As may also be influenced by the status of the acquiring firm.

According to Institutional Economics, informal institutions are based on social systems, power elites, and social hierarchies. In these, status plays an important role and contributes to creating social norms and the coding of behavioral patterns (Berrone et al., 2020). Intended as a shared ranking of individuals, groups, or organizations (Washington & Zajac, 2005), status can affect the social dynamics at play during the integration stage and thus the ultimate outcome of M&As. More specifically, differences in attributes such as size, performance, or reputation (Empson, 2001; Terry, 2001; Very et al., 1997) between acquiring and target firms may amplify or weaken the organizational problems that arise from informal institutional distance (Yildiz, 2014). High-status firms, in fact, are generally perceived as more trustworthy and more attractive as exchange partners, which reduces transaction and operational costs (Berger et al., 1972; Sauder et al., 2012) and facilitates sociocultural interaction and integration (Yildiz, 2014). Thus, when acquiring firms have high status, the dysfunctional social dynamics that emerge from informal institutional distance – and that may hinder the success of post-acquisition organizational integration – are likely to be reduced, which mitigates one of the most consequential costs of an M&A. Conversely, since low-status entities receive fewer positive evaluations, have lower legitimacy as leaders, and are ultimately less influential (Berger et al., 1977), acquiring firms with low status are less likely to navigate successfully through the post-acquisition integration stage, which is especially problematic in the presence of significant informal institutional distance (Yildiz, 2014).

Building on these insights, we argue that the negative effect that informal institutional distance has on M&A outcomes is reduced when acquirers have high status, which should be reflected in a lower capacity to threaten rival firms and, ultimately, in their expected performance. We thus argue that:

Hypothesis 4. *Upon an acquisition announcement, the positive effect that the informal institutional distance between the acquirer and the target has on rivals' expected performance is weakened when acquirers have high status.*

3. Methodology

3.1. Data and sample

To estimate the impact that acquiring, target, and rival firms' formal and informal institutions have on rivals' expected performance we used a sample of 124 horizontal international acquisitions (consisting of 550 observations from 346 unique publicly listed rival firms) covered by 20 two-digit Standard Industry Codes (SIC, similar to U.S. NAICS codes).^h These acquisitions occurred between 1999 and 2014 and were reviewed by the European Commission (EC). Fifty-seven percent of these M&A events involved acquiring and target firms from non-EU countries while the other forty-three percent of the deals were between acquirers and targets from EU countries. The EC reports are a reliable source of data, as they have already been used in several other empirical studies that look at the effects of M&As on the profitability, sales, interfirm responses, and firm value of rivals (Clougherty & Duso, 2009, 2011; Duso et al., 2010; Fani et al., 2023; Gugler & Szücs, 2016).

The EC flags M&As when the aggregate worldwide turnover of the acquiring and target firms exceeds €5 billion or when the combined aggregate EU-wide turnover of merging firms exceeds €250 million. Additionally, the EC identifies the rival firms of flagged M&As, allowing us to avoid the methodological limitations of identifying rival firms based on industry structure classifications like SIC codes.ⁱ Indeed, identifying rivals through industry classification can result in biased estimates, as firms in the same industry may not be competing against each other due to fundamentally different positioning and target segments, and they may even be distributors or suppliers of the acquiring or target firms. To provide an illustration of the rivals that were associated with flagged M&As, in Table 1 below we report acquirer–target dyads and their respective rivals for some of the M&As in our sample.

Our initial sample included 288 M&As announced between 1999 and 2014, but we dropped some observations for the following reasons. First, some of the M&As identified by the EC were not connected to any rivals. Second, as we adopted an event-study methodology, we had to focus exclusively on publicly traded companies, and so we cut M&As that were only associated with private rivals. After we eliminated those transactions, our sample included 887 observations (from 468 unique publicly listed rival firms) relating to 171 domestic and international horizontal M&As in the manufacturing industry across 22 sectors over a period of 15 years. Thus, our final sample, as described above, consisted of 124 international horizontal M&As over a period of 15 years. In addition, to complement the EC data, we also relied on: i) London Stock Exchange Group (LSEG) Eikon, to collect financial information data, and ii) LSEG Reuters' SDC Platinum, to collect supplementary M&A data. The geographic distribution of the acquirers, targets, and rivals in our sample is reported in Table 2a and Table 2b.

3.2. Dependent variable

To assess the effect acquirers' and targets' institutional distances had on rival firms' expected performance following M&A announcements,

^h In the Supplementary Materials, we also present results from a sample of 171 large global M&A announcements (887 observations of which 468 are unique publicly listed rival firms) across 22 sectors over a period of 15 years.

ⁱ The European Commission uses Form CO to gather information on direct rivals. More specifically, it requires the focal M&A firms to provide information regarding their customers, suppliers, distributors, and competitors. This information is then used to conduct independent market investigations by sending questionnaires to customers, competitors, professional associations, upstream firms, and distributors to gather information about any additional parties that the focal M&A firms may have failed to mention but that could be significantly affected in the market after the merger. The acquired information allows EC experts to define the closest rivals of the acquirers and the targets.

Table 1
Examples of Acquirer–Target Dyads and their Respective Rivals.

M&As	Within (WB) / Cross-border (CB)	Direct rivals identified by European Commission (EC) anti-trust experts	Industry Description	
Bayer (DEU) acquires Lyondell Chemical Company (USA)	CB	<ul style="list-style-type: none"> • Dow (USA) • BASF (DEU) • Shell (NLD) • Volkswagen (DEU) 	<ul style="list-style-type: none"> • Repsol (ESP) • ICI (GBR) 	Manufacture of basic chemicals, fertilizers and nitrogen compounds, plastics, and synthetic rubber in primary forms
General Motors Corporation (USA) acquires Saab Automobile AB (SWE)	CB	<ul style="list-style-type: none"> • Audi (DEU) • Ford (USA) • Volvo (SWD) 	<ul style="list-style-type: none"> • Peugeot/Citroen (FRA) • Renault (FRA) • Daimler (DEU) • BMW (DEU) • Guerbet (FRA) 	Manufacture of motorcycles
General Electric Company (USA) acquires Amersham (GBR)	CB	<ul style="list-style-type: none"> • Philips (NLD) • Siemens (DEU) • Toshiba (JPN) • Hitachi (JPN) • Schering (DEU) • Altana (DEU) • Borg Warner (USA) 	<ul style="list-style-type: none"> • Bristol-Myers Squibb (USA) • Tyco (IRL) • Bruker (USA) • Shimadzu (JPN) • GKN (GBR) 	Manufacture of pharmaceutical preparations
Magna International (CAN) acquires New Venture Gear (DEU)	CB	<ul style="list-style-type: none"> • Siemens (DEU) • GE (USA) • Johnson Controls (IRL) • Schneider (FRA) 	<ul style="list-style-type: none"> • Kidde (GBR) 	Manufacture of other parts and accessories for motor vehicles
Honeywell International (USA) acquires Novar (GBR)	CB	<ul style="list-style-type: none"> • GE (USA) • Johnson Controls (IRL) • Schneider (FRA) • Flextronics (SGP) • Jabil Circuit (USA) • Elcoteq (FIN) • Beiersdorf (DEU) • Johnson & Johnson (USA) • Henkel (DEU) 	<ul style="list-style-type: none"> • Securitas (SWD) • Invensys (GBR) 	Manufacture of other general-purpose machinery n.e.c.
Foxconn (TWN) acquires Sanmina SCI (USA)	CB	<ul style="list-style-type: none"> • Flextronics (SGP) • Jabil Circuit (USA) • Elcoteq (FIN) • Beiersdorf (DEU) • Johnson & Johnson (USA) • Henkel (DEU) 	<ul style="list-style-type: none"> • Quanta (TWN) • Asustek (TWN) • Wistron (TWN) • Unilever (GBR) • Derma (USA) 	Manufacture of computers and peripheral equipment
Colgate-Palmolive (USA) acquires Sanex (GBR)	CB	<ul style="list-style-type: none"> • Johnson & Johnson (USA) • Henkel (DEU) 	<ul style="list-style-type: none"> • Unilever (GBR) • Derma (USA) 	Manufacture of soap and detergents, cleaning and polishing preparations, perfumes and toilet preparations

Table 2a
Number of Acquirers, Targets, and Rivals Per Country.

Acquirer Countries	Target Countries		Rival Countries		
	Freq.		Freq.		
Australia	1	Austria	2	Australia	6
Austria	2	Belgium	3	Austria	3
Belgium	4	Canada	1	Belgium	7
Brazil	1	Denmark	2	Brazil	1
Canada	4	Finland	3	Canada	6
China	2	France	15	China	4
Denmark	2	Germany	20	Denmark	4
Finland	7	Ireland	2	Finland	13
France	8	Italy	5	France	30
Germany	11	Japan	1	Germany	63
India	2	Korea, South	1	Greece	7
Ireland	6	Luxembourg	1	Hungary	1
Italy	5	Mexico	1	India	7
Japan	5	Netherlands	8	Ireland	12
Korea, South	1	Norway	4	Italy	9
Luxembourg	1	Portugal	1	Japan	75
Netherlands	8	Spain	5	Korea, South	9
Norway	2	Sweden	4	Luxembourg	1
Pakistan	1	Switzerland	2	Mexico	1
Singapore	4	Thailand	1	Netherlands	14
Spain	1	United Kingdom	12	Norway	1
Sweden	4	United States	30	Pakistan	2
Switzerland	6			Poland	6
Taiwan	1			Singapore	4
United Kingdom	10			Spain	6
United States	25			Sweden	11
				Switzerland	34
				Taiwan	6
				United	43
				Kingdom	
				United States	164

we made use of the event-study methodology, looking at stock market reactions. In particular, our dependent variable was rivals' cumulative abnormal returns (CARs). These indicate the excess stock market return produced by the announcement of a firm's M&A (Clougherty & Duso,

2009; Duso et al., 2010; Pinelli et al., 2022). Given the assumption of efficient stock markets, all available information is incorporated into stock prices (Fama, 1998). Therefore, unexpected consequential events like M&A announcements, by altering expectations regarding a firm's expected performance (i.e., future profits brought about by the specific announcement), are expected to produce positive or negative abnormal fluctuations in rival firms' stock prices (Cappa et al., 2019; Clougherty & Duso, 2009, 2011; Duso et al., 2010; Gaur et al., 2013; Gligor et al., 2021; Shahur, 2005; Song & Walkling, 2000; Stigler, 1950; Testoni, 2021).

It is crucial in event studies to determine the first day on which each M&A event appeared in the international press. To increase the precision of our event windows, we consulted multiple sources of information to confirm the exact date of each M&A announcement in our sample.^j We then estimated a market model for each firm's stock until the event date $t = 0$. In line with previous research, we used an estimation period of 180 days (from $t = -240$ to $t = -60$) to estimate expected returns for the firm and used national stock market indices as benchmarks. These expected returns were then used to predict the expected daily returns regarding an M&A announcement. Additionally, we added corrections related to book-to-market, size, and momentum factors, as proposed by Fama–French–Carhart (FFC)^k to gauge the stock market returns more precisely (Fama & French, 1996). Finally, for each firm we computed the abnormal returns for each day of the event window by subtracting the expected return from the actual return. The CARs are computed as the sum of the abnormal returns (ARs). Following previous studies (Clougherty & Duso, 2009; Pinelli et al., 2022), we used a 3-day event window ($t = -1$; $t = +1$), i.e., from one day before to one day after the announcement. Event windows of such length are short enough to avoid the inclusion of potential confounding effects and long enough to account for information leaks (McWilliams and Siegel, 1997). However, we also report results for the 11-day event window ($t = -5$; $t = +$

^j LexisNexis, EC datafiles, and Refinitiv Eikon.

^k https://mba.tuck.dartmouth.edu/pages/faculty/ken.french/data_library.html

Table 2b
Acquirer/Target countries by the number of cross-border M&As.

Acquirer-Target Countries		Freq.	Freq.	Freq.	
Australia/Canada	Ireland/France	1	1	Sweden/France	2
Austria/Germany	Ireland/Germany	2	1	Sweden/United States	2
Belgium/France	Ireland/Korea, South	2	1	Switzerland/Austria	1
Belgium/Germany	Ireland/Thailand	1	1	Switzerland/France	1
Belgium/United States	Ireland/United States	1	2	Switzerland/Germany	1
Brazil/United Kingdom	Italy/France	1	1	Switzerland/United States	3
Canada/Germany	Italy/Taiwan	1	1	Taiwan/United States	1
Canada/United States	Italy/Netherlands	3	1	United Kingdom/Denmark	1
China/Germany	Italy/United Kingdom	1	1	United Kingdom/France	2
China/Netherlands	Italy/United States	1	1	United Kingdom/Spain	2
Denmark/Norway	Japan/Denmark	1	1	United Kingdom/Sweden	1
Denmark/United Kingdom	Japan/France	1	1	United Kingdom/Switzerland	1
Finland/Germany	Japan/Germany	2	1	United Kingdom/United States	3
Finland/Italy	Japan/Italy	1	1	United States/Austria	1
Finland/Norway	Japan/United States	2	1	United States/Belgium	2
Finland/Sweden	Korea, South/Ireland	1	1	United States/Finland	1
Finland/United States	Luxembourg/United States	1	1	United States/France	2
France/Germany	Netherlands/Germany	2	1	United States/Germany	5
France/Italy	Netherlands/Luxembourg	2	1	United States/Ireland	1
France/Netherlands	Netherlands/Spain	2	1	United States/Japan	1
France/Norway	Netherlands/United Kingdom	1	2	United States/Mexico	1
France/United Kingdom	Netherlands/United States	1	3	United States/Netherlands	2
Germany/Belgium	Norway/Finland	1	1	United States/Spain	2
Germany/Finland	Norway/Germany	1	1	United States/Sweden	1
Germany/France	Pakistan/United States	2	1	United States/Switzerland	1
Germany/Italy	Singapore/France	1	1	United States/United Kingdom	5
Germany/Netherlands	Singapore/Germany	1	1		
Germany/United States	Singapore/Sweden	5	1		
India/United Kingdom	Singapore/United States	1	1		
India/United States	Spain/Netherlands	1	1		

5), which is another well-established time span (Campbell et al., 2010; Collevocchio et al., 2024), for robustness (Table 5 below and Table 7 in the Supplementary Materials). Additional robustness checks were conducted for the 5-day ($t = -2; t = +2$), and the 7-day ($t = -3; t = +3$) event windows.¹

3.3. Independent and moderating variables

Our variables *Formal Institutional Quality (IQ) Distance* and *Rival - Acquirer Formal IQ Distance* are constructed based on the International Country Risk Guide (ICRG) (Kostova et al., 2020), which assesses national markets' political, economic, and financial risk yearly (Valentino et al., 2019). Higher values in these dimensions correspond to better country performance. Due to high correlations among some of these dimensions, we measured the institutional quality of each country in which acquirers, targets, and rivals operate through a single score obtained via a principal component analysis (PCA). We thereby compute the *Formal IQ Distance M&A* as the absolute value of the difference between the formal IQ of acquirer's and target's country and *Rival - Acquirer Formal IQ Distance* as the absolute value of the difference between the formal IQ of the rival's and acquirer's countries. Additionally, in line with a stream of research suggesting that institutional distance is not symmetric – the effect of engaging in a country with weaker, rather than stronger, formal institutions is not the same – we follow the empirical specification employed by Hernández and Nieto (2015) and Hernández, Nieto and Boellis (2018) to create variables showing the direction of the formal institutional distance. *M&A Negative Formal IQ Distance* is a dummy variable that takes the value 1 when institutional distance is negative (i.e., acquirers operate in countries with higher institutional quality compared to the targets) and 0 when the institutional distance is positive (i.e., targets operate in countries with higher institutional quality compared to the acquirers). *Rival - Acquirer Negative Formal IQ Distance* is a dummy variable that takes the value 1 when institutional distance is negative (i.e., rivals operate in countries with higher institutional quality compared to the acquirers) and 0 when the institutional distance is positive (i.e., acquirers operate in countries with higher institutional quality compared to the rivals).

We computed the *Informal Institutional Distance M&A* using the Mahalanobis measure, a commonly used methodology that takes into account the interdependence between the different institutional dimensions (Beugelsdijk et al., 2020; Kostova et al., 2020). We relied on six cultural dimensions – uncertainty avoidance, power distance, individualism/collectivism, masculinity/femininity, long-/short-term orientation, indulgence/restraint – as identified by Hofstede (2001). Indeed, “the typical institutional distance study in the Institutional Economics tradition measures [...] informal distance using Hofstede's cultural dimensions” (Kostova et al., 2020, p. 477). Additionally, as a proxy for the acquirer's status, we used firm size (Empson, 2001; Terry, 2001; Very et al., 1997), measured through the natural logarithm of the acquirer's total assets in the year before the M&A announcement.

3.4. Control variables

We control for several firm, deal, and industry characteristics that might affect changes in rivals' cumulative abnormal returns. We controlled for *Relative Size Rival-Acquirer*, computed by dividing the market capitalization of the rival by the market capitalization of the acquirer, as the literature shows that smaller rivals often benefit more from M&As announced by their competitors (Clougherty & Duso, 2009). To control for the acquisition probability hypothesis (Clougherty & Duso, 2009; Song & Walkling, 2000), we included a dummy variable *Rival Subsequent Target* that equals 1 for rivals that have been acquired

¹ Due to space constraints, these results are unreported and may be made available upon request.

within one year of the focal M&A and 0 otherwise. Meanwhile, to control for acquirers' acquisition capability (Laamanen & Keil, 2008), we created a control variable *Acquirer Acquisition Experience*, calculated as the number of acquisitions that the acquirers undertook within the five years prior to the announcement of the focal acquisition.

In addition, because some rivals can be exposed to multiple acquisitions by competitors, we include a dummy variable *Rival in Multiple M&As by Competitors* that is equal to 1 when a rival has been affected by multiple M&As by competitors in the focal year and 0 otherwise. We also controlled for *Rival Return on Assets* as a measure of a rival's performance.

Next, we controlled for deal characteristics that could influence changes in rivals' expected performance. Since rivals that are geographically closer to the acquirers or the targets may be affected more strongly by an M&A (Clougherty & Duso, 2009), we included a dummy variable *Same Region Rival* that equals 1 if rivals operate in the same geographical area as the acquirer or the target and 0 otherwise. Additionally, and in accordance with previous research on M&As, we controlled for whether the M&A is cross-border or domestic using a dummy variable (*Cross-border M&A*) and for the geographic distance between the acquirer and the target (*Acquirer-Target Geographic Distance^m*).

At the industry level, since industry concentration may reduce competition and increase the performance of rivals (Clougherty & Duso, 2009), we controlled for the *Number of Rivals* identified by the EC per focal M&A event. Additionally, as firms are more likely to engage in M&A activities during merger waves, we included a *Merger Wave* dummy that is equal to 1 for the years 1999–2001 and 0 otherwise (Haleblian et al., 2012). Furthermore, as the wealth of a country is connected to the efficiency and degree of development of its financial market (Guillén & Capron, 2016), we included the natural logarithm of the *Rival Country GDP Growth* (source: World Bank). Finally, we used dummies to control for industry- and year-level fixed effects that may influence rivals' expected performance.

4. Results

Descriptive statistics and correlations are reported in Table 3, which does not show any substantive correlation issue. Additionally, we relied on variance inflation factor (VIF) analysis to check for possible multicollinearity, which we did not find in our models.ⁿ

In Table 4 and Table 5 we report the results of our estimates on a sample that consisted only of international M&As, whereas in Table 6 and Table 7 (in the Supplementary Materials file) we report the results of our analysis on the full M&A sample, which consisted of both domestic and international deals. Overall, the R² values showed that our models are able to explain a considerable portion of the variance in the dependent variable, which is in line with other studies that have examined stock market reactions to M&A announcements, e.g., 0.19 (Li et al., 2020), 0.13 (Pinelli et al., 2022), 0.06 (Clougherty & Duso, 2009), and 0.04 (Boateng, Du, Bi & Lodorfos, 2019).

Our baseline model, Model 1 in Table 4 (as well as Model 6 in Table 5), includes only our control variables and shows that *Acquirer Acquisition Experience* has a negative and significant effect on rivals' CARs ($\beta = -0.003, p < 0.007$) while *Relative Size*, *Rival Subsequent Target*, *Number of Rivals*, and *Merger Wave* have a positive effect on rivals' CARs ($\beta = 0.00002, p < 0.000; \beta = 0.082, p < 0.002; \beta = 0.002, p <$

^m Calculated as the great circle distance between the two countries' capitals (Daude & Stein, 2007) (Source: CEPII). We used its natural logarithm to compensate for the skewness of the distribution.

ⁿ The average VIF value across all models is 4.63 (the models in Table 4 vary from 4.20 to 5.43), which is well below the standard cut-off level of 10. Our main independent variable in Table 4 has a VIF value of 1.43 (for Negative Formal Institutional Distance between the acquirers and the targets).

Table 3
Correlations and Descriptive Statistics.

Variables	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)
(1) Rival 3-days CAR	1.000																
(2) Formal IQ Dst. M&A	-0.105	1.000															
(3) M&A Negative Formal IQ Dst.	-0.074	-0.105	1.000														
(4) Rvl. Acq. Formal IQ Dst.	0.037	-0.217	0.397	1.000													
(5) Rvl. Acq. Negative Formal IQ Dst.	0.080	-0.017	-0.438	0.458	1.000												
(6) Informal Inst. Dst. M&A	0.067	0.146	-0.063	-0.084	0.033	1.000											
(7) Acquirer Status - Total Assets	-0.015	0.132	0.157	0.065	-0.114	-0.052	1.000										
(8) Rival Return on Assets	-0.042	-0.051	0.028	0.112	0.068	-0.047	-0.047	1.000									
(9) Relative Size Rival-Acquirer	0.027	0.196	-0.077	-0.031	0.169	-0.011	-0.011	0.013	1.000								
(10) Rival Subsequent Target	0.022	-0.051	0.065	-0.033	-0.073	-0.012	0.046	0.035	-0.006	1.000							
(11) Rival in Multiple M&As of Compet.	-0.027	-0.014	-0.085	-0.027	0.097	0.110	-0.011	0.007	0.113	0.016	1.000						
(12) Acquirer Acquisition Experience	-0.206	0.158	0.156	-0.027	-0.209	-0.012	0.088	-0.122	0.032	-0.009	0.063	1.000					
(13) Same Region Rival	-0.014	-0.125	-0.092	0.123	0.179	0.001	-0.116	0.024	-0.092	-0.052	0.056	-0.011	1.000				
(14) Acquirer-Target Geographic Dst.	-0.009	-0.061	-0.056	-0.032	0.051	0.361	-0.141	-0.020	0.078	0.017	0.037	0.057	0.223	1.000			
(15) Rival Country GDP Growth	0.119	0.065	0.007	-0.117	-0.148	0.149	0.115	-0.000	0.032	-0.043	-0.002	-0.102	-0.032	-0.032	1.000		
(16) Number of Rivals	0.047	0.005	0.005	0.126	0.096	-0.227	0.150	0.121	-0.042	0.049	-0.063	0.028	0.025	-0.163	-0.183	1.000	
(17) Merger Wave	0.054	-0.025	0.156	-0.203	-0.349	0.095	0.142	0.047	-0.030	0.028	0.102	0.090	0.019	0.008	0.223	-0.117	1.000
Mean	-0.018	1.771	0.564	0.169	0.493	9.613	16.23	6.989	28.24	0.005	0.242	9.502	0.667	7.824	2.106	15.83	0.185
Min	-1.142	0.008	0	0	0	0.998	10.01	-47.2	0	0	0	0	0	5.574	-9.132	2	0
Max	0.65	7.962	1	1	1	30.37	19.01	78.81	7478.8	1	1	39	1	9.688	14.23	64	1
St. Deviation	0.122	1.464	0.496	0.375	0.5	5.617	1.702	8.396	365.4	0.074	0.429	9.21	0.472	1.232	2.673	13.80	0.389

Note. Number of observations: 550; Number of M&A Events: 124; Number of unique rivals affected: 346.

Table 4

Main Effects (OLS): Formal and Informal Institutional Distance as Predictors of Rival Firm Performance.

VARIABLES	(1)	(2)	(3)	(4)	(5)
Dependent Variable: Rival 3-day CAR	Controls Only	Formal and Informal IQ dst. and Controls	Positive IQ dst. and Controls	Rival Formal IQ Moderation	Informal IQ, Moderators and Controls
Rival Return on Assets	−0.001 (0.001)	−0.001 (0.001)	−0.001 (0.001)	−0.001 (0.001)	−0.001 (0.001)
Relative Size Rival–Acquirer	0.121 (0.000)	0.104 (0.000)	0.100 (0.000)	0.091 (0.000)	0.129 (0.000)
Rival Subsequent Target	0.00002 (0.000)	0.00002 (0.000)	0.00002 (0.000)	0.00002 (0.000)	0.00002 (0.000)
Rival in Multiple M&As of Competitors	0.000 (0.026)	0.001 (0.028)	0.009 (0.043)	0.024 (0.040)	0.014 (0.041)
Acquirer Acquisition Experience	0.082 (0.002)	0.071 (0.012)	0.093 (0.031)	0.086 (0.031)	0.084 (0.040)
Same Region Rival	−0.0002 (0.011)	−0.003 (0.010)	−0.002 (0.010)	−0.005 (0.011)	−0.006 (0.010)
Acquirer–Target Geographic Distance	0.983 (0.001)	0.806 (0.001)	0.822 (0.001)	0.630 (0.001)	0.545 (0.001)
Rival Country GDP Growth	0.007 (0.011)	0.056 (0.010)	0.053 (0.010)	0.056 (0.010)	0.056 (0.010)
Number of Rivals	0.009 (0.011)	0.006 (0.010)	0.004 (0.010)	0.005 (0.010)	0.005 (0.010)
Merger Wave	0.400 (0.005)	0.547 (0.005)	0.698 (0.005)	0.590 (0.005)	0.627 (0.005)
Formal IQ Dst. M&A (1)	0.008 (0.005)	0.007 (0.004)	0.007 (0.004)	0.003 (0.004)	0.003 (0.004)
M&A Negative Formal IQ Dst. (2)	0.119 (0.005)	0.136 (0.004)	0.155 (0.004)	0.553 (0.004)	0.602 (0.004)
1 × 2	0.102 (0.000)	0.051 (0.000)	0.063 (0.000)	0.041 (0.001)	0.032 (0.001)
Rvl. Acq. Formal IQ Dst. (3)	0.002 (0.050)	0.002 (0.047)	0.002 (0.046)	0.002 (0.047)	0.002 (0.048)
Rvl. Acq. Negative Formal IQ Dst. (4)	0.085 (0.001)	0.112 (0.003)	0.109 (0.003)	0.088 (0.003)	0.095 (0.002)
3 × 4	0.091 (0.005)	0.018 (0.004)	0.019 (0.005)	0.059 (0.005)	0.046 (0.006)
Informal Inst. Dst. M&A (5)	0.003 (0.005)	0.057 (0.019)	0.058 (0.019)	0.056 (0.019)	0.059 (0.020)
Acquirer Status - Total Assets (6)	0.003 (0.012)	0.003 (0.012)	0.003 (0.012)	0.003 (0.012)	0.002 (0.012)
5 × 6	0.001 (0.001)	−0.040 (0.001)	−0.041 (0.001)	−0.041 (0.001)	−0.044 (0.001)
Constant	0.000 (0.008)	0.000 (0.008)	0.000 (0.008)	0.000 (0.008)	0.000 (0.008)
Observations	0.091 (0.079)	0.018 (0.084)	0.019 (0.089)	0.059 (0.090)	0.046 (0.117)
No. of merger events	0.046 (0.008)	0.013 (0.008)	0.008 (0.008)	0.004 (0.004)	0.321 (0.361)
R-squared	550 (0.007)	550 (0.007)	550 (0.007)	550 (0.007)	550 (0.007)
Adj. R-squared	124 (0.007)	124 (0.007)	124 (0.007)	124 (0.007)	124 (0.007)
Industries dummies	0.307 (0.007)	0.345 (0.007)	0.349 (0.007)	0.357 (0.007)	0.361 (0.007)
Year dummies	0.245 (0.007)	0.282 (0.007)	0.283 (0.007)	0.290 (0.007)	0.293 (0.007)
	YES (0.001)	YES (0.001)	YES (0.001)	YES (0.001)	YES (0.001)

NOTE: The dependent variable is the 3-day cumulative abnormal returns (CAR) of rivals. We report both the Hubert–White robust standard errors in parentheses and the exact p-value right below the standard errors. $1 \times 2 = \text{Formal IQ Dst. M\&A} \times \text{M\&A Negative Formal IQ Dst.}$; $3 \times 4 = \text{Rvl. Acq. Formal IQ Dst.} \times \text{Rvl. Acq. Negative Formal IQ Dst.}$; $5 \times 6 = \text{Informal Inst. Dst. M\&A} \times \text{Acquirer Status - Total Assets}$. We also include industry sector and year dummies. IQ (Institutional quality); Rvl. (Rival); Acq. (Acquirer).

0.000; $\beta = 0.085$, and $p < 0.091$, respectively).

Hypothesis 1 argued that the expected performance of rival firms is negatively affected by the negative formal institutional distance between the acquirer and the target. In Model 2 of Table 4, we see that the coefficient of 1×2 , which is the interaction term between *Formal IQ Dst. M&A (1)* and *M&A Negative Formal IQ Dst. (2)*, is negative and statistically significant ($\beta = -0.040$, $p < 0.001$). This effect remains stable throughout the models of Table 4, including the full model i.e. Model 5. In addition, this result also holds for the cumulative abnormal returns calculated on the 11-day event window (as shown in Model 7 of Table 5). To further explore the moderating effect of *Negative Formal IQ Dst. (2)* on the relationship between *Formal IQ Dst. M&A (1)* and rival's expected returns, we examine the marginal effect as shown in Fig. 1 (95 % confidence interval). As Fig. 1 shows, the effect of *Formal IQ Dst. M&A (1)* on rival's expected performance is negative and statistically significant only when the value of *Negative Formal IQ Dst. (2)* is 1, which is consistent with Hypothesis 1.

In Hypothesis 2 we propose that a rival's expected performance is positively affected by the negative formal institutional distance between rivals and acquirers. Model 3 in Table 4 and Model 8 in Table 5 show that the coefficient of the variable 3×4 , which is the interaction term between *Rvl. Acq. Formal IQ Dst. (3)* and *Rvl. Acq. Negative Formal IQ Dst. (4)*, is statistically significant only for the 11-day event window as shown in Model 8 of Table 5 ($\beta = 0.019$, $p < 0.052$). To assess whether the expected performance of rival firms is positively affected by negative formal institutional distance between rivals and acquirers, we looked at the marginal effect presented in Fig. 2 (95 % confidence interval). Fig. 2 reconfirms the observed partial support for Hypothesis 2 by showing that rivals residing in better formal institutional environments compared to their acquirers do accrue positive abnormal returns, but only for the mean and one of the confidence intervals.

Hypothesis 3 suggests that the expected performance of rival firms is positively affected by the distance between the acquirer's and the target's informal institutions. The coefficient of *Informal Inst. Dst. M&A* in Model 4 of Table 4 is positive and statistically significant ($\beta = 0.003$, $p < 0.007$), which is consistent with Hypothesis 3 as it implies that the CARs of rivals increase as the informal institutional distance between the acquirer and the target increases. This effect remains stable throughout the models of Table 4, including the full model i.e. Model 5. As shown in Model 9 of Table 5, this result also holds for CARs calculated on the 11-day event window. An increase of one standard deviation in *Informal Inst. Dst. M&A* increases rivals' CARs by approximately 13.81 percent, which is higher than the economic effect of *Relative Size Rival-Acquirer* (6%) and *Rival Subsequent Target* (4.97 %) but smaller than the effects of *Number of Rivals* (22.62%) and *Merger Wave* (27.10%). Given the potential that merger waves have to restructure and consolidate overall industries across different geographical markets and the role that industry concentration plays for the remaining firms' ability to accrue rents and enhance their performance on the market, such a large effect is reasonable.

Finally, we also argued that the acquirer's status weakens the positive effect brought about by informal institutional distance (Hypothesis 4). In line with our arguments, the coefficients of the interaction term between *Informal Inst. Dst. M&A (5)* and *Acquirer Total Assets (6)* in Model 5 of Table 4 is negative and statistically significant ($\beta = -0.001$, $p < 0.086$). This finding also holds for the 11-day event window, as shown in Model 10 of Table 5. Consistently with Hypothesis 4, the analysis of the marginal effects reveals that the positive effect of informal institutional distance on rivals' expected performance disappears when acquirers have high status. The results of this analysis are presented in Fig. 3 (95 % confidence intervals), which shows the effect of *Informal Inst. Dst. M&A (5)* at various levels of the moderator *Acquirer Total Assets (6)*.

4.1. Robustness and post-hoc tests

To confirm the robustness of our results, we performed additional tests. First, Table 5 below, and Table 6 and Table 7 in the Supplementary Materials, present our findings for alternative event windows (11-day) for both the cross-border only and full sample; these show that our main findings (reported in Table 4) hold across event windows of different lengths.^o Second, we controlled for rivals' internationalization, because operating in multiple countries may have an impact on the effect M&A announcements have on rival firms' expected performance (see Table 10 in the Supplementary Materials). Third, despite the significant drop in the size of our sample, we are also controlling for rival ownership structure, R&D intensity, firm age, and market-to-book ratio (see Table 8 for cross-border only, and Table 9 for full sample in Supplementary Materials). Fourth, we also account for resource similarity and market commonality (see Table 11, Table 12, Table 13, and Table 14 in the Supplementary Materials). Fifth, our results remain consistent when we control for political affinity (Bertrand, Betschinger & Settles, 2016) between acquirers and targets (Table 15 in the Supplementary Materials). Sixth, our main findings remain generally consistent even when we control for the technological distance between acquirers and targets (Table 16 in Supplementary Materials). Finally, our results remain robust when we rely on alternative measures of rival-acquirer size (total assets), rivals becoming targets themselves (after 3 years), the degree of development of stock markets (GDP per capita), acquirer's and rival's slack resources, acquirer's and rival's return on assets, acquirer's cumulative abnormal returns, alternative measures for acquirer status, a subsample of high-technology deals, and a subsample of completed deals only.^p

Furthermore, to alleviate any concern related to how the EC identified rival firms, we adopted the method proposed by Hoberg and Phillips (2016; 2018). Specifically, Hoberg and Phillips (2016; 2018) use pairwise similarity scores for companies based on the similarity of their product descriptions in their 10 K filings (Item 1). Given that most studies rely on TNIC3 (an industry identification corresponding to the same level of coarseness in 3-digit SIC codes) (e.g., Connelly et al., 2020; Testoni, 2021; Shi et al., 2017), we used the latest version of the TNIC3 dataset to conduct the comparison. In Table 22 of the Supplementary Materials, we compare the average similarity scores of acquirer-rival dyads within each acquisition event to the average similarity score of the acquirer's top 10 closest firms within TNIC3 (for the acquirers that we were able to match). We found that the average similarity score for the acquirer-rival dyads in our sample (mean=0.056) is comparable to that of the top 10 firms closest to the acquirers within the TNIC3 (mean=0.064). The mean and median for the matched pairs are significantly larger than the mean (0.025) and median (0.021) similarity scores reported for close rivals by Hoberg and Phillips (2016). This indicates that our rival identification method is not only comparable, but outperforms alternative rival identification methodologies.

As a final post-hoc test, we also checked whether the rivals' status had a positive effect on their expected performance, as our arguments suggested that rivals' expected performance may improve when M&As signal potential value-creating opportunities. In cases where rivals attempt to take advantage of such opportunities, higher status may facilitate organizational blending with the target, which would positively affect their expected performance. These tests show that rivals' status has a direct positive effect on their expected performance and amplifies the positive effect of informal institutional distance (between acquirers and targets) on rivals' expected performance. These effects, however, while positive, are not statistically significant.

^o The main findings remain robust even when relying on the 7- and 5-day event windows.

^p Some of the aforementioned results are available upon request, to reduce the size of the supplementary materials file in this circumstance.

Table 5

Main Effects (OLS): Formal and Informal Institutional Distance as Predictors of Rival Firm Performance (11-day event window).

VARIABLES	(6)	(7)	(8)	(9)	(10)
Dependent Variable: Rival 11-day CAR	Controls Only	Formal and Informal IQ dst. and Controls	Positive IQ dst. and Controls	Rival Formal IQ Moderation	Informal IQ, Moderators and Controls
Rival Return on Assets	0.0003 (0.001)	0.0004 (0.001)	0.0003 (0.001)	0.003 (0.001)	0.0004 (0.001)
Relative Size Rival–Acquirer	0.736 (0.000)	0.747 (0.000)	0.768 (0.000)	0.780 (0.000)	0.708 (0.000)
Rival Subsequent Target	0.001 (0.045)	0.003 (0.046)	0.034 (0.062)	0.070 (0.059)	0.048 (0.058)
Rival in Multiple M&As of Competitors	0.641 (0.013)	0.874 (0.012)	0.598 (0.012)	0.692 (0.012)	0.716 (0.011)
Acquirer Acquisition Experience	0.006 (0.001)	0.004 (0.001)	0.004 (0.001)	0.000 (0.001)	−0.001 (0.001)
Same Region Rival	0.637 (0.002)	0.728 (0.001)	0.759 (0.001)	0.996 (0.001)	0.916 (0.001)
Acquirer–Target Geographic Distance	0.014 (0.012)	0.021 (0.011)	0.026 (0.011)	0.028 (0.011)	0.028 (0.011)
Rival Country GDP Growth	0.228 (0.006)	0.296 (0.005)	0.528 (0.005)	0.418 (0.005)	0.444 (0.005)
Number of Rivals	0.006 (0.005)	0.006 (0.004)	0.005 (0.004)	−0.000 (0.004)	−0.001 (0.004)
Merger Wave	0.284 (0.005)	0.295 (0.004)	0.375 (0.004)	0.959 (0.004)	0.901 (0.004)
Formal IQ Dst. M&A (1)	0.106 (0.002)	0.047 (0.001)	0.074 (0.001)	0.043 (0.001)	0.033 (0.001)
M&A Negative Formal IQ Dst. (2)	0.002 (0.046)	0.002 (0.043)	0.002 (0.044)	0.003 (0.044)	0.003 (0.045)
1 × 2	0.024 (0.002)	0.002 (0.001)	0.002 (0.001)	0.013 (0.001)	0.009 (0.001)
Rvl. Acq. Formal IQ Dst. (3)	0.104 (0.006)	0.132 (0.005)	0.136 (0.007)	0.109 (0.007)	0.117 (0.007)
Rvl. Acq. Negative Formal IQ Dst. (4)	0.002 (0.002)	0.002 (0.001)	0.002 (0.001)	0.003 (0.001)	0.003 (0.001)
3 × 4	0.024 (0.002)	0.002 (0.001)	0.002 (0.001)	0.013 (0.001)	0.009 (0.001)
Informal Inst. Dst. M&A (5)	0.104 (0.046)	0.132 (0.043)	0.136 (0.044)	0.109 (0.044)	0.117 (0.045)
Acquirer Status - Total Assets (6)	0.024 (0.002)	0.002 (0.001)	0.002 (0.001)	0.013 (0.001)	0.009 (0.001)
5 × 6	0.104 (0.046)	0.132 (0.043)	0.136 (0.044)	0.109 (0.044)	0.117 (0.045)
Constant	−0.010 (0.003)	−0.012 (0.003)	−0.012 (0.003)	−0.012 (0.003)	−0.002 (0.006)
Observations	0.001 (0.001)	0.000 (0.000)	0.000 (0.000)	0.001 (0.001)	0.744 (0.001)
No. of merger events	0.066 (0.085)	0.119 (0.090)	0.146 (0.094)	0.177 (0.096)	0.027 (0.124)
R-squared	0.437	0.183	0.123	0.066	0.828
Adj. R-squared	0.293	0.330	0.336	0.347	0.351
Industries dummies	0.230	0.266	0.268	0.279	0.282
Year dummies	YES	YES	YES	YES	YES

NOTE: The dependent variable is the 11-day cumulative abnormal returns (CAR) of rivals. We report both the Hubert–White robust standard errors in parentheses and the exact p-value right below the standard errors. $1 \times 2 =$ Formal IQ Dst. M&A x M&A Negative Formal IQ Dst.; $3 \times 4 =$ Rvl. Acq. Formal IQ Dst. x Rvl. Acq. Negative Formal IQ Dst.; $5 \times 6 =$ Informal Inst. Dst. M&A x Acquirer Status - Total Assets. We also include industry sector and year dummies. IQ (Institutional quality); Rvl. (Rival); Acq. (Acquirer).

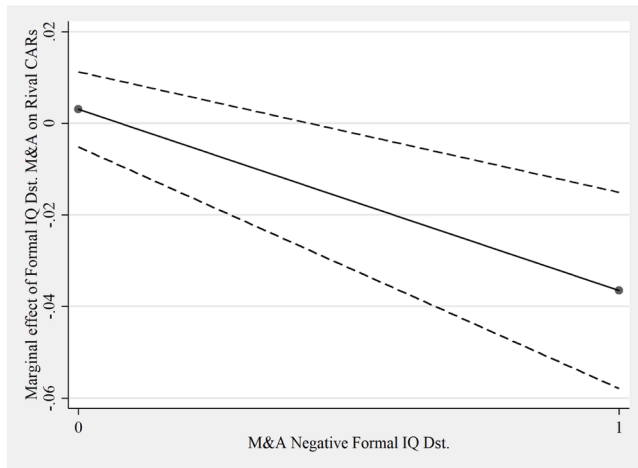


Fig. 1. The Moderating Effects of Acquirer – Target Negative Formal IQ Distance on the Relationship between the Acquirer – Target Formal IQ Distance and Rival's Expected Returns.

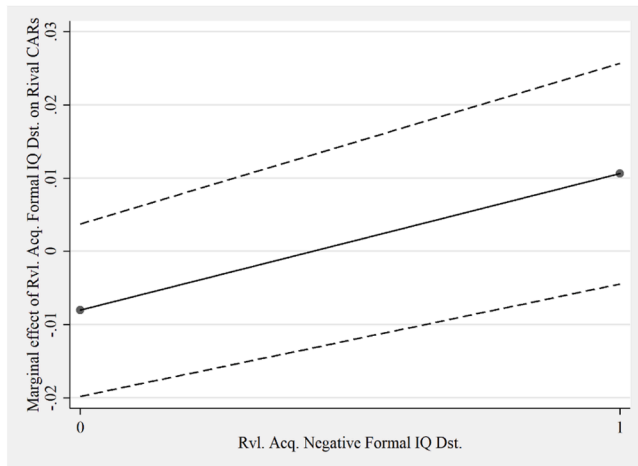


Fig. 2. The Moderating Effects of Rival – Acquirer Negative Formal IQ Distance on the Relationship between the Rival – Acquirer Formal Institutional Distance and Rival's Expected Returns.

5. Discussion

In this study, we examined the institutional environment of acquiring, target, and rival firms to explain the performance effects of horizontal M&As on rival firms. Horizontal M&As involve companies within the same industry combining operations to achieve synergies, cost reductions, and better resource utilization. These deals are typically driven by the desire for tighter coordination in downstream activities, such as distribution, sales, and customer support, leading to greater efficiency and stronger customer relationships (Capron & Hulland, 1999; Vermeulen & Barkema, 2001). In fact, relative to non-horizontal M&As, the elimination of redundancies and the sharing of assets are particularly prominent motives for horizontal M&As, as they may lead to significant cost savings (Bower, 2001; Capron, 1999). By consolidating overlapping functions like sales teams and distribution networks, firms can reduce operational expenses and enhance performance. Resource redeployment between merging companies—such as transferring human capital, technology, and infrastructure—also plays a crucial role in creating value (Cording, Christmann & King, 2008). Resource similarities between merging firms facilitate smoother integration, enabling them to exploit shared assets and achieve synergy more effectively (Walter & Barney, 1990).

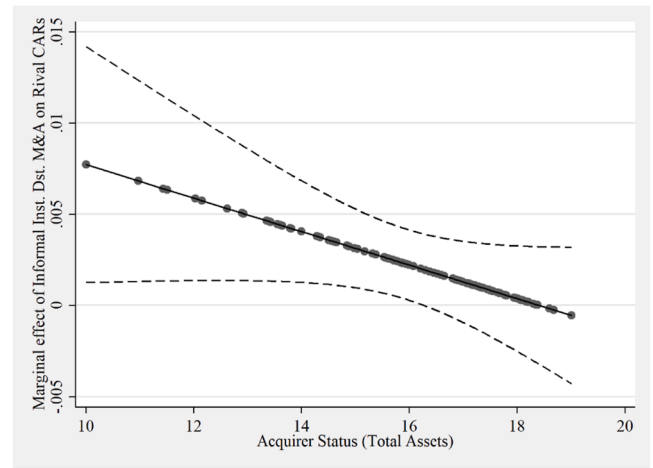


Fig. 3. The Moderating Effects of Acquirer Status on the Relationship between the Acquirer – Target Informal Institutional Distance and Rival's Expected Returns.

Nonetheless, while cost savings through redundancy elimination is a well-established motive for these mergers (Bower, 2001), the integration process often brings substantial organizational challenges, particularly for employees. The restructuring that accompanies these deals can, in fact, result in layoffs and changes to roles, creating stress and uncertainty within the workforce (Cartwright, Tytherleigh & Robertson, 2007; Tarba et al., 2019). As such, acquirers may benefit greatly from horizontal M&As but they may also be damaged if the intended gains are not realized. In turn, the performance and organizational consequences of horizontal M&As on acquirer-target dyads also have the potential to affect their rivals' prospects (Cartwright & Schoenberg, 2006; Clougherty & Duso, 2009; Gaur et al., 2013, 2011; Shahrur, 2005; Song & Walking, 2000).

Such a stream of research typically attributes fluctuations of rivals' performance as an effect of changes in the intensity of competitive rivalry. For example, decreasing rival performance may reflect intensified competition, while performance improvements suggest reduced competitive rivalry (Clougherty & Duso, 2009; Eckbo, 1985). Empirically, research has often shown that horizontal M&As are likely to benefit rivals by increasing industry concentration (Chatterjee, 1986; Clougherty & Duso, 2011; Stigler, 1950) and by signaling the presence of opportunities from location-based advantages or synergies (Gaur et al., 2013; Shahrur, 2005; Song & Walking, 2000) that competitors may take advantage of through prospective acquisitions, either as potential targets or acquirers (Song & Walking, 2000). Other studies, however, found that rivals do not experience any positive abnormal returns after an acquisition by their competitors about half of the time, and in many cases they even reported negative returns (Song & Walking, 2000; Akdoğu, 2009). In fact, Clougherty and Duso (2011) showed that 26 % of rivals lose market value when competing acquirers gain from efficiency-based synergies and competitive advantages. In short, while the industry consolidation and the acquisition probability hypotheses predict positive performance effects for rival firms, the competitive advantage hypothesis predicts negative effects.

In an attempt to further reconcile adverse theoretical arguments with the empirical findings, research then examined how firm resources (Barney, 1991) and capabilities (Teece et al., 1997) may affect the relationship between horizontal M&As and rival performance. Yet, these firm-level factors alone were not able to fully explain the observed performance effects on rivals. In turn, this inconclusiveness paves the way to an examination of contextual factors, and in particular of the role played by the institutional environments in which acquiring, target, and rival firms operate (Garrido et al., 2014). Joining this stream of literature, the present study draws on Institutional Economics to argue and

show that both the formal and informal institutional distances of acquirers and targets directly impact the expected performance of rival firms after horizontal M&A announcements. Specifically, we showed that negative formal institutional distance between acquirers and targets harms rivals, which we attribute to the acquirer-target dyads' strengthened market positions (in line with the competitive advantage hypothesis). In contrast, we argued that acquirers and targets are weakened by informal institutional distance due to organizational frictions in the organizational-blending stage of an acquisition, which prevents them from realizing synergies, to the benefit of rival firms (consistently with the value destruction logic).

Overall, our findings support our main argument that formal institutional distance and informal institutional distance between acquirer-target dyads have an opposite effect on rival firms' performance. Specifically, we found that negative formal institutional distance makes M&As more efficient, thus benefiting acquirer-target dyads through institutionally driven advantages and damaging rivals' prospects. Conversely, we found that informal institutional distance has an opposite effect, i.e., it damages acquirer-target dyads and benefits rivals. In addition, our findings also indicate that rivals operating in formal institutional environments of comparable strength to those of the acquirers accrue positive performance effects following M&A announcements by competitors, possibly because these rivals may benefit from the same institutionally driven advantages in case of future acquisitions. Lastly, our findings also show that the positive performance effects accrued by rivals when acquirers and targets are embedded in different informal institutional environments decrease with the acquirer's status, as high status may help acquirers overcome the post-acquisition organizational challenges that are amplified by informal institutional distance.

Our study makes a number of contributions to both international business and strategy research. Our findings add to the international business literature that adopts Institutional Economics to explore the relationship between a firm's institutional context and its performance (for instance, Devarakonda et al., 2021; Buchner et al., 2018; Kafouros & Aliyevm, 2016; Peng, 2002; Peng et al., 2009). While prior studies largely examined performance implications for acquirers and targets in diverse institutional settings, the effect on a rival firm's performance had remained largely unexplored. Our findings highlight that differences in the institutional settings of acquirer-target dyads have complex effects on rivals' performance. This is a particularly informative insight for international business literature, as it illustrates that the formal and informal institutions of acquirer-target dyads produce opposite effects on rivals' performance.

Our study also contributes to the literature that examines formal institutional distance as a primary driver of the liability of foreignness (Perkins et al., 2014), as the former increases information asymmetries (Chang & Tsai, 2013; Roy, 2012; Krishnan et al., 2007), decreases legitimacy (Hitt & Pisano, 2003; Kostova & Zaheer, 1999), and requires acquirers to invest more resources in target screening activities (Li & Xie, 2013). As such, formal institutional distance may negatively affect the prospective gains from acquisitions (Haleblian et al., 2009; Li, Wang, Ren & Zhao, 2020; Liou & Rao-Nicholson, 2017). Yet, our findings show that rivals accrue negative returns upon M&A announcements in the case of negative formal institutional distance, that is, when the target firms operate in countries with comparatively weaker formal institutions than the acquirers', thus highlighting that rival firms' performance is affected by both the size and the direction of formal institutional distance between acquirers and targets (Hernández & Nieto, 2015; Hernández, Nieto & Boellis, 2018; Kostova et al., 2020). Yet, our findings also show that the formal institutional environment of rival firms plays a role too, as rivals operating in formal institutional environments at least as strong as those of the acquirers accrue positive returns, possibly because these rivals may also benefit from similar institutionally driven advantages and may thus obtain gains similar to those of the acquirers through future M&As (Gaur et al., 2013).

Our paper also contributes to the ongoing debate on the effect of informal institutional distance on M&A outcomes (Boateng et al., 2019; Lim et al., 2016; Popli et al., 2016). Empirical findings show that informal institutional distance has negative effects on M&A completion (Dikova et al., 2010; Zhang et al., 2011; Sarala & Vaara, 2010; Stahl & Voigt, 2008), longevity (Barkema et al., 1996), and firm survival (Zeng et al., 2013). Yet, some scholars have argued that, despite the challenges and tensions that it may cause, informal institutional distance can improve acquisitions' outcomes due to positive effects on knowledge acquisitions, routine development, and access to valuable repositories (Chakrabarti et al., 2009; Ghoshal, 1987; Slangen & Hennart, 2008). By showing that rivals' expected performance is positively associated to informal institutional distance between acquirers and targets, our findings corroborate the view that informal institutional distance hinders M&As. However, our findings also confirm that the performance and organizational consequences of informal institutional distance in the case of M&As are especially complex (e.g., Shenkar, 2001; Stahl & Voigt, 2008). In fact, we found that the positive impact that acquirer-target informal institutional distance has on rivals' performance diminishes when acquirers have high status because it can facilitate organizational blending – and thus improve M&A outcomes – through smoother sociocultural interaction and integration (Yildiz, 2014).

Finally, the findings and theoretical insights of this study are also meaningful for both managers and policymakers. The study suggests that managers can better evaluate potential acquisition targets and increase the threat they pose to their direct rivals by also considering the formal and informal institutional setting in which the acquirers, targets, and rivals operate. Thus, careful analysis of the target country's formal institutional environment and the benefits it may offer is of great importance for value creation during an M&A and its ability to threaten the market positions of direct rivals. However, managers should strive to choose targets in informal institutional environments that are similar to their own, as excessive informal institutional distance aids the prospective performance of their direct competitors. In addition, policymakers, especially those overseeing antitrust inquiries, should examine not only market structures that limit competition but also the institutional environments of acquiring, target, and rival firms. These settings can either constrain or empower market actors, often enabling dominant firms to pursue foreclosure more aggressively.

5.1. Limitations and further developments

Aside from its theoretical and practical contributions, this study also has limitations that pave the way for future research. First, due to the geographic distribution of acquirers, targets, and rivals, the variance in formal and informal institutions in our sample is not always substantial. As our results may have been even more pronounced had developing countries been better represented in our data, we invite future research interested in building on our study to use more comprehensive datasets. Despite this limitation, our findings still provide important insights because they show that even small changes in the variation of formal and informal institutional environments can affect the expected performance of rivals.

Second, our study primarily focuses on highly visible acquisitions that involve large firms in the manufacturing sector. Hence, we invite future research to investigate M&As that involve companies that are private or that operate in other industries. Third, our analysis focuses on actual competitors identified through the EC rival identification method. We acknowledge that this approach may have led us to miss "potential" competitors, which could have limited our grasp of potential market competition. As a better understanding of both actual and potential competition is crucial for the development of the international business and strategy fields, we call for research that delves deeper into this matter. Fourth, we focus on negative formal institutional distance between acquirers and targets—i.e., when acquirers operate in countries with formal institutional environments of higher quality than targets –

and between rivals and acquirers – i.e., when rivals operate in countries with higher formal institutional quality than acquirers. As our focus is on cross-border acquisitions, this study does not examine deals where acquirers, targets, and rivals operate in the same institutional context (although in some cases the home and the host countries may incidentally have the same values for our institutional measures). Yet, an examination of domestic horizontal M&As may also be informative and help improve our knowledge of the institutional effects on the relationship between acquisitions and performance. We thus invite future research to address this line of inquiry.

Fifth, like other studies, such as Valentini (2016), due to the cross-sectional nature of our data, we cannot guarantee the causality of the relationship studied in this research. Therefore, our findings should be considered to be highlighted correlations rather than definitive causal relationships. Sixth, while the event-study methodology that we used in this paper allowed us to isolate the impact produced by specific events, it relies on the assumption that stock markets are efficient. Although this assumption is commonly accepted, it is also often questioned. Hence, we encourage future studies to further validate the outcomes of our study with other proxies for firm performance, such as ex-post accounting metrics. Seventh, while our study focused on the institutional context at the aggregate level, future studies could explore the effects of individual institutional dimensions, such as particular aspects of culture or specific legal provisions, to assess more precisely how different institutional factors may benefit or harm acquiring, target, or rival firms (Aguilera & Grøgaard, 2019).

6. Conclusion

Both international business and strategy research highlight the significant role M&As play in shaping firm performance. The valuable aspect of strategy literature is that it employs firm resources and capabilities to interpret the influence of M&As on competitors, despite being predominantly focused on critical outcomes for the acquirer and target. International business literature, on the other hand, mainly considers the influence of institutional contexts on firm performance in M&As. This study serves as a conduit between these two perspectives, illuminating the significant role that the institutional environments – where acquiring, target, and rival firms operate – play in explaining how the M&As of competitors shape their rivals' expected performance. This approach provides insightful evidence and invites more research to be done at the intersection of international business and strategy to further expand our knowledge of the relationship between M&As and firm performance.

CRediT authorship contribution statement

Dimitrija Kalanoski: Writing – review & editing, Writing – original draft, Visualization, Validation, Project administration, Methodology, Investigation, Formal analysis, Data curation, Conceptualization. **Francesco Cappa:** Writing – review & editing, Writing – original draft, Visualization, Validation, Project administration, Methodology, Investigation, Data curation, Conceptualization. **Michele Pinelli:** Writing – review & editing, Writing – original draft, Validation, Data curation, Conceptualization. **Jean-Philippe Bonardi:** Writing – review & editing, Writing – original draft, Validation, Conceptualization.

Supplementary materials

Supplementary material associated with this article can be found, in the online version, at [doi:10.1016/j.jwb.2024.101608](https://doi.org/10.1016/j.jwb.2024.101608).

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