

UNIVERSITA' COMMERCIALE "LUIGI BOCCONI"

PhD SCHOOL

PhD program in Business Administration and Management

Cycle: XXXI

Disciplinary Field: SECS – P/08

**THE INFLUENCE OF STAKEHOLDER
ORIENTATION ON CORPORATE
DEVELOPMENT ACTIVITIES**

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PhD Thesis by

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Academic Year 2019/2020

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EXTENDED ABSTRACT

Corporate development activities refer to all activities related to firm growth strategies such as alliances, acquisitions, divestitures and internal development (Harzing, 2002; Villalonga and McGahan, 2005; Wang & Zajac, 2007; Zollo & Reuer, 2010). In an attempt to identify the antecedents of these strategic decisions, scholars put their attention on several factors such as the resources a firm controls (Lavie & Rosenkopf, 2006), its ownership type (Feldman, Amit, & Villalonga, 2016; Gomez-Mejia, Patel, & Zellweger, 2018), its previous experience (Kale, Dyer, & Singh, 2002; Russo & Vurro, 2019), or the type of relationships the firm has created over time (Gulati, 1995; Reuer, Tong, & Wu, 2012).

A growing number of studies focus the attention on the influence that the relational resources a firm developed with its internal and external stakeholders (Parmar et al., 2010) might have on corporate development activities. For instance, it has been found that a firm stakeholder orientation is positively associated to firm innovation (Flammer & Kacperczyk, 2016), to the acquisition behavior (Tong, Wang, & Xia, 2019) and to divestment activities (Bettinazzi & Feldman, 2019). These results are not surprising, given the influence that firm stakeholder orientation has on the sources of competitive advantage (Eccles, Ioannou, & Serafeim, 2014) and on the characteristics of the resources developed by stakeholder-oriented firms (Jones, Harrison, & Felps, 2018).

In this thesis, we wish to advance this emerging stream of research by investigating the influence of firm stakeholder orientation on its alliance propensity and on the likelihood of it being acquired. Specifically, the first paper analyzes the influence of stakeholder orientation on firm alliance propensity. We suggest that stakeholder orientation, mitigates exchange related hazards and facilitates the selection process in alliance formation. Results confirm the

hypotheses submitted and, additionally, show that the effect of stakeholder orientation is more pronounced in opaque contexts and in situation in which is complicated to assess focal firm trustworthiness and openness to collaboration.

In the second paper, we analyze the influence of firm stakeholder orientation on its likelihood to be acquired. We argue that a firm's stakeholder orientation might influence its visibility, its potential for value creation, the complexity in assessing it, and, lastly, the integration strategies. We propose arguments for both a positive and negative relationship between a firm's stakeholder orientation and its likelihood of being acquired. In addition, we hypothesize that the effect of firm stakeholder orientation of its likelihood of being acquired is moderated by the acquirer' level of stakeholder orientation. We tested the hypotheses conducting firm- and dyadic- level analyses. Results at firm level provide support for the negative hypotheses, while results at the dyadic level display that this negative effect is mitigated by the acquirer degree of stakeholder orientation.

By joining together the streams of literature on strategic alliances, target selection and stakeholder orientation, this thesis makes two contributions. First, our arguments and findings emphasize the critical role played by the way in which the firm manages the network of relationship in which is embedded, in addition to the considerations about the type of relationship a firm possess emphasized in previous research. In particular, it enriches recent discussion on the importance of complementing valuable resources with valuable approaches to collect those resources. In so doing, we contribute both to M&A and alliance literature and more in general to literature on corporate development Second, we contribute to the stakeholder theory literature. In particular, we advance existing knowledge on the outcome associated to the different strategies adopted to manage stakeholder relationships. By providing a deeper understanding of potential benefits and drawbacks of a stakeholder-oriented approach, we hope to encourage managers to increase the adoption stakeholder theory practices in their behavior.

**LET YOUR LIGHT SHINE: THE EFFECT OF STAKEHOLDER ORIENTATION
ON STRATEGIC ALLIANCE FORMATION**

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LET YOUR LIGHT SHINE: THE EFFECT OF STAKEHOLDER ORIENTATION ON STRATEGIC ALLIANCE FORMATION

ABSTRACT: This study contributes to the literature on strategic alliances by examining the impact of stakeholder orientation on alliance propensity. We suggest that stakeholder orientation, defined as the degree to which a firm decides to focus its attention on stakeholders and integrates their interests and knowledge in its decision making, mitigates exchange related hazards and facilitates the selection process in alliance formation. We theorize that stakeholder-oriented firms display lower level of informational opacity, signal integrity and collaborative attitude to prospective partners. We validate our arguments using a longitudinal sample of 10,339 firm-year observations on the tendency to form strategic alliances over the period 2003-2017. We find support for our baseline hypothesis according to which stakeholder orientation improves firms' proclivity to form alliances. We also test the boundary conditions under which the positive effect of stakeholder orientation on alliance formation is mitigated, that is, at high level of external scrutiny, action-based trustworthiness and openness to the outside by means of formal conduits for information and resources.

Keywords: Stakeholder Orientation; Alliance Formation; Stakeholder Management

INTRODUCTION

Firms participate in strategic alliances for various reasons. They may engage in collaborative relationships for sharing complementary resources (Dyer & Singh, 1998; Harrison, Hitt, Hoskisson, & Ireland, 2001), mitigate risks and defray costs of speculative strategic endeavors. Yet, alliances are complex and fraught with risks, as witnessed by their dismal failure record and the frequent choice of alternative growth options (Villalonga & McGahan, 2005; Wang & Zajac, 2007). The promises and pitfalls of strategic alliances have fueled growing interest and concern among scholars on the reasons that derail firms from inter-organizational arrangements.

Early emphasis on the quality of resources owned by the firm as a sufficient driver of attractiveness as an alliance partner (Das & Teng, 2000), has been steadily complemented by research on the perceived exchange related hazards and their impact on alliance behavior (Arslan, 2018; Gulati & Singh, 1998). As potential benefits might be not obvious at the beginning and competitive tensions might arise over the course of an alliance life cycle, exchange related hazards are deemed inevitable, thus limiting firm's propensity to ally. Indeed, the perceived risk of moral hazard and adverse selection can have detrimental effects on the realization of alliance benefits, leading to underinvestment of resources, overprotection of proprietary assets and retaliation. When perceptions of exchange related hazards are high, firms' propensity to ally might be greatly discouraged, resulting in uncaptured opportunities for synergistic value creation (Gulati, Lavie, & Singh, 2009).

In an attempt to support firms in countering the negative effects of perceived exchange hazards, research has recently focused on the beneficial impact of information availability, trustworthiness and credibility as drivers of alliance formation (Ariño & Ring, 2010; Das & Teng, 1996; Gulati & Nickerson, 2008). Whether they are derived from agglomeration or geographical proximity (McCann, Reuer, & Lahiri, 2016), prior collaborations and their

configurations (Gulati, 1995), or more observable characteristics such as market identity, status or reputation (Russo, Vurro, & Nag, 2019; Stern, Dukerich, & Zajac, 2014), trust-based and information-based mechanisms have the potential to reduce perceived adverse selection and moral hazard, thus increasing the likelihood of alliance formation.

In the discussion about firm-level factors that might shape exchange related hazards the role of stakeholder orientation, defined as the degree to which a firm decides to focus its attention on stakeholders and integrates their interests and knowledge in its decision making (Harrison, Bosse, & Phillips, 2010), has been mostly neglected. Previous research has largely documented that stakeholder-oriented firms differ in terms of their approach to value creation, which relies on stakeholder involvement in strategic decision making and implies continuous knowledge exchange with stakeholders in a stakeholder network (Garcia-Castro & Aguilera, 2015; Tantaló & Priem, 2016). Indeed, stakeholder-oriented firms have been observed to behave differently from less stakeholder-oriented ones, in terms of corporate development activities such as acquisitions (Tong, Wang, & Xia, 2019), innovation (Flammer & Kacperczyk, 2016) or divestiture (Bettinazzi & Feldman, 2019).

Heeding the call for a deeper understanding of what drives the choice of an alliance partner and building on recent advancements on the relevance and role of stakeholder orientation, we aim at advancing this stream of research by submitting that stakeholder-oriented firms are also different in terms of attractiveness as an alliance partner, resulting in a greater propensity to ally. The reasons why stakeholder orientation has the potential to shape the perceived exchange related risks that a firm face in alliance formation are threefold. First, by opening their boundaries to stakeholder interaction, stakeholder-oriented firms display lower level of informational opacity in comparison to less stakeholder-oriented ones, which in turn might reduce information asymmetries and the related perceived risks of moral hazard and adverse selection (Cho, Lee, & Pfeiffer Jr, 2013; Cui, Jo, & Na, 2018). Additionally, the

reputation developed in cooperating with stakeholders might act as a signal that increase a firm's perceived trustworthiness (Brammer & Pavelin, 2006; Parmar et al., 2010). As reputation depends on a firm's success in meeting the expectations of stakeholders, stakeholder-oriented firms are in a better position to signal that their behavior will be aligned with expectations of a perspective partner, thus improving their level of trustworthiness. Finally, relational capabilities stakeholder-oriented firms develop in managing stakeholder relationships might signal an attitude to cope with situations in which cooperation among the parties involved is crucial for creating value (Tong, Wang and Xia, 2019; Jones, Harrison, & Felps, 2018). Taken together these arguments support the existence of a positive effect of firm stakeholder orientation on alliance formation.

Although the different perspectives defined make the same prediction, the theorized underlying mechanisms suggest three distinct ways through which a firm stakeholder orientation might influence proclivity to form alliances. Accordingly, we introduce three moderators to better inform our discussion on the conditions under which stakeholder orientation act as a driver of alliance formation. In particular, we expect the level of external scrutiny, the trustworthiness as derived by previous environmental commitments and the existence of formal conduits of external information to mitigate the positive relationship we hypothesize. In fact, the moderators refer to the existence of conditions that are already supposed to reduce exchange hazards.

We test our hypotheses using a comprehensive panel dataset of 2,016 US-listed firms over the period from 2003 to 2017, resulting in sample of 10.399 unique firm-year observations. We find support for the notion that stakeholder orientation significantly increases the propensity of a firm to form strategic alliances. Moreover, we find evidence that the positive effect of a firm stakeholder orientation on its alliance propensity is stronger only for those firms that show characteristics that are commonly associated to a lower attractiveness (i.e., when the risk related

to adverse selection and moral hazard are higher because of increased opacity, reduced trustworthiness and lack of signals of openness to collaboration).

These findings contribute to several research areas. First, we develop a richer understanding of the relational drivers of alliance formation (Gu & Lu, 2014; Norheim-Hansen, 2015; Stern et al., 2014), by showing how stakeholder orientation act as an informational and trust-related mechanism to improve a firm's attractiveness as an alliance partner. Moreover, we answer the call for further studies on firm-level determinants of trust in the alliance context (Stern et al., 2014), by enriching recent discussion on the importance of complementing valuable resources with valuable approaches to collect those resources. Finally, we offer fresh insights on the mechanisms linking stakeholder orientation to corporate development strategies (Bettinazzi & Zollo, 2017; Flammer & Kacperczyk, 2016) and resonate on the boundary conditions that mitigate the persistence of expected effects across contexts.

The remainder of the paper is structured as it follows. First, earlier research focused on the reasons that derail firms from forming alliances and on the different factors that can support firms in overcoming obstacles is presented. Second, the theoretical framework and hypotheses are developed. These sections are followed by the empirical analysis. Finally, the findings and contributions are discussed, as well as the limitations of the paper.

THEORETICAL BACKGROUND AND HYPOTHESES

Research and practice have long documented the motivations behind firms' participation in strategic alliances (Gomes, Barnes, & Mahmood, 2016; Gulati & Singh, 1998). They might engage in collaborative relationships for developing knowledge and exploit complementarities (Grant & Baden-Fuller, 2004; Harrison et al., 2001), experimenting with assets on an arm's length basis (Eisenhardt & Schoonhoven, 1996), preserving limited resources (Kale, Singh, & Perlmutter, 2000) and gaining access to markets (Baum, Calabrese, & Silverman, 2000).

Whereas motivations to enter an alliance might be heterogeneous, the theoretical perspectives through which alliances have been analyzed converge on acknowledging exchange related risks as key to understand why some firms are less prone to engage in alliance than others. In particular, strategic alliances are considered as risky means of corporate development because of the potential for both adverse selection, which is connected to the asymmetry of information in assessing ex-ante firm's resources and capabilities (Hoenig & Henkel, 2015; Reuer & Lahiri, 2014), and moral hazard, which relates to the cost of monitoring a firm's contribution to the alliance and counter private benefit extraction at the expense of common benefit potential (Dyer, Singh, & Kale, 2008; Gulati & Higgins, 2003).

Limited or incomplete information when assessing the value of inter-firm collaboration is not the only deterrent to alliance formation. Some firms might be less attractive than others as an alliance partner, because they send weak signals about their collaborative attitude (Dyer, Kale, & Singh, 2001; Gulati et al., 2009) or commitment to meet expectations, namely trustworthiness (Schilke & Cook, 2015; Stern et al., 2014). In fact, the lack of trust in the counterpart's credibility, integrity or openness to collaboration increases the perceived expected cost associated with monitoring of opportunistic behavior in the post-formation stage, thus discouraging alliance formation (Hoenig & Henkel, 2015; Robson, Katsikeas, & Bello, 2008). Taken together, these perspectives suggest that firms that are perceived as less scrutinizable because of information asymmetries, less trustworthy, and potentially misaligned in terms of attitude towards collaboration will be less prone to form alliances, because of higher risks for exchange related hazards.

Several studies have investigated which factors could mitigate these obstacles to alliance formation. In particular, it has been observed that the availability of third-party information and the existence of prominent affiliations for the focal firm reduce information asymmetry while driving alliance formation (Ozmel, Reuer, & Gulati, 2013; Pollock & Gulati, 2007).

Additionally, entering an alliance with highly reputed business partners or suppliers increase the perceived trust in the firm (Luo, 2002; Mukherjee, Gaur, Gaur, & Schmid, 2013). Similarly, scholars point to the role of firm's status (Podolny, 1994; Stuart, 1998), market identity (Russo et al., 2019), reputation and perceived fairness (Ariño & Ring, 2010; Dollinger, Golden, & Saxton, 1997; Luo, 2007; Stern et al., 2014), and investment to reduce environmental impact (Norheim-Hansen, 2015) as trust-enhancing mechanisms.

On a partly related side, recent research has started to analyze the impact of organizational arrangements meant to facilitate alliance management on attracting prospective alliance partners (Kale, 1999; Wang & Rajagopalan, 2015). In this regard, the presence of a dedicated alliance function, that is, an organizational unit to better manage alliance-related activities, has been shown to improve the propensity to ally by signalling firms' attitude towards alliances and strengthening their legitimacy as potential partners (Findikoglu & Lavie, 2019; Russo & Vurro, 2019).

Stakeholder orientation and alliance propensity

Despite the vast amount of research aimed at identifying which factors may foster or impede a firm's propensity to form alliances, less attention has been paid to stakeholder orientation as an antecedent of alliance formation. Existing literature alludes to the potential benefits of developing an attitude towards stakeholders as a reassurance mechanism about reliability (Bettinazzi & Zollo, 2017). However, how a firm degree of orientation towards its stakeholders can influence a firm attractiveness as an alliance partner has not yet been subject to systematic analysis, as well as the conditions under which the adoption of a stakeholder-oriented approach can be beneficial for alliance formation remain understudied.

By involving stakeholders in the value creation process, stakeholder orientation implies a continuous knowledge exchange between the firm and its stakeholders. This approach relies

on relational contracting (Gibbons & Henderson, 2012) and it contributes to the accumulation of tacit and socially complex knowledge (Tantalo & Priem, 2016), of mutual trust in relationships (Bridoux & Stoelhorst, 2014) and to the emergence of relational capabilities (Jones et al., 2018). Accordingly, stakeholder-oriented firms differ substantially from non-stakeholder-oriented ones in term of value creation configuration (Garcia-Castro & Aguilera, 2015), acquisition behavior (Tong et al., 2019), and divestiture propensity (Bettinazzi & Feldman, 2019).

Building on and extending preliminary evidence on the role of stakeholder-orientation in driving corporate development activities, we posit that stakeholder-oriented firms are also different in terms of attractiveness as an alliance partner, as represented by a higher propensity to ally. As any alliance involve a certain degree of uncertainty due to well-known exchange related hazards (Arslan, 2018), stakeholder-orientation can act as a mitigating mechanism by shaping the perceptions of partner-seeking firms prior to entering an inter-organizational agreement.

First, recent research on instrumental stakeholder theory and the adoption of corporate social responsibility strategies point out to stakeholder orientation as an informational mechanism improving firm accountability about targets, achievements and internal processes. Stakeholder oriented firms, in fact, tend to disclose more information to their stakeholders in order to facilitate interactions with them and to reduce potential conflicts of interest among heterogeneous stakeholder categories (Harjoto & Jo, 2011; Jo & Harjoto, 2012). As a result, stakeholder orientation has emerged as negatively correlated with the degree of information asymmetry between the firm and the market since being stakeholder oriented inherently implies improved openness to external scrutiny and opportunities (Cho et al., 2013; Cui et al., 2018; Kulkarni, 2000).

Furthermore, a high degree of attention towards stakeholders has been associated to a better social evaluation (King, 2008) as it represents an explicit intention to get involved into better monitoring and transparency, with more information disclosed that turns into a strengthened firm's external visibility (Pollock, Chen, Jackson, & Hambrick, 2010; Saxton & Dollinger, 2004) and the likelihood of being covered by analysts (Bowers & Prato, 2018). In sum, firms with higher level of stakeholder orientation would display a larger amount of information to external audiences compared to firms that are less stakeholder oriented. As information availability that derives from stronger stakeholder orientation increases, it reduces the efforts potential counterparts have to go through to assess the quality of the firm. In turn, the lower level of information opacity increases the attractiveness of the scrutinized firm as a potential alliance partner.

The second argument supporting the beneficial role of stakeholder orientation on alliance formation is rooted in the observation that stakeholder-oriented firms might be perceived as more trustworthy because of the characteristics of the relationships they have with their stakeholders and the related reputation outcome. Stakeholder theory and scholars have long posited that the extent to which a firm adopts a stakeholder-oriented approach determines the creation of trust-based relationships with the different counterparts (Harrison et al., 2010; Zander & Zander, 2005). In this sense, a higher degree of stakeholder orientation could represent a signal of trustworthiness, induce the belief that the focal firms will be less prone to exploit the other's exchange vulnerabilities (Schilke & Cook, 2015), and increase their attractiveness to external audiences (Parmar et al., 2010). In addition, stakeholder orientation reflects the tendency of the firm to build and manage relationships according to the principles of fairness and reciprocal trust (Bridoux & Stoelhorst, 2014). This suggests that if a prospective partner makes an "outside-in" analysis to assess the focal firm (that is, for example, interviewing suppliers, customers, former employees and other stakeholders to collect

information) the stakeholders involved in this process will be more likely to provide positive feedbacks about the scrutinized firm and about its management (Ariño & Ring, 2010; Chen, Kale, & Hoskisson, 2018). These positive feedbacks, in turn, might positively influence the counterpart's perception about the focal firm trustworthiness, smoothing the negotiation process and increasing the likelihood of alliance formation.

The third argument supporting the positive influence of stakeholder orientation on alliance formation hinges on the observation that a stakeholder oriented firm might be perceived as a more reliable partner in terms of its capacity and attitude to cooperate. In fact, the adoption of a stakeholder-oriented approach has been associated to a higher-level ability in reciprocal coordination of a firm with its stakeholder, which results in better quality outcomes such as, products and services offered or capacity to adapt to changing conditions (Jones et al., 2018; Ortiz-de-Mandojana & Bansal, 2016). In addition, the principles of fairness and mutual trust on which relationships with stakeholders are based are expected to promote the utilization and dissemination of knowledge between parties (Doh & Quigley, 2014). In fact, the continuous interactions required by the adoption of a stakeholder-oriented approach promotes the development of shared understandings and a common vocabulary, which are necessary elements for the transmission of tacit knowledge.

Similarly, stakeholder orientation might increase a firm's attractiveness as a potential ally because of its expected impact on the emergence of collaborative capabilities. In fact, it has been argued that capabilities developed by managing stakeholder relationships might influence corporate development activities such as firm's acquisitions (Gibbons & Henderson, 2012; Tong et al., 2019). For instance, Bettinazzi and Zollo in their study on the effect of firm's stakeholder orientation on acquisition performance argued that "*the degree of orientation toward stakeholders preadapts the acquiring firm in the target selection process through competencies that have been developed for completely different reasons*" (2017: 143). Similar

considerations might apply in the case of alliances. Stakeholder-oriented firms might send signals of better relational capabilities as accumulated while interacting with stakeholders. Attitude to relations and interactions could in turn act as reassuring mechanisms about the ability of the focal firm to assess inter-organizational opportunities, anticipate potential problems and cope with selection uncertainty. With respect to the latter point, stakeholder-oriented firms make more extensive use of relational contracts to access internal and external resources compared to less stakeholder-oriented firms, which typically rely more on formalized contracts (Tantalo & Priem, 2016). Being more generic and open-ended compared to formalized ones, these contracts bring with them higher risks of moral hazard (Garcia-Castro & Aguilera, 2015; Gibbons & Henderson, 2012). As a consequence, having a stakeholder-oriented approach might both indicate a higher propensity to cope with situations surrounded by uncertainty and signal the presence of capabilities to manage cooperative relationships in loosely settled contexts.

Taken together, these arguments point to a higher attractiveness of stakeholder-oriented firms as compared to non-stakeholder-oriented firms, as stakeholder-orientation mitigates perceived exchange hazards by improving information availability and signaling trustworthiness and propensity to cooperate. These considerations are expected to result in a higher likelihood of observing alliances that involve stakeholder-oriented firms.

Thus, we hypothesize:

Hypothesis 1: The more stakeholder-oriented a firm is, the greater will be its tendency to form strategic alliances.

Boundary conditions and alternative mechanisms

In our baseline prediction we postulate that stakeholder-oriented firms will be comparatively more inclined to form alliances because they will be perceived at lower risk of adverse selection and moral hazard, as they are less opaque and perceived as more trustworthy and comfortable in collaborating. This effect could be redundant in certain situations or other arguments might concur in the explanation of the expected increase in alliance propensity. It is thus important to set the basis for a throughout understanding of the conditions under which stakeholder orientation offers a better explanation for what drives alliance proclivity. In fact, we can expect that alternative informational or trust-enhancing mechanisms provide insightful boundary conditions. In particular, we analyze how the level of external scrutiny by means of financial analyst coverage, environmental reputation and outside-orientation via board interlocks set the basis for ruling out alternative explanations.

External scrutiny via analyst coverage

Existing research highlight how the selection of an alliance partner entails two major concerns for the partner-seeking firms: that valuable partners get unnoticed and that low-level partners get selected. The severity of these concerns strictly depends on the extent to which prospective partners can be scrutinized. In this context, financial analysts are in the position to play a key role in supporting alliance formation, having privileged access to information flows, as well as information processing and diffusion competences (Collet & Philippe, 2014).

Being acknowledged as independent experts who continuously collect, analyze and disseminate information about the conditions and future prospects of firms, financial analysts act as information broker and intervene for the correct functioning of financial markets (Das, Guo, & Zhang, 2006; Lang & Lundholm, 1996). Their forecasts and recommendations are largely leveraged on by investors and interested stakeholders in making more informed decision about whether or not withhold their financial and non-financial support (Chang, Dasgupta, &

Hilary, 2006; Feldman, Gilson, & Villalonga, 2014). In addition to disseminating information by themselves, financial analysts contribute to reduce opacity by stimulating the voluntary provision of information by firms that are interested in being perceived correctly. Research shows how management reactions to meet or influence analysts' expectations can also have distortive consequences for all the parties involved (Wiersema & Zhang, 2011). Regardless of such purposeful interventions, the expectations to be scrutinized inherently lead to more information disclosed. Indeed, previous work has documented a positive correlation between the number of analysts following a firm and the likelihood to voluntarily disclose financial information (Hutton, 2005). Similarly, executives tend to disclose nonfinancial information or corporate social responsibility information to improve the analyst forecast accuracy (Ioannou & Serafeim, 2015). In so doing, they contribute to alleviate informational frictions and shape the perceptions about the attractiveness of a scrutinized firm.

On a partly related side, financial analysts might exert an additional pressure on the management of a scrutinized firm because of their monitoring role on behalf of potential investors, namely institutional investors (Wiersema & Zhang, 2011). It is through the monitoring function that analysts contribute to greater governance effectiveness, reduce managerial discretion, and shape the perception of quality of the focal firm (Brauer & Wiersema, 2018). In this sense, analyst coverage acts as a reassuring mechanism about the reliability of the firm in attaining declared or expected achievement and the predictability of its behavior.

As a whole, we can expect the informational advantage that is associated to firms characterized by a higher level of stakeholder orientation to be upper bounded as the benefit deriving from increased information availability decreases marginally when the amount of information available to an external audience reaches a certain threshold level. For instance, Pollock and Rindova (2003) found that the level of media coverage affect investors' decisions at

a diminishing rate because the information conveyed through, and thanks to, the relational bonds with stakeholders becomes increasingly redundant. Thus, we posit:

Hypothesis 2: The extent to which firms are subject to external scrutiny by means of financial analysts' coverage weakens the positive influence of stakeholder orientation on alliance propensity.

Trustworthiness via environmental performance

Exchange-related concerns threatening alliance formation can be also mitigated by the extent to which prospective partners have expectations about mutual positive behavior, that is, the level of perceived reciprocal trustworthiness in an inter-organizational agreement as linked to achievements or previous commitments (Das & Teng, 2002; Schilke & Cook, 2015). A recurring recent theme in this regard is how dedication and commitment towards higher level responsibilities, such as the eradication of environmental degradation by means of controlling and reducing environmental impacts (George, Howard-Grenville, Joshi, & Tihanyi, 2016), can act as a powerful trust-enhancing mechanism, thus shaping a firm's level of attractiveness in the eye of potential beholders (Norheim-Hansen, 2015; Schoorman, Mayer, & Davis, 2007).

Environmental performance, as resulting from actions and commitments leading to the reduction or elimination of negative environmental impacts beyond legal requirements, demonstrates concern and care for societal goals, thus turning into perception of integrity and trustworthiness (Cho, Guidry, Hageman, & Patten, 2012). It is in this sense that environmental achievements can act as a substitute for direct partnering experience, with an impact on the propensity to ally (Saxton, 1997; Saxton & Dollinger, 2004). Indeed, environmental performance has been associated with positive evaluations by external stakeholders such as

investors and customers (Aaron, McMillan, & Cline, 2012; Berrone, Fosfuri and Gelabert, 2017), and with a higher likelihood to sign government procurement contracts (Flammer, 2018).

In the alliance context, it has been found that environmental commitments are more related to the perceived trustworthiness in the focal firm than other types of reputation-enhancing relational mechanisms that might be informative about focal firm abilities or competences (Becerra, Lunnan, & Huemer, 2008). Thus, environmental performance is both related to the perceived integrity of a firm and to the expectation that it will behave according to expectations. In this sense, environmental performance has the potential to directly mitigate the perceived risks of exchange hazards and increase a firm's attractiveness as an alliance partner (Norheim-Hansen, 2015)

We posit that when partner-seeking firms can count on environmental performance or similar commitments towards higher-order goals, being stakeholder oriented is redundant as a reassuring mechanism and its impact on alliance formation is relatively less important. Additionally, environmental performance can act as a cognitive shortcut on which to formulate expectations about future behavior, at the expenses of signals rooted in managerial practices, namely stakeholder orientation, that could need throughout understanding to be effectively captured (Hoenig & Henkel, 2015). Thus, we hypothesize:

Hypothesis 3: The extent to which firms are perceived as trustworthy by means of their environmental performance weakens the positive influence of stakeholder orientation on alliance propensity.

Openness to the outside via board interlocks

Literature has long documented that board interlocks, which are formed when the executives or directors of one firm sit on the board of directors of another firms (Mizruchi, 1996), can have

important effects as reassuring mechanisms about a focal firm's ability to acquire resources from the external environment (Beckman, Haunschild, & Phillips, 2004; Ozmel et al., 2013). In fact, firms rely on interlocking directorate to mitigate uncertainty and resource dependence while improving legitimacy and acquiring resources by means of connection with highly reputed firms (Martin, Gözübüyük, & Becerra, 2015). Additionally, firms can engage in board interlocks to better monitor their counterparts when important interests are at stake (Carpenter & Westphal, 2001). Finally, being interlocked gives a priority access to private information from other firms that might facilitate inter-organizational learning (Beckman & Haunschild, 2002) and the diffusion of practices across firms (Haunschild, 1993; Palmer, Jennings, & Zhou, 1993; Shropshire, 2010).

Beyond their support in managing uncertainty and gaining access to critical resources, board interlocks convey signals of a firm's quality to stakeholders, mostly current and potential investors (Certo, 2003), thus shaping attractiveness. Indeed, interlocking directorates are not only informative of the state of firm governance, of resource endowments and social connections, but also about the propensity of firms to connect with one another and engage in cross-boundary information flows. Accordingly, recent research has underlined how board interlocks can exert a direct influence on alliance formation by conveying signals about a firm's formal commitment towards inter-organizational cooperation and information exchange across organizational boundaries (Ni Sullivan & Tang, 2013).

As engaging in strategic alliances naturally requires the development of superior coordinating routines and combinative capabilities to enable firms to harness divergent knowledge streams within their boundaries, board interlocks can provide informational cues about the extent to which a focal firm relies on external resources and give value to relational capabilities (Lamb & Roundy, 2016). Consequently, the confidence of other firms in the focal firm's ability to acquire and utilize resources from the outside can be enhanced, thus turning

into an improved attractiveness as a potential ally. In this sense, firms engaged in interlocking directorates might be perceived as more inclined to cope with inter-organizational relations and benefit from them, as they formally commit their governance bodies to inter-organizational information and resource exchange. This might serve as a reassuring shortcut compared to alternative mechanisms based on managerial approaches or relational attitudes. Thus, we expect that board interlocks mitigate the positive effects of firm stakeholder orientation on alliance formation and hypothesize:

Hypothesis 4: The extent to which firms are perceived as outside oriented by means of engaging in board interlocks weakens the positive influence of stakeholder orientation on alliance propensity.

METHODOLOGY

Sample selection

We tested our hypotheses over a sample of US firms in the period 2003-2017. To build the dataset we initially collected data from Thomson Reuters Asset4 database, one of the most comprehensive databases providing data on ESG (Environmental, Social and Governance) indicators for over 7,000 public companies since 2002. Asset4 analysts collect data from several public sources such as annual reports, NGO websites, and stock exchange filings. The data collection process is designed to maximize data quality and comprises automated checks, independent audits, and managerial reviews. Asset4 was preferred to other databases used in studies on stakeholder orientation such as the Kinder, Lydenberg, Domini & Co. (KLD) due to the detail and accuracy of the data which is ensured by rigorous processes of quality check and auditing. This choice follows recent trends in studies on stakeholder orientation and inter-organizational relationships (Bettinazzi & Zollo, 2017; Ioannou, Li, & Serafeim, 2016). The

first step in the sampling process was the identification of US firms whose stakeholder orientation had been measured by the ASSET4 variables. For each of these firms, data about stakeholder orientation variables were collected through ASSET4.

Second, the Thomson Reuters Securities Data Company (SDC) Platinum database was used to collect data on alliances realized by these companies in the period 2000-2017 (Lavie, Kang, & Rosenkopf, 2011; Stettner & Lavie, 2014). We collect data on alliances from 2000 in order to collect information about alliance experience, Of the 2,888 ASSET4 US firms, 1,270 have realized at least one alliance in the period 2003-2017 leading a total of 6,516 alliances.

The thirds step in the sampling process was collecting data about control variables for each firm. We relied on Thomson Reuters Datastream database. Collected data was then merged with stakeholder orientation data from ASSET4 and variables related to alliance activity computed based on SDC database. The 6-digit version of the CUSIP identifier was used throughout the entire sampling process as the linking field to merge the three different datasets and identify each firm. The risk of possible discrepancies in CUSIPs was minimized by using databases that all belong to Thomson Reuters (ASSET4, SDC, and Datastream). In addition, manual checks were also performed to ensure accuracy Finally, we retrieved information about industry concentration from the Hoberg-Philips data library. The final sample was reduced to 10,339 observations (2,016 firms) due missing data in Datastream and in the Hoberg Philips datasets.

Estimation procedure

To estimate the effect of firm stakeholder orientation on its alliance propensity we ran population-averaged regression models and used generalized estimating equation (GEE) to control for firm heterogeneity (Fosfuri, Giarratana & Sebrek, 2020). This method accounts for

autocorrelation due to the presence in the sample of the same subject across different years by estimating the correlation structure of the error terms (Ballinger, 2004; Liang & Zeger, 1986)

Given the nature of the dependent variable, the total number of alliances in which a firm is involved in year that is a count variable that cannot assume negative values, as well as the over-dispersion in its distribution, we use a negative binomial estimation to test our hypotheses (Hausman, Hall, & Griliches, 1984). As a robustness, we reported the results obtained using the Poisson model. In addition, we dichotomized it creating a new variable which takes value 1 if the firm i has completed at least one alliance in year t and 0 otherwise to mitigate concerns related to over-dispersion in the distribution of the dependent variable. Given the binary nature of this variable, we tested this hypothesis using a logit model.

We recognize that comparing the alliance propensity of firms with heterogeneous degree of stakeholder orientation might raise concerns about selection issues. In order to mitigate this concerns, we use the coarsened exact matching – CEM – (Iacus, King, & Porro, 2012), a widely adopted matching technique in management literature (Chirico, Gómez-Mejía, Hellerstedt, Withers, & Nordqvist, 2019; Feldman, Amit, & Villalonga, 2016; Rogan & Sorenson, 2014), to improve covariate balance in our sample. Specifically, we used CEM to identify, for each firm i that made at least one alliance in a given year (case), a group of firms that display similar characteristics to those of the firm i and that did not make alliances in the same year (control). We matched firms on *size* (same asset quartile), *performance* (Tobin's Q), *firm sector* (same first 2 digits of the primary SIC code provided by Datastream), and *same year*. The matching procedure yielded to a sample of 4,409 observations, (1,387 cases and 3,022 controls).

In each model, the independent and control variables were lagged by 1 year. This approach follows an established practice in alliance literature aimed at mitigating reverse

causality concerns (Lavie et al., 2011; Russo et al., 2019). Lastly, we standardized all the continuous variables in order to have better interpretation of the relationships hypothesized.

Dependent Variable

The dependent variable is the *propensity* of a firm's making alliances, measured as the number of alliances formed by a firm (Gulati, 1995; Rothaermel, 2001; Zhang, Baden-Fuller, & Mangematin, 2007). To operationalize the variable, we count all the types of alliances made by firm, including licensing agreements, marketing or distribution agreements, research and development agreements and technology transfer agreements as our primary interest lies in analysing the effect on firm stakeholder orientation on firm alliance behaviour in a given year.

Explanatory Variable

Firm stakeholder orientation. The main explanatory variable represents a firm's orientation toward its stakeholders. Following extant literature, we focus on those stakeholders that contribute, either voluntarily or involuntarily, to the existence of a firm: employees, shareholders, customers, suppliers, and local communities (Jawahar & McLaughlin 2001; Post, Preston & Sachs, 2002; Hawn & Ioannou 2016; Bettinazzi & Zollo 2017). To operationalize a firm's degree of stakeholder orientation, we used the equally weighted average of operationalization of orientation across the five stakeholder categories on which this study focus (i.e., employees, customers, suppliers, local community and shareholders).

Consistently previous operationalizations, we assessed the orientation towards a stakeholder group based on category-specific items. For the variable *customer orientation*, the aggregated "Revenue/Client Loyalty" category score from the ASSET4 database was used, which measures the firm's ability to maintain a loyal customer base through dedicated policies

and initiatives, transparency, open communications, and interactions. The aggregate score is obtained by ASSET4 analysts by combining 46 raw measures.

The variable *employee orientation* was constructed by computing the equally-weighted average of four measures within the “Employment Quality” category, related to the existence of a policy aimed at ensuring long term employment stability (“Policy”), to the presence of information about the action implemented by the firm to ensure the adoption of the policy within the organization (“Implementation”); to existence of specific tools aimed at assessing employees’ needs (“Monitoring”); to the presence of specific targets for employees’ development (“Improvement”). This category evaluates the firm’s ability to maintain high quality and fair relationships with employees and the presence of dedicated policies and monitoring.

We assessed *customer orientation* using the average of the four indicators included in the category ‘Client Loyalty’, which reflects the effectiveness of a company in pursuing long-term growth in revenue and at the same time nurturing client relationships based on fairness and trust.

For the variable *community orientation*, the aggregated “Society/Community” category score was used, which measures the quality of the firm’s relationship with the general society and community and its ability to behave as a good corporate citizen and to contribute to the betterment of society. The aggregate score is obtained by ASSET4 analysts by combining 124 raw measures.

We built *supplier orientation* on four data-points that capture the degree to which a company treats suppliers as key business partners. Specifically, included the dummy variables presence of a policy and adoption of a code of conduct (considered as a proxy to assess firm’s commitment to treating suppliers as key business partners) and the two dummy variables that account for the presence of processes and communication tools to improve partnerships with

suppliers (considered as a proxy for the existence of managerial practices to interact with suppliers). The measure is constructed as the normalized sum of these four single constructs, so ranges from zero (low) to 100 (high).

The variable *shareholder orientation* was obtained calculating the equally weighted average of four corresponding scores within the “Shareholder Rights” category which indicates the quality of shareholders management by the firm and its ability to follow best-practice corporate governance principles and to ensure equal treatment of shareholders

Lastly, the 5 scores obtained with this process, corresponding to the firm’s orientation towards the categories of primary stakeholders, were combined into a single overall variable *stakeholder orientation*. This variable was computed taking the equally weighted average of the 5 variables and thus ranges between 0 and 100.

Moderator Variables

External scrutiny via analyst coverage: The level of external scrutiny via coverage by financial analysts was operationalized as the average number of analysts covering a firm in a given year. Specifically, we retrieved the number of analyst estimates of earnings issued on a listed firm from the Institutional Brokers Estimates Systems (I/B/E/S). I/B/E/S is the most widely used dataset for studies on financial analyst (Ioannou & Serafeim, 2015; Luo, Wang, Raithel, & Zheng, 2015). In this dataset there are multiple records (typically four) for a firm for every year because analyst make multiple earnings estimates (Hong & Kacperczyk, 2009). For this reason, we operationalized the variable as the average number of analysts following the company in a given year. As in earlier studies, we assumed that listed firms that do not appear in I/B/E/S have no analyst coverage (Chang et al., 2006).

Environmental performance: To operationalize the variable environmental performance we used the value assigned by Asset4 to the pillar Environment (ENVSCORE). This rating,

like other ratings provided by independent agencies, has been widely used to assess the aggregate firm environmental performance by both researchers and practitioners (Cheng, Ioannou, & Serafeim, 2014; Semenova & Hassel, 2015), given the difficulties in assessing all the different dimensions that concur to determine the firm environmental performance (Delmas & Blass, 2010). The environmental score assigned by Asset 4 ranges between 0 and 100 and encompasses three distinct dimensions: first, the company's management commitment and effectiveness towards achieving an efficient use of natural resources in the production process (*resource reduction category*); second, the company's management commitment and effectiveness towards reducing environmental emission in the production and operational processes (*emission reduction category*); third, a company's management commitment and effectiveness towards supporting the research and development of eco-efficient products or services (*product innovation category*).

Outside orientation via board interlock: We obtained data on the board of directors and their network connection from the Edgar database, which provided public access to firm proxy statements of US firms that have to disclose information to the US Securities and Exchange Commission (SEC) (Ortiz-de-Mandojana & Aragon-Correa, 2015). Extant research on board interlock distinguishes among three types of tie that can connect two firms: sent tie, when an inside director of the focal firm sits on the board of another firm; received tie, when an outside director of the focal firm sits as an inside director on the board of another firm; and neutral tie, when an outside director of the focal firm sits as an outside director on the board of another firm (Ni Sullivan & Tang, 2013). Following Beckman and Haunschild (2002), we support the notion that all types of board interlocks (sent, received, and neutral ties) might influence how potential counterparts perceive the degree of outside orientation of the focal firm. Consequently, we operationalize this variable as the count of the number firms that are connected to the focal firm through their board members.

Control Variables

Several firm-specific control variables were introduced in the analysis to mitigate concerns for potential heterogeneity at the firm level in the tendency to form alliances. We controlled for *firm size* as previous research has shown its influence on the propensity to form alliances (Beckman et al., 2004; Rothaermel & Deeds, 2004). Following an established practice in the alliance literature, this was measured as the number of the employees. We accounted for the effect of previous experiences with alliances using the number of alliances the firm conducted in the previous three years (*Alliance experience*) (Kale & Singh, 2007, 2009). We included *firm financial solvency* which indicates the financial resources available to support alliance activities, and can reveal organizational slack which in turn can influence its alliance propensity (Lavie, Stettner, & Tushman, 2010; Stettner & Lavie, 2014). We operationalized the variable as the debt-to-asset ratio, following previous papers on alliances. We included *firm financial performance* using its Tobin's Q. We included the intangible asset ratio which might positively influence the attractiveness of a firm as a partner for alliances (Bizzi, 2017). We included a control for *firm profitability* as it can also have an influence on alliance-related decisions, for instance by facilitating reinforcement of existing routines and discouraging alliance formation (Lavie & Rosenkopf, 2006). This was included as control through earnings per share (EPS). To account for potential heterogeneity based on experience, we included *firm age*, measured as logarithm of the difference between the focal year and the year in which the firm has been founded plus one. Seventh, we included the *intensity of competition* within focal firm industry (Caves, 1998). In order to estimate the extent of competition faced by a given firm, we adopted the formulation of the Herfindahl-Hirschman concentration index (HHI) proposed by Hoberg and Phillips according to whom the strength of competition between a pair of firms can be inferred from the degree of similarity with which each describes its products in their annual

statements (Hoberg & Phillips, 2010). More specifically, since US public firms are legally required to provide accurate and updated product description in their annual statements, the two scholars rely on a text-based analysis of such descriptions to compute a pairwise similarity matrix – i.e. a matrix of the pairwise similarity score for any two given firms in the sample. Based on the similarity scores, the two scholars construct a Text-Based Industry Classification (TNIC-3) with the same degree of coarseness¹ as the SIC-3 and calculate the HHI index accordingly. Lastly, we controlled for temporal effects (year dummy variables).

Table 1 and 2 report the summary statistics and the pairwise correlations. The correlation between firm environmental score and firm’s stakeholder orientation is high (0.68) but below the value 0.70 considered as acceptable in those cases in which the number of observations is large ($N > 1000$) (Hair, Anderson, Tatham and Black, 1995). Additionally, we checked for the presence of potential multicollinearity in our independent variables by running OLS regressions and assessing the variance influence factor (VIF). VIF’s results show that all the values were below the critical threshold of 10, which suggest that multicollinearity does not pose a significant concern (Chatterjee & Price, 1991).

Insert Table 1 and 2 here

RESULTS

Table 3 reports the regression models used to test the first hypothesis. Model 1 includes only control variables, while Model 2 adds the main effect of firm stakeholder orientation on its alliance propensity. Model 3, 4, and 5 present different robustness tests to confirm our results. Specifically, Model 3 reports results obtained using the random effect Poisson estimation,

¹ Coarseness refers to the likelihood that, chosen two firms at random in the sample, those firm result related according to the proposed classification

Model 4 presents results of the regression on the dichotomized dependent variable obtained using the random effect logit estimation, and Model 5 presents results of matched sample regression.

Insert Table 3 here

Turning first to Model 1, some of the control variable estimates are worth noting. In particular, the estimates are consistent with results shown in previous research: alliance experience (p-value =0.000), firm size (p-value =0.002), intangible asset ratio (p-value =0.000) and firm Tobin's Q (p-value=0.0155) are all positively correlated with firm alliance propensity (Bizzi, 2017; Kale & Singh, 2007). As reported in Model 5, these coefficients in the matched sample analysis are not statistically significant. These results have to be interpreted as a consequence of the matching procedure and indicate that the two groups are composed by observationally equivalent firm (Rogan & Sorenson, 2014). In addition, the number of observations in Model 5 is significantly lower than the number of observations reported in the other models. This is due to the fact that unmatched observations are not included in the regression.

Model 2, 3, 4 and 5 report the main results of this paper. The coefficient estimates for the effect of firm stakeholder orientation on the propensity to ally (Model 2) is positive and statistically significant, which provides support for Hypothesis 1. The interpretation is that a 1% increase in the level of stakeholder orientation results in a 1.3% increase in the firm alliance propensity (p-value =0.000). Results do not vary in the different specifications presented in Model 3 (b = 0.191, p-value = 0.000), 4 (b = 0.089, p-value = 0.01), and 5 (b = 0.056, p-value = 0.0531). Taken together, these results provide strong support for our first hypothesis.

Hypotheses 2, 3 and 4 suggest that the effect of firm stakeholder orientation might be redundant in situations in which the exchange related hazards are lower. The models in Table 4 test these hypotheses.

Insert Table 4 here

In Model 6, we test whether the level of external scrutiny, by increasing the availability of information about the focal firm, mitigates the positive effect of firm stakeholder orientation of its propensity to ally, with a negative effect predicted for the interaction between external scrutiny via analyst coverage and firm stakeholder orientation. The coefficient value of -0.096 is significant at p-value (0.000), providing support to our hypothesis 2. In Model 7, we test whether firm environmental performance, by increasing the perceived reliability of the focal firm, mitigates the positive effect of stakeholder orientation. Our prediction of negative effect for the interaction between environmental performance and stakeholder orientation is supported by regression results. Specifically, the coefficient value of -0.068 is significant at p-value (0.01), providing support for hypothesis 3. In Model 8, we test whether the number of board interlocks, by increasing the perceived ability to cope with inter-organizational exchanges by the focal firm, mitigates the positive effect of stakeholder orientation on proclivity to form alliances. Results provide support for the negative interaction between outside orientation via board interlocks and stakeholder orientation as predicted in hypothesis 4. Specifically, the coefficient value of -0.066 is significant at p-value (0.003).

Lastly, Table 5 reports a series of robustness checks in which we scaled the stakeholder orientation variable by the natural logarithm of firm total asset (Hawn & Ioannou, 2016). The results show that the pattern of results is similar to that presented in Table 2 and 3.

Insert Table 4 here

Additional analyses

To corroborate our theoretical argument for the mitigation effect of firm stakeholder orientation on exchange related hazards that impede the formation of alliances, we conduct two additional analyses reported in Table 6. First, we analyzed the effect of firm stakeholder orientation on the formation on R&D alliances, a particular type of alliance in which the exchange related hazards are particularly prominent (Reuer & Devarakonda, 2017). These alliances, in fact, are aimed at transferring or absorbing the knowledge of the partner in order to explore novel domains (Anand & Khanna, 2000; Zollo, Reuer, & Singh, 2002) or exploit complementarity in knowledge domains (Lavie et al., 2011). Given its intangible nature, knowledge owned by the focal firm is more difficult to be assessed because of the lack of information and the absence of an established track record of highly innovative firms.

Thus, we might expect to observe a stronger influence of a firm degree of orientation towards its stakeholders on the propensity to form R&D alliances. To test this relationship, we identified all the knowledge based alliances from our initial sample of alliances (Zhang et al., 2007), which represents the 32% of the total. Results are reported in Model 13 and provide mixed support for our argument. On the one hand, in fact, the coefficient estimate of stakeholder orientation is positive and statistically significant ($b = 0.246$, $p\text{-value} = 0.005$), indicating that 1% increase in the level of stakeholder orientation results in a 2.5% increase in the firm propensity to form R&D alliances. On the other hand, confidence interval [0.0755 – 0.417] suggests that the coefficient is not statistically different from the coefficient associated to the effect of stakeholder orientation on firm alliance propensity reported in Model 2 ($b = 0.131$ $p\text{-value}=0.000$; CI 0.084 – 0.178).

The second analysis is aimed at testing whether a related but alternative construct, the consistency in treating the different stakeholder categories, might concur to explain differences in the alliance propensity of firms. Recent advancements in stakeholder and, more broadly, in CSR literature indicates firms that treat internal and external stakeholders equally display to higher financial performance as compared to those of firms that prioritize one stakeholder category over the other (Hawn & Ioannou, 2016). Reduction in the degree of information asymmetry is one of the key mechanisms proposed to explain these findings: if a firm is not able to align its internal and external efforts it will be perceived as opaquer by external audiences, which, in turn, will penalize it.

Given this premise, we ask whether consistency in the way a firm treats its stakeholders might reduce the perceived exchange hazards, increasing the firm alliance propensity. To answer to this question we introduce, as an additional variable, the distance in the orientation towards internal (employees and shareholders) and external stakeholders (suppliers, customers, and community) (Parmar et al., 2010). To operationalize the variable, we created two variables: internal stakeholder orientation (ISO), calculated as the mean of employee and supplier orientation, and external stakeholder orientation (ESO), calculated as the mean of supplier, customer and community orientation. We then measured stakeholder distance as Euclidean distance between the variables ISO and ESO. Lastly, we took the absolute value of the variable.

Results presented in Model 14 support the notion that a 1 standard deviation increase in stakeholder distance results in a 4.1% decrease in the firm alliance propensity (p -value = 0.000). As discussed in the following section, although preliminary, this result represents an important aspect that deserve further investigation, as they propose that stakeholder orientation impact could interact with the specific approach each firm adopts to manage stakeholder.

Insert Table 6 here

DISCUSSION AND CONCLUSION

Summary and contributions

This paper advances research on the determinants of strategic alliance formation by critically investigating the influence of stakeholder orientation on exchange related hazards. While previous studies provide important insights into the causes behind adverse selection and perceived moral hazards in the alliance context, they mostly converge on how to mitigate the negative impact of opportunistic behavior in the post-formation stage either by carefully structuring the inter-organizational relationship (Arslan, 2018) or by leveraging on perception of fairness along the cycles of negotiation and interaction (Ariño & Ring, 2010). When it comes to partner-seeking and the determinants of a firm's attractiveness, research has mostly focused on trust-enhancing mechanisms and attractiveness signals as affected by the actual or perceived value or quality of resource endowments and previous actions (Krishnan, Geyskens, & Steenkamp, 2016; Krishnan, Martin, & Noorderhaven, 2006; Stern et al., 2014). Yet, there can be situations in which opaqueness makes valuable resources less visible to prospects, or the approach to acquire resources could be perceived as more attractive than the resources per se.

In an attempt to advance literature in this important respect, we draw from and extend existing evidence on the beneficial role of stakeholder orientation in the completion and performance of corporate development strategies (Berman, Wicks, Kotha, & Jones, 1999; Bettinazzi & Zollo, 2017; Flammer & Kacperczyk, 2016) arguing for its extension in the context of alliance formation. Our results show that firm stakeholder orientation positively drives alliance formation. We theorize that this evidence is attributable to the fact that stakeholder-oriented firms reduce the level of inherent opaqueness surrounding alliances in the pre-formation stage. Moreover, stakeholder-oriented firms tend to display a higher propensity to alliance formation because they are in a better position to signal their openness to external scrutiny, their care and commitment to the needs of their constituencies and their openness to

create value from collaboration and external opportunities.

Yet, stakeholder orientation is not a one-fits-all uncertainty mitigation mechanism. Our results show how firms integrating stakeholder interests and knowledge in their decision making (Harrison et al., 2010) can improve their attractiveness as a potential ally when information availability is limited. In fact, in case of limited external information to assess potential partners, the degree of stakeholder orientation is associated with a lower perceived risk of exchange related hazards. Additionally, stakeholder orientation can be leveraged on as a reassuring signal in those cases where trustworthiness can be hardly traced back to pre-existing ties (Gulati, 1995) or evidence of behavioral integrity (Dollinger et al., 1997; Norheim-Hansen, 2015). Stakeholder orientation also serves as a conduit of information about a future prospect's attitude towards collaborations when signals are limited about the propensity of the focal firms towards collaboration, openness to external opportunities or propensity to engage in external information exchanges (Ni Sullivan & Tang, 2013). In fact, we find evidence of a weakened effects of stakeholder orientation on alliance formation when firms are scrutinized by analysts, at higher levels of environmental performance and when they resort to interlocking directorates as prisms signaling the ability to manage uncertainty and benefiting from inter-organizational exchanges.

By bringing stakeholder orientation into the study of what drives the choice and evaluation of partners, we shed further light on the impact of firm-level relational attributes on alliance formation. As the establishment of robust cooperative relationships still remains a core issue in strategic alliance research, stakeholder orientation can serve as a conduit of information and trustworthiness, thus supporting partner-seeking firms in anticipating unexpected adverse consequences. The development of an attitude towards integrating stakeholder needs and requests provides a rich source of information on potential exchange partners, thus affecting the alliance decisions firms make. Adding on existing research on how to mitigate opportunisms

in interorganizational relations, we contribute by suggesting how mitigation of information-related hazards can also occur well before the completion of an alliance negotiation, through the selection of a stakeholder-oriented partner. Similarly, by showing the positive impact of the degree of stakeholder orientation on alliance formation we also enrich our understanding of the trust-related mechanisms driving partner selection. Finally, our arguments and findings, therefore, emphasize the critical role played by the way in which a firm manages the network of relationships in which it is embedded, in addition to the considerations about the types of relationship a firm possess as emphasized in previous research. Such an evaluation might persist across alliance types as in our additional analysis we show that the effect holds also in the formation of knowledge-based alliances.

We also see our findings as contributing to the considerable interest in developing a throughout understanding of the role of stakeholder orientation in driving corporate development activities (Tong et al., 2019). In so doing, we propose a less simplistic view of stakeholder orientation in the context of alliance formation by providing a preliminary investigation of the mechanisms by which it might turn into higher attractiveness as a prospect in an inter-organizational agreement. Obtaining a deeper understanding of the benefits of a stakeholder-oriented approach, in fact, remains fundamental to encourage managers to increase adoption stakeholder theory practices in their behavior. With specific reference to the alliance context, managers have several incentives to adopt stakeholder-oriented approaches. By providing them with relational capabilities, routines and social capital, stakeholder management can signal collaborative orientation to future partners, as well as the inherent attitude of a firm towards leveraging on external opportunities and knowledge sources. This is specifically important in those contexts in which opaqueness and information asymmetries prevail, thus potentially undermining the efforts firms make in developing valuable resources. Regardless of the level of information richness, stakeholder orientation has a role to play in letting a firm

emerge as a credible, trustworthy and capable partner.

Limitations and future research

Our work represents an initial attempt to investigate the role of firm stakeholder orientation in explaining firm alliance propensity. In so doing, we adopted a firm-level perspective assuming that the counterparts are homogeneous, and we did not distinguish between different stakeholder categories. Relaxing this assumption and analyzing the effect of stakeholder orientation similarity\disparity on alliance formation might contribute significantly to advance our understanding of the relation between stakeholder orientation and alliance behavior. Additionally, future research could provide a fine-grained analysis of each stakeholder category (Bettinazzi & Zollo, 2017) as their characteristics and roles can work differently on attractiveness and turns into more or less pronounced, more or less virtuous impacts on the propensity to ally.

Our preliminary additional analysis shows that it is not only the development of stakeholder orientation that matters but also the approach to manage stakeholder, that is, for example the extent to which internal and external stakeholders are well balanced and consistently approached (Hawn & Ioannou, 2016). Indeed, not all firms approach their stakeholders in the same way, as well as the content of a stakeholder engagement strategy can be different according to the purpose behind involving stakeholders. Building on and extending recent research on multi-stakeholder initiatives (Garcia-Castro & Aguilera, 2015; Neville & Menguc, 2006), future studies can build on this evidence and further investigate how the purpose of being involved in stakeholder interactions could moderate the beneficial impact of the degree of stakeholder orientation on alliance performance. Finally, we have started investigating the contingencies which might undermine the positive effect of stakeholder orientation on alliance formation. Future research could dig deeper into this topic and further

assess the unintended or negative consequences related to high degree of stakeholder orientation. In particular, a partner-seeking firm might perceive the management of a stakeholder-oriented firm to be subject to adverse stakeholder reactions or misleading, confounding requests (Maon, Vanhamme, De Roeck, Lindgreen, & Swaen, 2019).

Within the alliance formation literature, we investigated our hypotheses at the firm-level. Though additional analyses show consistency of our results across models and specifications, future research could reproduce and extend our evidence both at the dyadic level to better control for other firm's characteristics or the relatedness among potential partners (Rothaermel & Boeker, 2008; Tsai, 2000). Additionally, we acknowledge how attractiveness might depend on the quality of the resources owned by the firm as explained by previous research on the impact of internal knowledge on the formation of R&D alliances (Hitt *et al.*, 2000; Russo, Vurro, and Nag, 2019). Yet, we did not directly control whether the effect of stakeholder orientation could be amplified or weakened depending on the type and value of the resources owned by the stakeholder-oriented firm. Moreover, future research should examine the potential effects of stakeholder orientation on alliance performance, which was out of the scope of our analysis. In fact, stakeholder orientation is likely to have a relevant influence also on the management of alliances and, in turn, on their performance. This can happen, for instance, by influencing the development of firm capabilities and social capital, as well as supporting the development of relational capabilities on how to interact, extract, exchange and integrate value from interorganizational collaborations (Dyer *et al.*, 2001).

Finally, we have inferred the persistence of our results by testing the hypotheses on the sub-sample of knowledge-based alliances. Yet, this is only an initial step into theorization and empirical analysis about the impact of stakeholder orientation on types of alliances (Lavie *et al.*, 2011; Lavie & Rosenkopf, 2006). Our study could be integrated with concepts and theories from the exploration-exploitation alliance literature or the search for ambidexterity in alliance

formations, thus providing a fine-grained analysis of the impact of stakeholder orientation across dimensions, times and organizational models behind the propensity to ally.

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Table 1 Summary statistics

Variable	Observations	Mean	Std. Dev.	Min	Max
Alliance in year	10339	0.38	1.31	0.00	35.00
Alliance experience	10339	1.14	3.63	0.00	96.00
Intangible Asset	10339	0.23	0.21	0.00	0.91
Tobin's Q	10339	1.25	1.27	0.01	22.72
Industry concentration	10339	0.24	0.24	0.02	1.00
Age	10339	50.75	38.53	0.00	211.00
Debt Asset Ratio	10339	0.26	0.20	0.00	1.00
Size	10339	31028.72	92559.57	0.00	2300000
EPS	10339	2.49	5.57	0.00	266.54
Stakeholder Orientation	10339	42.96	15.00	14.11	92.02
Analyst	10339	3.69	3.46	0.00	26.0
Environmental Performance	10339	41.25	31.11	8.47	97.47
Board Interlock	10246	5.79	4.68	0.00	35.00

TABLE 2 Pairwise correlations

		1	2	3	4	5	6	7	8	9	10	11	12	13
1	Alliance in year	1.00												
2	Alliance experience	0.26	1.00											
3	Intangible Asset	0.05	0.01	1.00										
4	Tobin's Q	0.05	-0.01	0.05	1.00									
5	Industry concentration	-0.01	0.05	0.18	0.06	1.00								
6	Age	0.05	0.11	0.04	-0.07	0.20	1.00							
7	Debt Asset Ratio	-0.02	0.00	0.15	-0.07	0.00	0.01	1.00						
8	Size	0.15	0.18	0.02	-0.02	0.03	0.13	0.02	1.00					
9	EPS	0.00	0.00	0.01	0.00	-0.01	0.00	0.00	0.00	1.00				
10	Stakeholder Orientation	0.16	0.16	0.00	-0.04	0.07	0.25	-0.03	0.23	0.04	1.00			
11	Analyst	0.23	0.15	0.12	0.06	-0.04	0.15	-0.05	0.24	-0.01	0.27	1.00		
12	Environmental Performance	0.20	0.18	-0.02	-0.06	0.14	0.30	0.00	0.27	0.03	0.68	0.14	1.00	
13	Board Interlock	0.19	0.17	0.12	0.01	0.04	0.23	0.01	0.23	-0.01	0.31	0.33	0.32	1.00

TABLE 3 Results of main analyses

	Model 1	Model 2	Model 3	Model 4	Model 5
	Dv Alliances in year GEE Negative Binomial	Dv Alliances in year GEE Negative Binomial	Dv Alliances in year Poisson	Dv Alliance dummy Logit	Negative Binomial - Matched sample
Alliance Experience	0.682	0.667	0.105	2.562	0.479
	0	0	0.0433	0	0
Intangible Asset	0.723	0.704	1.025	0.494	0.0105
	0	0	0	0	0.926
Tobin's Q	0.0424	0.0442	0.0301	0.0615	-0.0289
	0.0155	0.0126	0.433	0.0128	0.290
Industry Concentration	-0.0839	-0.0815	-0.0771	-0.213	0.0221
	0.461	0.469	0.643	0.117	0.858
Age	0.0191	-0.0105	-0.0849	0.0194	0.0278
	0.524	0.730	0.0449	0.536	0.264
Debt Asset Ratio	0.0205	0.0144	-0.0741	0.275	-0.142
	0.864	0.906	0.617	0.0467	0.314
Size	0.0390	0.0262	0.253	0.00464	0.0149
	0.00167	0.00816	0.00149	0.636	0.224
EPS	-0.00470	-0.00837	-0.00321	-0.0108	-0.0240
	0.345	0.188	0.731	0.277	0.0102
Stakeholder Orientation		0.131	0.191	0.0888	0.0555
		0	0	0.01	0.0531
Constant	-1.981	-1.887	-1.446	-2.705	-1.438
	0	0	3.49e-09	0	0
Year	Yes	Yes	Yes	Yes	Yes
Observations	10,339	10,339	10,339	10,339	4,409
Firms	2,016	2,016	2,016	2,016	
Clustered Standard Errors at firm level					
P-value are reported below coefficients					

Table 4 Moderation results

	Model 6	Model 7	Model 8
	Dv Alliances in year GEE Negative Binomial	Dv Alliances in year GEE Negative Binomial	Dv Alliances in year GEE Negative Binomial
Alliance Experience	0.662	0.654	0.653
	0	0	0
Intangible Asset	0.644	0.706	0.659
	0	0	0
Tobin's Q	0.0377	0.0491	0.0436
	0.0364	0.00579	0.0140
Industry Concentration	-0.0844	-0.0885	-0.0710
	0.456	0.431	0.534
Age	-0.0146	-0.0285	-0.0250
	0.635	0.357	0.400
Debt Asset Ratio	0.0172	0.0100	0.00828
	0.889	0.935	0.946
Size	0.0258	0.0208	0.0146
	0.0127	0.0400	0.173
EPS	-0.0100	-0.00898	-0.00927
	0.153	0.174	0.167
Stakeholder Orientation	0.186	0.102	0.146
	0	0	0
Analyst	0.0539		
	0.0409		
Stakeholder Orientation*Analyst	-0.0906		
	0		
Environmental Performance		0.118	
		0	
Stakeholder Orientation*Environmental Performance		-0.0680	
		0.01	
Interlocking Directorates			0.183
			0
Stakeholder Orientation*Interlocking Directorates			-0.0661
			0.003
Constant	-1.991	-1.815	-1.976
	0	0	0
Year	YES	YES	YES
Observations	10,339	10,339	10,246
Number of Firms	2,016	2,016	1,997
Clustered Standard Errors at firm level			
P-value are reported below coefficients			

Table 5 Robustness test with different specification of the independent variable

	Model 9	Model 10	Model 11	Model 12
	Dv Alliances in year GEE Negative Binomial	Dv Alliances in year GEE Negative Binomial	Dv Alliances in year GEE Negative Binomial	Dv Alliances in year GEE Negative Binomial
Alliance Experience	0.672	0.670	0.655	0.656
	0	0	0	0
Intangible Asset	0.705	0.638	0.712	0.663
	0	0	0	0
Tobin's Q	0.0364	0.0311	0.0438	0.0382
	0.0448	0.0873	0.0162	0.0338
Industry Concentration	-0.0954	-0.0952	-0.0952	-0.0817
	0.401	0.406	0.398	0.479
Age	-0.00155	-0.00764	-0.0264	-0.0197
	0.959	0.804	0.395	0.512
Debt Asset Ratio	0.0237	0.0260	0.0160	0.0149
	0.846	0.830	0.896	0.903
Size	0.0329	0.0292	0.0204	0.0166
	0.00190	0.00935	0.0492	0.110
EPS	-0.00643	-0.00823	-0.00789	-0.00766
	0.266	0.199	0.209	0.223
Stakeholder Orientation	0.123	0.184	0.0839	0.138
	0	0	0.0131	0
Analyst		0.318		
		0		
Stakeholder Orientation*Analyst		-0.0992		
		0		
Environmental Performance			0.351	
			0	
Stakeholder Orientation*Environmental Performance			-0.0808	
			0.01	
Interlocking Directorates				0.357
				0
Stakeholder Orientation*Interlocking Directorates				-0.0668
				0.01
Constant	-2.224	-2.517	-2.036	-2.358
	0	0	0	0
Year	YES	YES	YES	YES
Observations	10,339	10,339	10,246	10,246
Number of Firms	2,016	2,016	1,997	2,016
Clustered Standard Errors at firm level				

Table 6 Additional analyses

	Model 13	Model 14
	DV Explorative Alliances in year GEE Negative Binomial	DV Alliances in year GEE Negative Binomial
Alliance Experience	0.293	0.673
	0	0
Intangible Asset	1.452	0.710
	0.001	0
Tobin's Q	0.182	0.0439
	0	0.0137
Industry Concentration	-0.829	-0.0802
	0.0257	0.478
Age	0.196	0.00448
	0.0463	0.882
Debt Asset Ratio	0.0347	0.0150
	0.908	0.901
Size	-0.0960	0.0332
	0.321	0.00207
EPS	0.00749	-0.00626
	0.229	0.265
Stakeholder Orientation	0.246	
	0.005	
Stakeholder distance absolute valued		-0.406
		0
Constant	-3.474	-1.815
	0	0
Year	YES	YES
Observations	10,339	10,339
Firms	2,016	2,016
Clustered Standard Errors at firm level		
P-value are reported below coefficients		

**THE EFFECT OF FIRM STAKEHOLDER ORIENTATION ON THE LIKELIHOOD OF
IT BEING ACQUIRED**

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THE EFFECT OF FIRM STAKEHOLDER ORIENTATION ON THE LIKELIHOOD OF IT BEING ACQUIRED

ABSTRACT

In this paper we investigate how the relationships a firm has developed with its stakeholders influence how it is perceived as a target attractive by potential acquirers and, in turn, the likelihood of it being acquired. In particular, we argue that a firm's stakeholder orientation might influence: a) its visibility, b) its potential for value creation, c) the complexity in assessing its value and, d) the strategic alternatives the acquirer might pursue during the post-merger integration phase. We propose arguments for a linear (positive and negative) relationship between a firm's stakeholder orientation and its likelihood of being acquired. To examine the influence of such mechanisms, we also hypothesize that the effect of firm stakeholder orientation on its likelihood of being acquired is determined also by the acquirer's degree of orientation towards its stakeholders. We test our hypotheses conducting firm- and dyadic- level analyses on a dataset of US-listed firms. Results provide support for the negative hypotheses and for the moderating effect of acquirer stakeholder orientation.

Keywords: Stakeholder Orientation; Target Selection; Acquisition

INTRODUCTION

Whereas the majority of studies in the M&A contexts focused on the outcomes of acquisitions (e.g., financial returns, organizational issues, see Haleblan et al., 2009 for a review), an increasing number of studies points to the antecedents of the decision to acquire a firm. These studies, in most cases, put their attention on the resources (being them strategic, financial or technological) the target control as the main driver of it being evaluated and selected by an acquiring firm (e.g. Bena & Li, 2014; Cefis & Marsili, 2012; Coff, 1999; Heeley, King, & Covin, 2006; Valentini & Di Guardo, 2012; Villalonga & McGahan, 2005; Wang, Zhao, & He, 2016; Younge, Tong, & Fleming, 2015).

Less attention has been devoted to the relational resources a firm controls as a potential explanation of why a specific firm is selected over another for being acquired. The few works that looked at the relational antecedents of acquisitions have focused on the network positioning (Hernandez & Shaver, 2018), prior alliances (Reuer & Ragozzino, 2008) or common clients (Rogan & Sorenson, 2014). However, limited attention has been devoted to the effects that the relational resources a firm developed with its internal and external stakeholders (Parmar et al., 2010) can have on how it is evaluated as a potential target for an acquisition by other firms. This is somewhat surprising, given the influence that these relationships have on its sources of competitive advantage (Eccles, Ioannou, & Serafeim, 2014; Jones, Harrison, & Felps, 2018) being them based on increased differentiation from competitors (Crilly & Sloan, 2012) innovation (Flammer & Kacperczyk, 2015) or better social recognition (Choi & Wang, 2009).

Therefore, in this paper, we adopt a stakeholder-based view of the firm (Parmar et al., 2010) to fill this gap by answering the following research question: how do a firm's relationships with its stakeholders influence the likelihood of it being acquired by another firm?

This issue is important as firms might be significantly different in the way they manage their stakeholder relationships (Bridoux & Stoelhorst, 2014; Jones et al., 2018; Tantaló & Priem, 2014). In

this paper, we submit that stakeholder management decisions influence how firms are assessed and, in turn, selected by potential acquiring firms. In so doing, we propose arguments for a positive and negative relationship between a firm's stakeholder orientation and its likelihood being acquired. On the positive side, stakeholder orientation might increase firm transparency to external audience, reducing information asymmetry. In addition, the relational resources a firm develops with its stakeholders might represent a valuable resource that a potential acquirer might find difficult to develop internally or access through alternative market based mechanisms. On the negative side the difficulties in assessing a complex stakeholder network as well as the difficulties in extract value from the relational resource acquired, might reduce, rather than increase, the attractiveness of a stakeholder firm as a target for an acquisition.

To examine the influence of such mechanisms, we also hypothesize that the effect of firm stakeholder orientation of its likelihood of being acquired is moderated by the acquirer's degree of orientation towards its stakeholders. We test our hypotheses using a comprehensive panel dataset of US-listed firms from 2003 to 2017. We conduct our analyses both at the firm and the dyadic level. At the firm level, we find support for the notion stakeholder orientation reduces the likelihood of being acquired. Results at the dyadic level show that the negative effect hypothesized is weakened by the acquirer stakeholder orientation. In particular, the distance between acquirer and target stakeholder orientation significantly increases the acquisition likelihood.

In answering our research questions, this study contributes to two streams of literature. On the one hand, we plan to contribute to the literature on M&A by focusing on the role of stakeholder relationships as potential explanatory factors of the decision acquire a target firm over another. First and foremost, we advance the understanding of the relational antecedents of corporate takeover, emphasizing the critical role played by way in which a firm manages its stakeholder relationships, in addition to the considerations about the types of relationship a firm possess as emphasized in previous

research. In addition, our findings show that investing in managing stakeholder relationships act as an antitakeover mechanism, in particular in such situations in which a potential acquirer might not possess the ability to assess the value of the counterpart or when its goal is to extract value from the acquired firm.

On the other hand, we strive to contribute to the literature on stakeholder theory by advancing our understanding of the outcomes associated with a firm's degree of stakeholder orientation (Bettinazzi & Feldman, 2019; Garcia-Castro & Francoeur, 2016; Tong, Wang, & Xia, 2019). In this sense, we corroborate recent findings about the effect of stakeholder orientation, and more broadly of firm CSR, to corporate development activities

The reminder of the paper is structured as it follows. First, we introduce earlier research focused on the reasons that explain the selection of a firm as a target for and acquisition. Second, the theoretical framework and hypotheses are developed. These sections are followed by the empirical analysis. Finally, the findings and contributions are discussed.

THEORY AND HYPOTHESES

Among the different theories that have approached the study of the factors that drive acquisitions, a central role is occupied by the resource based view and transaction cost economics. In particular, both theories have been used to describe how a firm's characteristics can explain its attractiveness as an acquisition target.

The resources-based view has typically emphasized the influence that the resources a firm controls have on its attractiveness to potential acquirers. The general idea within this logic is that the characteristics of the resources controlled by a firm influence its attractiveness as a target for an acquisition (Wernerfelt, 1984). In particular, those resources that “enable a firm to conceive of or implement strategies that improve its efficiency or its effectiveness” (Barney 1991:106) and that can hardly be accessed through market-based mechanisms or developed internally, would typically

increase acquirers' expectations of creating value from obtaining control over such resources through an acquisition. Within this logic, firms that control resources that are both "valuable" and not obtainable through contracts or internal development would be more attractive targets for an acquirer. For instance, previous studies have shown that firms controlling large patent base in specific knowledge domains, are more likely to experience a takeover attempt, because of the difficulties new entrants face in developing such resources internally (Bena & Li, 2014; Cefis & Marsili, 2012; Heeley *et al.*, 2006).

Beside the intrinsic value of the target resources, other studies in the RBV tradition have emphasized the difficulties associated to redeployability of resources from one organization to another (Barney, 1986; Younge *et al.*, 2015). The redeployment of the resources of the merging firms represent, in fact, one of the key mechanisms through which a firm can create value from an acquisition (Capron, Dussauge, & Mitchell, 1998; Karim 2006). The resources possessed by a firm display a heterogeneous degree of redeployability: some resources can be easily transferred to one organization to another while other might pose challenges due to their specificity to the context in which they have emerged (Anand & Singh 1997). Difficulties in redeploying resources would affect acquirer ex-ante expectations about the outcome of potential acquisitions (Coff 1999). Within this line of reasoning, how attractive is a target firm for an acquisition will depend on the extent to which the resources it controls can be redeployed without a significant loss of value creation potential from one organization to another following the closing of the deal. For instance, it has been observed that firms that display lower risk of knowledge flow during the post-merger integration phase are more likely to be selected as a target for an acquisition (Younge *et al.*, 2015),

In the study of a firm's attractiveness to potential acquirers, information economics has, instead, typically emphasized the role of information asymmetry and its mitigating mechanisms. Building on the observation that the selection of a target firm is commonly impaired by uncertainty,

these studies point to fact the amount and the usefulness of the information it displays about its resources influence the attractiveness of a firm as a target (Chakrabarti & Mitchell, 2013; Shen & Reuer, 2005). In particular, information availability reduces the risk of adverse selection, as it increases the accuracy of the ex-ante assessment of the potential target resources (Ragozzino & Reuer, 2007). The effect of incomplete information on target selection is well established: the less information that acquirers can collect about potential targets, the greater the associated transaction costs and the less likely that managers will engage in the acquisition (Reuer & Ragozzino, 2008; Shen & Reuer, 2005). For instance, it has been observed that the amount of information that public firms have to disclose as a consequence of being listed positively influences the selection of it as a target (Capron & Shen, 2007)

Beside the availability of information about target's resources, the information economics perspective has emphasized the role of the complexity in the interpretation of the information retrieved to assess the quality of the target. Typically, complexity arises from the ambiguity in the linkages the different resources, skills and organization routines the firm controls (Chi, 1994). In particular, from an external perspective, the identification of the elements that are responsible for the firm's success or failure (Barney, 1986) and the mechanism that allowed the firm target develop those attributes might be obscure (Chi, 1994). Therefore, the assessment of potential target resources by the acquiring firm managers is further complicated as the causal complexity of the resource outcome linkages increases in the eyes of acquiring firm managers. As a consequence, the more casually ambiguous are the resources of the target firm, the more likely the economic evaluation of the target on the part of the potential acquirer will be inaccurate. Within this line of reasoning, the difficulties faced by the acquirer are higher, increasing the likelihood that the economic evaluation of the target might be perceived as inaccurate (Coff, 1999). For instance, it has been observed that when a firm

operates in a business segment that is different from those of the focal firm, the likelihood of alternative mechanisms to access counterpart's resources will increase (Wang & Zajac, 2007).

The relationships a firm has established with different constituents have received a growing attention by both RBV and information economics (Hernandez & Shaver, 2018; Ragozzino & Reuer, 2011; Rogan & Sorenson, 2014). RBV scholars have, in general, pointed to the influence that the quality of relationships might have on the development of valuable resources (Dyer & Singh, 1998; Lorenzoni & Lipparini, 1999; Ranjay, Lavie, & Singh, 2009). For instance, Lorenzoni and Lipparini (1999) explain that a close relationship with specific suppliers accelerates a focal firm's knowledge access and transfer with relevant effect on the development on innovative resources. Work at the intersection between RBV and resource dependence theory have discussed how relationships do not only enable the development of valuable resources but they represent themselves a potential source of competitive advantage (Zheng, Singh & Mitchell 2015). However, the same literature has discussed the complexity in term of redeployability of these resources across firms, in particular in those case in which the relational resources developed led to a high level of co-specialization. (Mesquita, Anand, & Brush, 2008). For instance, it has been observed that co-specialized investments that tie peripheral to central firms increase the likelihood of failure of the former because of the difficulties in redeploying the resources developed in conjunction with the partner to other context if the relationship terminate (Pierce 2009).

The information economics literature, instead, has pointed to the role of external relationships as an important mechanism of mitigation of the information asymmetry problem, and thus of the adverse selection consequences. In particular, firm relationships might covey information that can be relevant to mitigate issue related to the availability of information. For instance, it has been observed that the existence of direct or indirect (such as common clients) relationships between two firms facilitate the process of retrieving information about the counterpart (Porrini, 2004; Rogan &

Sorenson, 2014). On the other hand, in fact, the existence of relationship with specific actors it has been observed to act as a signal for the quality of the resources owned by a firm. For instance, firm relationship with prominent partners such as investment banks acts as a signal of the quality of target resources, simplifying the assessment process (Ragozzino & Reuer, 2011). On the other hand, the existence of relationships with distant partners, can also be interpreted as a negative signal by other stakeholders, as it might be perceived as a deviation from the dominant logic in the industry (Shynko & Roulet 2016), increasing the difficulties in assessing it.

So far the literature has only limitedly explored how stakeholder based relationships can influence the attractiveness of a firm's resources to external parties and the degree of information availability to external parties. In the following, we will discuss about these mechanisms to build our hypotheses on the influence of firm stakeholder orientation on the likelihood of being acquired.

Target stakeholder orientation and the acquisition likelihood

Given the central role of target stakeholders relationships in the process of target selection, we argue that the firm degree of orientation towards its stakeholder, i.e. the way in which a firm manages its set of stakeholder relationships, influences the likelihood of it being selected as a target for an acquisition. In particular, building on recent advancements in instrumental stakeholder theory literature, we posit that the degree stakeholder orientation of a firm might influence the attractiveness of the focal firm to potential acquirers. Table 1 provides an overview of our theoretical contribution distinguishing between the aspects that positively influence and those that negatively influence the takeover likelihood.

Insert Table 1 here

Positive influence of stakeholder orientation on acquisition likelihood

Two main arguments point to a positive effect of firm stakeholder orientation on the likelihood of being acquired. The first argument pertains the observation that firm stakeholder orientation might enhance the amount of information about its internal processes available to potential acquirers, reducing the perceived uncertainty in the pre-acquisition phase. Recent developments in stakeholder theory (and more in general in CSR literature) indicate that the degree of stakeholder orientation is positively correlated to the amount of information that is available to external audiences. Stakeholder oriented firms, in fact, tend to disclose more information to non-investing stakeholders in order to facilitate the interactions with them and to reduce potential conflicts of interest among various stakeholders (Jo & Harjoto, 2012). For instance, previous work found evidence of a negative effect of corporate social responsibility on the degree of information asymmetry between the firm and financial markets (Cho, Lee, & Pfeiffer, 2013; Cui, Jo, & Na, 2018). In addition, stakeholder orientation, because of the volume of information disclosed, is associated to a higher accuracy in analyst forecasts (Dhaliwal et al., 2012) As such, firms with higher level of stakeholder orientation would display a larger amount of reliable information to external audiences compared to firms that are less stakeholder oriented. Overall, the increased availability of reliable information that derives from stronger stakeholder orientation can reduce the efforts potential acquirers have to exert in searching information to assess the quality of the firm (Capron & Shen, 2007). This can, in turn, mitigate the uncertainty that surround the pre-acquisition phase.

The second argument pertains the nature of the resources controlled by stakeholder- oriented firms and the positive effect of these resources on its attractiveness as a target for an acquisition. Research in instrumental stakeholder theory suggests that the degree of orientation towards stakeholders contributes to the emergence of the close relationship capability (Jones et al 2018). This capability contributes to enhance firm's value creation (Choi and Wang, 2009; Garcia-Castro and Aguilera, 2015) as it increases reciprocal coordination between a firm and its stakeholders which, in

turn, enables the creation of higher quality products/services at quicker speeds (Larson,1992; Uzzi, 1997). In addition, positive stakeholder relationships might contribute to the diffusion of tacit and explicit knowledge within the stakeholder network (Su, 2014), which in turn might foster the development of innovation capabilities within the focal firm (Jiang, Wang, Zhou, & Zhang, 2019).

A second aspect, which couples with the contribution to value creation offered by firm stakeholder orientation, is that these resources are difficult to be developed by another entity and to be accessed through market-based mechanisms. In fact, trust between the parties, on which these resources are based, takes a long time to build, making difficult to develop them quickly (Barney & Hansen, 1994). Further, trust between the parties is the key element on which relational contracts are based (Gibbons & Henderson, 2012), thus making difficult to regulate these relationships through structured contracts, making difficult the access to these resources through different market-based mechanisms. Taken together, these arguments point to a positive effect of a firm stakeholder orientation on the likelihood of it being acquired. Thus we hypothesize:

Hypotheses 1a: the higher a firm's degree of stakeholder orientation, the higher the likelihood it being acquired

The negative influence of stakeholder orientation on takeover likelihood

Different arguments point to the fact that a firm's degree of stakeholder orientation might reduce, rather than increase, the likelihood of it being selected as a target for an acquisition. The first argument is rooted in the observation that, stakeholder-based relational resources might be complicated to be assessed. In fact, these resources, although potentially valuable for an acquiring firm, are characterized by a stronger level of causal ambiguity compared to more tangible resources (Jones et al 2018) and are, therefore, more complex to be assessed from an external perspective. Since stakeholder-oriented firms make more extensive use of relational contracts to access internal and

external resources compared to less stakeholder-oriented firms (which typically rely more on formalized contracts) (Tantalo & Priem, 2016), and since relational contracts are often more generic and open-ended compared to formalized contracts (Gibbons & Henderson, 2012) how stakeholder oriented firm are able to create an appropriate value might be more uncertain (Garcia-Castro & Aguilera, 2015). In particular, from an external perspective it might be unclear assessing how the value that is created over relational resources with stakeholders is distributed among the actors involved (Coff, 1999, 2010). The trust mechanisms that regulate these relationships, how they have been developed through multiple interactions, and the details of the expectations between the parts (Chassang, 2010; Gibbons & Henderson, 2012) cannot be observed from an external perspective and, therefore might be hard to be evaluated for a potential acquirer. As such, we might expect that the higher degree of complexity would characterize the assessment of the resource base of a stakeholder-oriented firm compared to the evaluation of the resources of a less stakeholder-oriented firm.

The second argument in favor of a negative influence of a firm's degree of stakeholder orientation on its takeover likelihood pertains the fact that acquiring firm with a higher degree of stakeholder orientation might increase the redeployment risk. The decision related to the degree of integration of stakeholders into strategic decision making, in fact, contributes to determine what type of stakeholders the firm will attract and retain because stakeholders tend to join firms that behave coherently with their expectations (Jones et al., 2018; Reilly, Chatman, & Caldwell, 2014). Stakeholders attracted by stakeholder oriented firms are interested not only in how the focal firm treat them but also in the way in which the firm treats the other stakeholders (Bridoux & Stoelhorst, 2014). This suggest that in cases such as lay-offs or suppliers' change, these stakeholders may react more negatively than those of less stakeholder oriented firms, punishing the firm for what they perceive as an unfair behavior against another stakeholder category (Cording, Harrison, Hoskisson & Jonsen, 2014). For instance, the decision to close a plant, which typically affects employees and local

communities, might also harm the relationship a firm has developed with customers or suppliers because of the perceived unfairness of the treatment (Bridoux & Stoelhorst, 2014). Thus, an acquirer, in order to preserve the relationships that the target has established with its stakeholders and mitigate the risk that frictions with different stakeholders categories might harm the value creation might decide to adopt post-merger integration strategies that do not entails radical changes for the target (Tong, Wang, & Xia, 2019). This suggest that the options for synergies realization from the acquisition of a stakeholder-oriented firm might be comparatively more limited than those that can be leveraged when a non-stakeholder-oriented firm is selected. We might expect that a firm stakeholder orientation could reduce its attractiveness as a target for an acquisition. Overall these arguments point to a negative effect of a firm stakeholder orientation on the likelihood of it being acquired. Thus:

Hypotheses 1b: the higher a firm's degree of stakeholder orientation, the lower the likelihood it being acquired

The acquirer-target stakeholder orientation distance

So far, we have analyzed the effect of a firm stakeholder orientation on the likelihood of it being selected as a target for an acquisition holding constant the characteristics of the acquirer. However, a growing number of studies aimed at analyzing the antecedents of the selection of a firm as a target for an acquisition emphasize the importance of considering the acquirer characteristics, both alone and in relation to those of the target (e.g. Berchicci, Dowell, and King, 2012; Capron *et al.*, 1998; Kaul and Wu, 2016). For instance, previous studies found that acquirer experience (Haleblian, Kim, and Rajagopalan, 2006; Zollo and Reuer, 2010) its financial characteristics (Park, 2003), as well as those of the sector in which it operates (Lubatkin, 1987; McNamara, Haleblian, and Dykes, 2008) affect its acquisition behavior.

More recently, scholars focused on the combination of acquirer and target characteristics as key predictor an acquisition (Schildt and Laamanen, 2006; Yu, Umashankar, and Rao, 2016). In particular, it has been found that the similarity between the target and the acquirer, in term of culture, resources controlled or ownership, lowers the complexity the pre-acquisition phases, increasing the likelihood that the acquisition will take place (Bauer & Matzler, 2014; Bettinazzi et al., 2018; Chakrabarti & Mitchell, 2013; Wang & Zajac, 2007). For instance, Yu et al (2016) found that firms with similar technological capabilities are preferred as a target for an acquisition to firms that are specialized knowledge domains that are distant from those of the acquirer. Likewise, Wang and Zajac (2007) found that assessing a potential target that operate in a business that is similar is easier for an acquirer because the similarity of their businesses generates knowledge about each other.

Other works focused on the differences between target and acquirer as predictor of the acquisition. In particular these studies suggest that acquirers prefer targets with inferior characteristics because the assessment and the integration of these firms are less complex and risky as compared to those for firms that display higher characteristics (Shen, Tang, & Chen, 2014; Wang & Xie, 2009). For instance, Shen et al. (2014) found that high status acquirers tend to select lower status firms as acquisition target because the difference between the two helps to clarify the role of the two firms in the takeover process facilitating the negotiation and contributing to the successful completion of the deal. Likewise, Kaul and Wu (2016) observed that the acquisition of firms with superior characteristics only in those cases in which the post-merger integration challenges for the acquirer are low.

Taken together, these studies indicate that the likelihood of an acquisition is higher when the two firms are similar or when the acquirer has higher characteristics than those of the target (Bettinazzi et al, 2018; Shen et al., 2014). It worth noting that we are not neglecting the possibility that a firm will acquire another entity endowed with superior resources or capabilities (Berchicci,

Dowell & King, 2012). However, as acknowledged in the literature, we recognize that this type of acquisitions is rarer as compared to the other cases because of the complexity in the assessment and the risk in the post-merger integration phase (Kaul and Wu, 2016).

Following this reasoning, two main arguments that point to a positive influence of the distance between acquirer and target stakeholder orientation on the acquisition likelihood. The first argument is rooted in the observation that the ability to assess a stakeholder-oriented target might vary according to the degree of acquirer's orientation towards its stakeholder. In particular, received literature suggests that a stakeholder-oriented acquirer might have a higher ability to assess target resources as compared to a less stakeholder oriented one because the relational resources developed with its stakeholders might facilitate the evaluation (Bettinazzi & Zollo, 2017). This argument suggests that when the level of target stakeholder orientation is higher than the one of the acquirer, the evaluation process might be more complex because the acquirer does not control those relational resources that might help to assess target value. On contrary, when the two firms display similar level of stakeholder orientation or when the acquirer is more stakeholder oriented than the target, the relational resources the acquirer has developed within its stakeholder network might help in understanding target's value creation configuration, which in turn might reduce the complexity in the pre-acquisition phase (Bettinazzi & Zollo, 2017).

The second argument pertains the observation that the motives for acquisitions undertaken by stakeholder oriented acquirers are likely to be different from those of less stakeholder oriented ones. In fact, extant literature recognizes that different orientations towards stakeholders are likely to affect the performance of the acquisition , (Bettinazzi & Zollo, 2017; Deng, Kang, & Low, 2013). A recent study by Tong et al. (2019) shed light on the mechanisms through acquisition of a high CSR target generates positive outcomes for an acquirer with similar characteristics because the acquirer. In particular, they found that high CSR acquirer tend to preserve target existing relationships during the

post-merger integration. In so doing, the acquirer benefits in term of performance from the value created from the exploitation of the target relational resources. This imply that stakeholder-oriented acquirers are less likely to operate those major changes, such as massive lay-offs, in order to obtain costs synergies (Tong, Wang & Xia, 2019) that might harm interests of target stakeholders. As a consequence, in those cases in which the two firm display similar degree of stakeholder orientation or in those cases in which the acquirer is more stakeholder oriented than the target, the acquirer might have lower concerns relative to the negative effects of multi-stakeholder campaigns because target stakeholders react negatively to those changes that harm their interests (Teerikangas, 2012).

Taken together, these arguments suggest that when the distance in those cases in which a potential target display a degree of stakeholder orientation that is higher than those of the acquirer, the difficulties in assessing it and the redeployment risk perceived by a potential acquirer will be higher, reducing the likelihood that the acquisition will take place. On contrary, when the two firms display similar level of orientation towards their stakeholder or when the acquirer is more stakeholder oriented than the target these two negative effects are mitigated, resulting in a higher likelihood that the acquisition will take place. Thus, we hypothesize:

Hypothesis 2: the higher the acquirer-target stakeholder orientation distance, the higher the likelihood it being acquired

METHODS

Sample and Data

We tested our hypotheses using a sample of North American firms between 2003 and 2017. We constructed our dataset from three primary sources. First, we collected data from Thomson Reuter Asset4, which includes information about firms' stakeholder orientation from 2002. This is a database

aimed at providing accurate ESG (Environmental, Social, Governance) factors for financial analysts with data ranging back to 2002 (Thomson Reuters, 2013). Asset4 analysts collect data from several public sources such as annual reports, NGO websites, and stock exchange filings. The data collection process is designed to maximize data quality and comprises automated checks, independent audits, and managerial reviews (Eccles et al., 2014). From this database, we collected data for all the North American companies included in the Asset4 database from its inception until 2017. The initial sample resulted in 3,264 firms.

Second, we used Thomson One database to identify which of the firms included in Asset4 was acquired between 2003 and 2017, excluding those acquisitions made for financial reasons as well as acquisitions of minority stakes (less than 50% of shares), business units, assets, or factories in order to avoid problems of comparability between the units included in the sample. Out of the initial sample, 380 firms have been acquired between 2003 and 2017.

Lastly, we retrieved financial data using Thomson Reuters Datastream and information about industry concentration from the Hoberg-Philips data library. The final sample was reduced to *1,610* firms due missing data in Thomson Reuters and in the Hoberg Philips datasets. This leads to a sample of *12,009* firm-year observations.

Empirical strategy

To test hypotheses 1a and 1b, we adopted a hazard rate model. We preferred this approach over other probability estimation models because hazard rate models, compared to logit and probit models, allow to control for all stable predictor variables, while solving the problem of dependence among repeated observations (Allison, 2012; Conti, Gambardella, and Mariani, 2014). Furthermore, these models can effectively handle right-censored data, thereby reducing estimation biases (Ozmel, Reuer, and Wu, 2017).

We applied Cox proportional hazard models which are a class of models that estimates: a) a baseline hazard function that describe how the likelihood of an event to happen (acquisition likelihood) changes over time when the covariates included in the model are at the mean level, and b) a parameter for each covariate that describes how the baseline hazard changes in response to explanatory covariates. In the Cox model all the parameters are assumed to have a multiplicative effect on the base-line hazard (Ozmel, Reuer, and Wu, 2017; Ransbotham and Mitra, 2010). To correct for intragroup correlations across errors, we clusterized standard errors at the sector level as we expect that both the degree of stakeholder orientation and the likelihood to be acquired to be correlated to the industry in which the firm operates.

To test Hypothesis 2, we move our analysis at the dyadic level and we estimate the likelihood of the acquisition occurrence comparing the effectively realized with potentially occurred acquisitions. Following Wang and Zajac (2007) the sub-sample of potentially occurred dyads has been created including all the possible pairs of firms our starting sample. After accounting for missing data and dyads excluded by the algorithm, we relied our estimation on 20,365,115 dyads. Among those, 220 pairs of firms were actually involved in an acquisition and 20,364,895 did not. To reduce computational efforts, we created a new sample in which we included all the 220 pairs of firms actually involved in an acquisition and 1 million dyads randomly selected from the sample of potentially occurred dyads. To test the hypothesis, we used logistic regressions with dyad-clustered standard errors.

In both cases (firm and dyad level of analysis), we used a one-year lag for the independent and control variables to account for potential reverse causality problems and we standardized all the continuous variables in order to facilitate interpretation of the results (Aiken and West, 1991, Heeley, King and Covin 2006; Zaheer, Castañer and Souder 2013; Choi and Wang 2009).

Dependent Variable

Takeover likelihood. The dependent variable used to test hypotheses 1a and 1b is a dichotomous variable that takes a value of 1 when the takeover is realized and 0 otherwise. For testing hypothesis 2, the dependent variable is a dichotomous variable that take value 1 if the target-acquirer dyad has been formed and 0 otherwise.

Explanatory Variables

To test hypotheses 1a and 1b we measured *firm stakeholder orientation* as the equally-weighted average of orientation across the five stakeholder categories on which this study focus (i.e. employees, customers, suppliers, local community and shareholders) (Bettinazzi and Zollo, 2017). Consistently with previous operationalization, we assessed the orientation towards a stakeholder group based on category specific items. We assessed employee orientation by averaging four score indicators within the category “Employment Quality”. Specifically, the four variables included assess the presence of a policy for maintaining long term employment stability (‘Policy’); the existence of information about the way in which an employment quality policy is implemented (‘Implementation’); the presence of tools to evaluate interests of the employees (‘Monitoring’) and the presence of specific targets for employees’ development (‘Improvement’). The measure is constructed as the normalized sum of these four single constructs, so it ranges from zero (low) to 100 (high). We assessed customer orientation using the average of the four indicators included in the category ‘Client Loyalty’, which reflect the effectiveness of a company in pursuing long-term growth in revenue and at the same time nurturing client relationships based on fairness and trust. We calculate community orientation as the overall score of the ‘Community’ category, which measures the extent to which a company fulfills its duties as a corporate citizen and operating to the benefit of the community. We built supplier orientation on four datapoints which capture the degree to which a company treats suppliers as key

business partners. Specifically, included the dummy variables presence of a policy and adoption of a code of conduct (considered as a proxy to assess firm's commitment to treating suppliers as key business partners) and the two dummy variables that account for the presence of processes and communication tools to improve partnerships with suppliers (considered as a proxy for the existence of managerial practices to interact with suppliers). The measure is constructed as the normalized sum of these four single constructs, so ranges from zero (low) to 100 (high). Lastly, we operationalized shareholder orientation as the average of four indicators within the category 'Shareholder Rights', which captures the ability of a company to ensure equal treatment of shareholders and to follow corporate governance best practices. The scores build for the 5 separate stakeholder categories have been normalized on a 0-100 scale and then averaged to obtain the aggregate degree of stakeholder orientation.

The aim of the dyadic level analyses is to test the hypothesis according to which the effect of a firm stakeholder orientation on likelihood of it being acquired is contingent upon the counterpart degree of stakeholder orientation. To test hypothesis 2, we adopted multiple complementary approaches. First, we operationalized the distance in the degree of orientation of the two firms towards their stakeholders (*stakeholder orientation distance*) as the difference between acquirer and target stakeholder orientation weighted by their sum. This variable ranges from -1 (if the acquirer is less stakeholder oriented than the target) to +1 (if the acquirer is more stakeholder oriented than the target). Second, we included in the dyadic sample the measure of stakeholder orientation of the firms in each dyad (*acquirer stakeholder orientation* and *target stakeholder orientation*), measured by following the same procedure for constructing the variable firm stakeholder orientation, and their interaction. Third, we created two dummy variables, *target stakeholder orientation high* and *acquirer stakeholder orientation high*. The variable *target (acquirer) stakeholder orientation high* takes value 1 if the target (acquirer) degree of stakeholder orientation in a given year is above the median of the level of

stakeholder orientation of all the firms included in Asset4 in that year, and 0 otherwise. Then, we combined these two variables to obtain four dummy variables: *acquirer HIGH target HIGH stakeholder orientation*, which takes value 1 if both the variables target stakeholder orientation high. and acquirer stakeholder orientation high. are equal to 1 and 0 otherwise; *acquirer LOW target LOW stakeholder orientation*, which takes value 1 if both the variables target stakeholder orientation high. and acquirer stakeholder orientation high. are equal to 0 and 0 otherwise; *acquirer HIGH target LOW stakeholder orientation*, which takes value 1 if the variable target stakeholder orientation high is equal to 0 and the variable acquirer stakeholder orientation high is equal to 1 and 0 otherwise, and *acquirer LOW target HIGH stakeholder orientation*, which takes value 1 if the variable target stakeholder orientation high is equal to 1 and the variable acquirer stakeholder orientation high is equal to 0 and 0 otherwise.

Control Variables

To test hypotheses 1a and b, we included several variables that account for firm's characteristics that are likely to affect the likelihood of it being selected as a target for an acquisition. We controlled for *size*, *performance*, *leverage* and *earnings-per-share* (Lee, Mauer, and Xu, 2018). We operationalized firm size as the number of employees. We measured firm performance using its Tobin's Q. *Leverage* is measured scaling total debt by total assets. We included the *intangible asset ratio* which might positively influence the attractiveness of a firm as a potential target for an acquisition in particular for firm with high level of level information availability (Capron and Shen, 2007; Shen and Reuer, 2005). We operationalized this variable as the total intangible asset scaled by total asset. Additionally, we control for the *number of firm's alliances*, which may help to reduce information asymmetry, because such business partners may work as catalysts in the identification, valuation, and selection of appropriate targets (Reuer and Tong, 2010). We operationalized this variable using the cumulative

number of alliances made in the previous 3 years. We included the *intensity of competition* within an industry is positively associated with the probability of a firm to exit the market (Caves, 1998). In order to estimate the extent of competition faced by a given firm, we adopted the formulation of the Herfindahl-Hirschman concentration index (HHI) proposed by Hoberg and Phillips according to whom the strength of competition between a pair of firms can be inferred from the degree of similarity with which each describes its products in their annual statements (Hoberg and Phillips, 2010). More specifically, since US public firms are legally required to provide accurate and updated product description in their annual statements, the two scholars rely on a text-based analysis of such descriptions to compute a pairwise similarity matrix – i.e. a matrix of the pairwise similarity score for any two given firms in the sample. Based on the similarity scores, the two scholars construct a Text-Based Industry Classification (TNIC-3) with the same degree of coarseness² as the SIC-3 and calculate the HHI index accordingly. We also controlled for *firm's age* measured as the difference between the focal year and the year of firm's incorporation. Lastly, we included *sector fixed effect* to control for unobserved heterogeneity in the characteristics of the sectors in which the firms operate (Ozmel *et al.*, 2017), *year fixed effect* to account for temporal dimension (Chakrabarti and Mitchell, 2013).

To test hypothesis 2, we included controls for dyad, target and acquirer and characteristics. Specifically, we controlled for *relative size* of the two firms measured as the absolute value of the difference in number of employees between the two firms, weighted by the sum of their total employees. We included *relative performance* as the absolute value of the difference between the two firm's Tobin's Q, divided by the absolute value of the sum of their Tobin's Q (Bettinazzi *et al.* 2018). Following Wang and Zajac (2007), we control for *business similarity* using primary SIC codes of the

² Coarseness refers to the likelihood that, chosen two firms at random in the sample, those firm result related according to the proposed classification

two firms. Specifically, the variable takes value of 4 if the SIC codes matched at the 4-digit level, the value of 3, 2 or 1 if the two SIC codes matched, respectively where they matched at 3, 2 or 1-digit level and 0 otherwise. Additionally, we added *leverage*, *intangible asset ratio*, *number of firm's alliances*, *intensity of competition*, and *age* for both the target and the acquirer. All these variables have been measured by following the same procedure described above. Lastly, we included year fixed effects and both firms' industry (2 digits SIC code) fixed effects.

In Table 2 are summarized all the variable used to test the hypotheses.

Insert Table 2 here

Table 3, 4 and 5 present descriptive statistics and correlations for the variables included in models. At the individual level, the correlation between the explanatory variable and the variable *size* might indicate the presence of multicollinearity. However, the coefficient is below the level 0.7, which is considered the critical level for large samples ($N > 1000$) (Hair et al., 1995). Additionally, we conducted the Variance Inflation Factor (VIF) test to address this concern. The mean VIF was 1.56 and the maximum was 2.21, both values are below the critical value 10. At the dyad level, all the variables that are included in the same models do not display critical correlation coefficients.

Insert Table 3, 4 and 5 here

RESULTS

Hypothesis 1a, 1b and additional analysis

Table 6 presents the coefficient estimates of the event history analyses to test Hypotheses 1a and 1b. Model 1 is the baseline model, including only control variables. The coefficient estimates for the

linear effect of firm's stakeholder orientation on the likelihood of it being acquired (Model 2) is negative and statistically significant ($p=0.027$), which provides support for Hypotheses 1. In particular, a 1% increase in the firm's level of stakeholder orientation reduces its likelihood of being acquired by 0.24%.

Insert table 6 here

In the hypotheses development, we proposed two different mechanisms that might explain why stakeholder oriented firms are less likely to be selected as a target for an acquisition. In Table 6 we included two set of additional analyses (Model 3 – 6) aimed at separating out the two mechanisms in order to understand if one might prevail over the other. This analysis, is important to understand which strategies can be adopted by stakeholder oriented firms to mitigate this negative effect and increase their attractiveness to potential acquirers.

In order to understand which effect might prevail over the other we introduce two variables: *number board interlock* and *number of institutional owners* which influence potential acquirer's perceived complexity (Goranova, Dharwadkar, and Brandes, 2010; Haunschild and Beckman, 1998; Pollock, Rindova, and Maggitti, 2008). Specifically, board interlocks, which are formed when the executives or directors of one firm sit on the board of directors of another firms (Mizruchi, 1996), are governance arrangement that might facilitate inter-organizational learning (Beckman & Haunschild, 2002) and the diffusion of practices across firms (Haunschild, 1993; Palmer, Jennings, & Zhou, 1993; Shropshire, 2010). In this sense, the more a firm is connected to other firms via board members, the higher its propensity to inter-organizational cooperation and information exchange across organizational boundaries (Ni Sullivan & Tang, 2013). From a potential acquirer standpoint, this might result in an increased complexity in assessing the value of the potential target. Thus we might expect that the number of board interlock, by making more complex the assessment of a perspective

target, will strengthen the negative relationship between stakeholder orientation and the likelihood to be acquired. At the individual level, board interlock has been measured as number of board interlocks the focal firm has with other firms in a given year (Booth and Deli 1996).

The presence of institutional investors among the shareholders of focal firm, on contrary, by acting as a signal of the quality of its resources and its internal processes, might reduce the evaluation effort exerted by a potential acquirer, resulting in a lower perceived complexity in assessing the perspective target. Thus we might expect, Thus, we might expect that the number of institutional investors, by facilitating the assessment of a perspective target, will weakens the negative relationship between stakeholder orientation and the likelihood to be acquired. At the individual level, board interlock has been measured has been measured as the number of institutional investors that participate that focal firm in a given year.

Coefficients estimates associated to the interaction between firm's stakeholder orientation and the number of board interlocks (Model 4) is negative and statistically significant ($p=0.000$). The coefficient estimate of -0.22 confirms our prediction, indicating that negative effect of target stakeholder orientation on its acquisition likelihood become stronger in those cases in which the assessment of the focal firm become more complex. However, the coefficient estimates for the interaction between firm's stakeholder orientation and the number of institutional is not statistically significant. As discussed in the following section, although preliminary, this result represents an important aspect that deserve further investigation, as they propose that negative effect of firm stakeholder orientation on the likelihood of it to be acquired might be mitigated or exacerbated by reducing or increasing the level of perceived complexity in the valuation.

Hypotheses 2 and additional analyses

Table 7 presents the results for the dyadic models. Model 7 and 8 include only control variables. Models 7 – 14 are used to test Hypotheses 2 which proposes that the takeover likelihood is higher when the acquirer and the target have similar level of stakeholder orientation, or when the acquirer is more stakeholder oriented than the target. The coefficient estimates for stakeholder distance (Model 9) is positive and statistically significant ($p=0.000$). This suggests that the likelihood that two firms will be involved in an acquisition is lower if the target is more stakeholder oriented than the acquirer. Model 10 includes the interaction between target and acquirer stakeholder orientation. The coefficient estimates for the interaction is positive and statistically significant ($p=0.016$). This result indicates that the negative effect of target stakeholder orientation on its acquisition likelihood decreases at increasing level of acquirer stakeholder orientation. Lastly, in Models 11 – 14 we included the four dummy variables; *acquirer HIGH target HIGH*, *acquirer LOW target LOW*; *acquirer HIGH target LOW*, and *acquirer LOW target HIGH*. In each model one of these variables is omitted and the coefficient estimates for the other variables measure the likelihood that a combination of two subjects with a certain degree of stakeholder orientation will occur compared to the likelihood that the combination between two subjects that has the characteristics taken by the omitted variable. Results indicate that least likely combination is when the target is more stakeholder oriented than the median of the population in the year before the acquisition and the acquirer not. In fact, the coefficient estimates of the variables *acquirer HIGH target HIGH* ($p=0.000$), *acquirer LOW target LOW* ($p=0.0506$); *acquirer HIGH target LOW* ($p=0.000$) are all positive and statistically significant.

Insert Table 7 here

Taken together, results presented in Table 7 provide a strong support for Hypotheses 2 and indicate that negative effect of target stakeholder orientation on the likelihood of it being acquired is

stronger when the acquirer is less stakeholder oriented than the target. As the acquirer stakeholder orientation increase, the negative effect become less pronounced,

In Table 6 are presented results of the additional analyses also at the dyad level. As moderators, we included the presence of *interlocking directorate* between the two firms of the dyad, which is a dummy variable that takes value 1 if the two firms have at least 1 board member in common and 0 otherwise, and the *institutional investors* between the two firms, which is a dummy variable that take value 1 if the two firms are participated by the same institutional investor and 0 otherwise, in a given year.

In our sample, only two acquisitions actually occurred had at least 1 board interlock (Model 15). For this reason, the coefficient associated to the interaction between interlocking directorate and stakeholder distance dimensions has not been estimated. The coefficient estimate for the interaction between the presence of institutional investors in common between the two firms and the distance in their stakeholder orientation (Model 17) is negative and statistically significant ($p=0.036$): a reduction in the complexity in assessing the target mitigate the positive effect of the acquirer stakeholder orientation on the acquisition likelihood. This preliminary result corroborates our previous findings, indicating that stakeholder oriented firm can reduce or increase its attractiveness as a target for an acquisition by lowering or enhancing the perceived complexity in its valuation.

DISCUSSION AND CONCLUSION

Summary and contributions

This paper advances research on the determinants of a firm selection as a target for an acquisition by critically investigating the influence of stakeholder orientation of the firm on its attractiveness to potential acquirers. While previous studies provide important insights about the relational antecedents of a firm likelihood to be acquired, they mostly focus on the characteristics of the partner to which a

firm is tied (Rogan and Sorenson, 2014) or to the structural characteristics of the network of relationships in which it is embedded (Hernandez and Shaver, 2018), suggesting that the existence of a particular type or a particular set of relationships might influence a firm attractiveness as a target for an acquisition. Yet, in addition to the considerations about the types of partner to which a firm is connected, other relational factors might concur to explain why some firm are more attractive than other as a target for an acquisition.

In this paper, we tried to understand the influence of the way in which a firm manage its stakeholder relationships. The analyses we conducted provide support for the notion that the degree of firm stakeholder orientation reduce the attractiveness of a firm as acquisition target. This suggests that when a firm is characterized by high level of stakeholder orientation, a potential acquirer would suffer from diseconomies of information deriving from the complexity in assessing a dense network of stakeholders and for the reduced possibility to extract value from the acquisition (e.g. through cost-based synergies) because of the fragility of the relational resources controlled by a stakeholder oriented firm.

Furthermore, our results at the dyadic level have shown that the negative effect of target stakeholder orientation is mitigated by the level of the stakeholder orientation of the acquirer. The results indicate that when a firm displays a higher level of stakeholder orientation in comparison to a potential acquirer, the negative effect hypothesized of firm stakeholder orientation on the likelihood of it being acquired are more pronounced. On contrary, the negative effect is mitigated when the two firms present a similar orientation towards their stakeholders and when the potential acquirer is more stakeholder oriented than the focal firm.

In two set of additional analyses, we tried to understand whether one of the two negative mechanisms proposed – higher assessment complexity and lower redeployability - might prevail over the other. The results provide preliminary support for the notion that the negative influence of firm

stakeholder orientation on its takeover likelihood can be attributable to first mechanism proposed. In particular, the negative effect of firm stakeholder orientation varies according to the degree of perceived complexity in assessing it.

The theory that we have sketched and the empirical evidence we have unearthed contribute to two different streams of research. First and foremost, this paper contributes to the literature on M&A by shedding light on the role of stakeholder orientation as a potential explanatory factor of the decision to select a firm to be acquired over another. In particular, we advance the understanding of the relational antecedents of corporate takeover, emphasizing the critical role played by way in which a firm manages its stakeholder relationships, in addition to the considerations about the types of relationship a firm possess as emphasized in previous research. In addition, by providing evidence of a negative effect on takeover likelihood deriving from integrating stakeholder needs and requests into a firm decision making, we provide a further understanding of the mechanism through which the decisions related to firm relationships might become an effective antitakeover mechanism.

Second, this paper contributes to the stakeholder-based view of the firm by discussing the potential advantages and disadvantages that are associated with a high degree of stakeholder orientation (Garcia-Castro and Francoeur, 2016). By providing a deeper understanding of potential benefits and drawbacks that derived from the adoption of a stakeholder-oriented approach, we hope to inform managers about the consequences of their decisions related to the adoption of a particular stakeholder management strategy, in particular in cases in which these consequences might be unintended.

Limitations and future research

Our work represents an initial attempt to investigate the role of firm stakeholder orientation in explaining a firm likelihood to be acquired. In so doing, we combined both a firm-level and dyad

level perspective we assuming that firms are homogenous in their approach to managing stakeholder relationships. Research in stakeholder theory, however, indicate that firms do not treat all the stakeholder equally: some firms, in fact, tend to prioritize certain stakeholder categories over others (Jawahar & McLaughlin, 2001). A recent contribution showed that this has consequences on the performance of the firm (Hawn and Ioannou, 2016). Future research could provide a fine-grained analysis of the effect of the different approaches adopted by firms to manage stakeholder relationship, both at the firm level and at the dyad level, on the takeover likelihood.

Findings presented in the additional analyses indicate that resource fragility mechanism might prevail as an explanation for the negative effect of stakeholder orientation on acquisition likelihood. However, we cannot completely exclude that the second explanation proposed could play a role in explain why stakeholder orientation reduce the attractiveness of a firm as a target for an acquisition. Future research could provide additional understandings of the two mechanisms and of how firms can manage them. Analyzing whether the negative effect of stakeholder orientation on the likelihood being acquired is mainly driven by an increased complexity in the evaluation of the firm or by the difficulties in the post-merger integration phase might be relevant for those firm, such as entrepreneurial firm. These firms, in fact, might be interested in understanding how to mitigate the negative effect of stakeholder orientation in order to be acquired by another entity and, at the same time, without losing benefits that derive from stakeholder relationships.

Partly related to this, in our research we didn't analyze the effect of target stakeholder orientation on its acquisition performance. Existing literature focused on the performance of stakeholder oriented acquirers (Bettinazzi & Zollo, 2017; Tong, Wang & Xia, 2019). Less ins known about target payoff (Graebner, Eisenhardt, & Roundy, 2010.). Having shown that target stakeholder orientation reduces the likelihood to be acquired, it would be interesting to analyze its effect of stakeholder orientation on the premium obtained to sell the target as well on different other

performance measure that might be relevant for a stakeholder oriented firm such as top management retention, employee turnover or firm reputation.

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Table 1 Mechanisms through which stakeholder orientation influence likelihood of being acquired

	<i>Positive Effect</i>	<i>Negative</i>
<i>Information Economics</i>	Availability of reliable information to potential acquirers <i>(Lower information asymmetry)</i>	Complexity in assessing stakeholder-based resources (in addition to firm resources) <i>(Higher uncertainty in determining value)</i>
<i>Resource Based View</i>	Access to resources that are valuable, rare and difficult to be imitated <i>(Higher expectations about value creation)</i>	Redeployment risk in the post-acquisition phase <i>(Lower synergy realization strategies)</i>

Table2 Variable Description

Variable	Description	Analysis
Firm (Target and Acquirer) stakeholder orientation	Average of the orientation towards the 5 categories of primary stakeholders (Employee, Shareholders, Customers, Suppliers, Community)	Both
Employee Orientation	Average of the scores of the following variables SOEQD01S – Employment Quality Policy SOEQD02S – Employment Quality Implementation SOEQD03S – Employment Quality Monitoring SOEQD04S – Employment Quality Improvements	NA
Shareholder Orientation	Average of the scores of the following variables CGSRD01S – Shareholders rights Policy CGSRD02S - Shareholders rights Implementation CGSRD03S – Shareholders rights Monitoring CGSRD04S - Shareholders rights Improvement	NA
Customer Orientation	Score assigned to the variable ECCL - “Client Loyalty”	NA
Community Orientation	Score assigned to the variable SOCO -“Society/Community”	NA
Supplier Orientation	Average of the scores of the following variables SOCODP001B Suppliers Policy SOCODP012B Suppliers Processes SOCODP003B Suppliers of Commitment SOCODP010B Suppliers Improvement	NA
Stakeholder Orientation Distance	$(\text{Acquirer SO} - \text{Target SO}) / (\text{Acquirer SO} + \text{Target SO})$	HP2
Stakeholder Orientation Low	1 =If firm stakeholder orientation is below the sample in a given year; 0 otherwise	HP2

Stakeholder Orientation High	1 =If firm stakeholder orientation is above the sample in a given year	HP2
Size Similarity	Absolute value of $[(N^{\circ} \text{ Employees Acquirer} - N^{\circ} \text{ Employees Target}) / (N^{\circ} \text{ Employees Acquirer} + N^{\circ} \text{ Employees Target})]$	HP2
Sector Similarity	= 4 if primary SIC of target = acquirer =3 if first 3 digits of primary SIC of target =acquirer =2 if first 2 digits of primary SIC of target =acquirer =1 if first digit of primary SIC of target =acquirer 0 otherwise	HP2
Performance Similarity	Absolute value of $[(\text{Tobin's Q Acquirer} - \text{Tobin's Q Target}) / (\text{Tobin's Q Acquirer} + \text{Tobin's Q Target})]$	HP2
Firm Leverage	Debt/Asset Ratio	Both
Intangible Asset Ratio	Intangible Asset/Total Asset	Both
Age	Year – Incorporation year	Both
Competition Intensity	Herfindal Index	Both
Cumulative Alliances	Number of alliances in the prior 3 years	Both
EPS	Earnings – Per – Share	Both

Table 2. Descriptive statistics and pairwise correlations – Firm level

Variable	Mean	Std. Dev.	Min	Max	1	2	3	4	5	6	7	8	9	10	11
1 Acquisition	0.027	0.162	0.000	1.000											
2 Stakeholder Orientation	0.070	1.001	-1.923	3.332	-0.035										
3 EPS	-0.008	0.000	-0.009	-0.007	-0.003	0.028									
4 Size	0.062	0.984	-1.529	3.304	-0.017	0.56	0.015								
5 Tobin's Q	1.263	1.255	0.003	16.435	0.004	0.009	0.011	0.029							
6 Leverage	0.261	0.197	0.000	1.000	0.030	-0.014	-0.023	-0.002	-0.171						
7 Age	0.378	1.044	-1.243	4.690	-0.040	0.224	0.020	0.198	-0.096	0.036					
8 Cumulative Alliance	0.234	1.763	-0.196	47.550	-0.010	0.151	0.002	0.121	0.091	-0.068	0.024				
9 Competition Intensity	0.242	0.236	0.017	1.000	-0.019	0.045	0.010	0.048	0.088	0.070	0.240	-0.024			
10 Intangible Asset Ratio	0.218	0.207	0.000	0.910	0.027	-0.006	0.005	0.038	0.036	0.124	0.015	-0.004	0.180		
11 Institutional Owners	0.053	1.132	-0.237	17.604	0.001	-0.048	-0.003	-0.047	0.053	0.006	-0.043	-0.003	-0.037	-0.017	
12 Board Interlock	0.546	1.166	-0.736	14.678	-0.036	0.285	0.018	0.230	0.019	0.023	0.142	0.103	0.038	0.035	-0.026

Table 3. Descriptive statistics - Dyad level

	Variable	Mean	Std. Dev.	Min	Max
1	Acquisition	0.000	0.016	0.000	1.000
2	Acquirer stakeholder orientation	-0.039	1.056	-1.923	3.332
3	Target stakeholder orientation	-0.036	1.057	-1.923	3.332
4	Stakeholder Distance	-0.001	0.252	-0.710	0.707
5	Acquirer High Target Low So	0.245	0.430	0.000	1.000
6	Acquirer High Target High So	0.205	0.404	0.000	1.000
7	Acquirer Low Target High So	0.246	0.430	0.000	1.000
8	Acquirer Low Target Low So	0.305	0.460	0.000	1.000
9	Size Similarity	0.441	0.296	0.000	1.000
10	Sector Similarity	0.236	0.640	0.000	4.000
11	Performance Similarity	0.451	0.273	0.000	0.999
12	Acquirer Leverage	0.270	0.207	0.000	1.000
13	Target Leverage	0.271	0.207	0.000	1.000
14	Acquirer Intangible Asset Ratio	0.224	0.214	0.000	0.910
15	Target Intangible Asset Ratio	0.224	0.214	0.000	0.910
16	Target Age	0.053	1.007	-1.507	4.281
17	Acquirer Age	0.052	1.007	-1.506	4.283
18	Target competition Intensity	0.244	0.237	0.017	1.000
19	Acquirer Competition Intensity	0.244	0.238	0.017	1.000
20	Target Cumulative Alliances	0.028	1.112	-0.204	37.874
21	Acquirer competition Intensity	0.029	1.109	-0.205	38.162
22	Acquirer EPS	0.016	0.958	-153.351	10.604
23	Target EPS	0.015	0.973	-147.862	10.225
24	Institutional Ownership	0.004	0.060	0.000	1.000
25	Board Interlock	0.003	0.052	0.000	1.000

Table 4. Pairwise correlations- Dyad level

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
1																									
2	0.01																								
3	0.00	0.08																							
4	0.01	0.67	-0.67																						
5	0.00	0.53	-0.41	0.69																					
6	0.00	0.47	0.47	0.00	-0.29																				
7	-0.01	-0.41	0.53	-0.70	-0.32	-0.29																			
8	0.00	-0.52	-0.52	0.00	-0.38	-0.34	-0.38																		
9	0.00	-0.04	-0.04	0.00	-0.06	0.02	-0.06	0.10																	
10	0.06	-0.01	-0.02	0.00	-0.01	0.00	-0.01	0.02	0.03																
11	-0.01	-0.05	-0.05	0.00	0.00	-0.04	0.00	0.03	-0.21	-0.11															
12	0.00	0.01	-0.03	0.03	0.02	0.00	-0.01	-0.01	0.06	-0.03	-0.05														
13	0.00	-0.03	0.00	-0.02	0.00	-0.01	0.01	0.00	0.06	-0.03	-0.05	0.01													
14	0.01	0.02	-0.01	0.03	0.01	0.00	-0.01	-0.01	0.06	-0.01	-0.15	0.15	0.01												
15	0.00	-0.01	0.01	-0.02	0.00	0.00	0.01	-0.01	0.05	-0.02	-0.15	0.00	0.15	0.00											
16	0.00	0.02	0.25	-0.17	-0.11	0.13	0.14	-0.14	0.00	-0.01	-0.03	-0.01	0.03	0.00	0.03										
17	0.00	0.25	0.02	0.17	0.14	0.13	-0.11	-0.14	0.00	-0.01	-0.03	0.03	-0.01	0.03	0.00	0.01									
18	0.00	0.00	0.05	-0.04	-0.02	0.02	0.02	-0.02	0.04	-0.02	-0.08	0.00	0.07	0.00	0.19	0.23	0.00								
19	0.00	0.05	0.00	0.04	0.02	0.02	-0.02	-0.02	0.04	-0.02	-0.09	0.07	0.00	0.19	0.00	0.00	0.23	0.00							
20	0.00	0.05	0.14	-0.06	-0.05	0.07	0.05	-0.07	-0.03	0.01	-0.01	-0.02	-0.06	-0.01	0.00	0.03	0.01	-0.02	0.00						
21	0.01	0.15	0.05	0.06	0.06	0.07	-0.05	-0.07	-0.03	0.01	-0.02	-0.06	-0.02	0.00	-0.01	0.01	0.03	0.00	-0.02	0.06					
22	0.00	0.02	0.00	0.02	0.01	0.01	-0.01	-0.01	-0.01	0.00	-0.01	-0.03	0.00	0.00	0.00	0.00	0.03	0.00	0.01	0.00	0.00				
23	0.00	0.00	0.02	-0.02	-0.01	0.01	0.01	-0.01	0.00	0.00	-0.01	0.00	-0.03	0.00	0.00	0.02	0.00	0.01	0.00	0.00	0.00	0.00			
24	0.00	-0.01	-0.01	0.00	0.00	-0.01	0.00	0.01	0.02	0.05	-0.01	0.01	0.01	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01	0.00	0.00	0.00	0.00		
25	0.00	0.02	0.02	0.00	-0.01	0.03	0.00	-0.02	0.01	0.01	-0.01	0.00	0.00	0.00	0.00	0.01	0.01	0.00	0.01	0.02	0.00	0.00	0.00	0.00	0.00

Table 5 – Main and Additional Analyses – Individual Level

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
	DV Acquisition Likelihood	DV Acquisition Likelihood	DV Acquisition Likelihood	DV Acquisition Likelihood	DV Acquisition Likelihood	DV Acquisition Likelihood
EPS	-27,775	-24,640	-21,727	-22,648	-24,691	-24,691
	(17,443)	(16,239)	(16,244)	(15,586)	(16,270)	(16,274)
Size	-0.0595	0.116	0.125	0.123	0.116	0.116
	(0.0455)	(0.0855)	(0.0833)	(0.0842)	(0.0854)	(0.0847)
Tobin's Q	-0.0212	-0.0332	-0.0328	-0.0344	-0.0329	-0.0329
	(0.0466)	(0.0476)	(0.0457)	(0.0456)	(0.0478)	(0.0479)
Leverage	0.869**	0.866**	0.903***	0.902***	0.866**	0.866**
	(0.276)	(0.266)	(0.271)	(0.266)	(0.266)	(0.266)
Age	-0.213**	-0.194**	-0.189**	-0.183**	-0.195**	-0.195**
	(0.0675)	(0.0687)	(0.0704)	(0.0700)	(0.0688)	(0.0687)
Cumulative Alliance	-0.0188	-0.0107	-0.00293	-0.000708	-0.0111	-0.0111
	(0.0220)	(0.0192)	(0.0176)	(0.0184)	(0.0192)	(0.0192)
Competition Intensity	-0.453 ⁺	-0.478 ⁺	-0.498*	-0.488*	-0.482*	-0.482*
	(0.251)	(0.247)	(0.248)	(0.246)	(0.245)	(0.244)
Intangible Asset Ratio	0.0752	0.0372	0.0622	-0.0166	0.0368	0.0366
	(0.249)	(0.241)	(0.239)	(0.244)	(0.240)	(0.237)
Stakeholder Orientation		-0.248*	-0.207 ⁺	-0.115	-0.249*	-0.249*
		(0.113)	(0.115)	(0.120)	(0.113)	(0.114)
Board Interlock			-0.184*	-0.165*		
			(0.0745)	(0.0702)		
Stakeholder Orientation *Board Interlock				-0.222***		
				(0.0453)		
Institutional Investors					-0.0110	-0.0113
					(0.0352)	(0.0393)
Stakeholder Orientation*Institutional Investors						-0.000906
						(0.0516)
Year Fixed Effect	Yes	Yes	Yes	Yes	Yes	Yes
Sector Fixed Effect	Yes	Yes	Yes	Yes	Yes	Yes
Observations	12,009	12,009	12,009	12,009	12,009	12,009
Sector Clustered errors in parentheses						
*** p<0.001, ** p<0.001, * p<0.5; + p<0.1						

Table 5 – Main Analyses – Dyad level (Page 1/2)

	Model 7	Model 8	Model 9	Model 10	Model 11	Model 12	Model 13	Model 14
Constant	9.886***	-9.963***	-10.13***	-10.06***	-10.68***	-10.09***	-9.576***	-9.366***
	-0.723	-0.724	-0.722	-0.725	-0.748	-0.741	-0.756	-0.728
Size Similarity	0.304	0.636**	0.497*	0.504*	0.419	0.419	0.419	0.419
	-0.246	-0.242	-0.242	-0.255	-0.256	-0.256	-0.256	-0.256
Sector Similarity	1.401***	1.407***	1.405***	1.401***	1.400***	1.400***	1.400***	1.400***
	-0.0631	-0.0642	-0.0639	-0.0645	-0.0644	-0.0644	-0.0644	-0.0644
Performance Similarity	1.390***	-1.293***	-1.376***	-1.300***	-1.360***	-1.360***	-1.360***	-1.360***
	-0.366	-0.367	-0.365	-0.368	-0.364	-0.364	-0.364	-0.364
Acquirer Leverage	0.342	0.477	0.397	0.497	0.478	0.478	0.478	0.478
	-0.452	-0.49	-0.468	-0.488	-0.473	-0.473	-0.473	-0.473
Target Leverage	0.697	0.655	0.624	0.674	0.632	0.632	0.632	0.632
	-0.424	-0.427	-0.413	-0.429	-0.419	-0.419	-0.419	-0.419
Acquirer Intangible Asset Ratio	2.056***	2.211***	2.110***	2.238***	2.062***	2.062***	2.062***	2.062***
	-0.428	-0.452	-0.439	-0.456	-0.441	-0.441	-0.441	-0.441
Target Intangible Asset Ratio	0.242	0.218	0.269	0.244	0.254	0.254	0.254	0.254
	-0.445	-0.447	-0.438	-0.45	-0.445	-0.445	-0.445	-0.445
Target Age	-0.241*	-0.235*	-0.179+	-0.232*	-0.223*	-0.223*	-0.223*	-0.223*
	-0.111	-0.112	-0.108	-0.112	-0.112	-0.112	-0.112	-0.112
Acquirer Age	0.185*	0.0708	0.128	0.0695	0.107	0.107	0.107	0.107
	-0.0774	-0.0829	-0.0799	-0.0823	-0.0823	-0.0823	-0.0823	-0.0823
Target competition Intensity	0.0331	0.022	0.018	0.0277	0.0301	0.0301	0.0301	0.0301
	-0.441	-0.438	-0.439	-0.436	-0.438	-0.438	-0.438	-0.438
Acquirer Competition Intensity	-0.883*	-0.817+	-0.853+	-0.816+	-0.818+	-0.818+	-0.818+	-0.818+
	-0.45	-0.434	-0.441	-0.432	-0.442	-0.442	-0.442	-0.442
Target Cumulative Alliances	-0.0259	-0.0124	0.00274	-0.015	-0.0121	-0.0121	-0.0121	-0.0121
	-0.0549	-0.052	-0.0452	-0.0537	-0.0513	-0.0513	-0.0513	-0.0513
Acquirer competition Intensity	0.117***	0.107***	0.112***	0.103**	0.112***	0.112***	0.112***	0.112***
	-0.0278	-0.0316	-0.0286	-0.0333	-0.0304	-0.0304	-0.0304	-0.0304
Acquirer EPS	0.386***	0.367***	0.389***	0.359***	0.369***	0.369***	0.369***	0.369***
	-0.0787	-0.103	-0.0875	-0.102	-0.0915	-0.0915	-0.0915	-0.0915
Target EPS	-0.0997*	-0.0958+	-0.0782	-0.0949+	-0.0960+	-0.0960+	-0.0960+	-0.0960+
	-0.0495	-0.0525	-0.0608	-0.0529	-0.0526	-0.0526	-0.0526	-0.0526

Table 5 – Main Analyses – Dyad level (Page 2/2)

	Model 7	Model 8	Model 9	Model 10	Model 11	Model 12	Model 13	Model 14
Acquirer Stakeholder Orientation		0.557***		0.587***				
		-0.0836		-0.0854				
Target Stakeholder Orientation		-0.116		-0.219*				
		-0.0819		-0.0907				
Stakeholder Orientation Distance			1.900***					
			-0.317					
Acquirer Stakeholder Orientation*Target Stakeholder Orientation				0.160*				
				-0.0663				
Acquirer High Target High					1.099***	0.510*		-0.21
					-0.309	-0.235		-0.204
Acquirer High Target Low					1.309***	0.720**	0.21	
					-0.299	-0.221	-0.204	
Acquirer Low Target Low					0.589+		-0.510*	-0.720**
					-0.308		-0.235	-0.221
Acquirer Low Target High						-0.589+	-1.099***	-1.309***
						-0.308	-0.309	-0.299
Observations	535,159	535,159		535,159	535,159	535,159	535,159	535,159
Dyad clustered standard errors in parentheses *** p<0.001, ** p<0.01, * p<0.05, + p<0.1								

Table 5 –Additional Analyses – Dyad level

VARIABLES	Model 15	Model 16	Model 17
	DV: Acquisition Likelihood	DV: Acquisition Likelihood	DV: Acquisition Likelihood
Constant	-10.12*** (0.722)	-10.12*** (0.723)	-10.13*** (0.723)
Size Similarity	0.493* (0.242)	0.490* (0.241)	0.500* (0.242)
Sector Similarity	1.405*** (0.0638)	1.402*** (0.0642)	1.402*** (0.0643)
Performance Similarity	-1.379*** (0.365)	-1.366*** (0.367)	-1.368*** (0.367)
Acquirer Leverage	0.396 (0.467)	0.397 (0.469)	0.396 (0.469)
Target Leverage	0.634 (0.414)	0.625 (0.413)	0.625 (0.412)
Acquirer Intangible Asset Ratio	2.112*** (0.438)	2.117*** (0.440)	2.120*** (0.441)
Target Intangible Asset Ratio	0.261 (0.438)	0.277 (0.436)	0.277 (0.435)
Target Age	-0.180+ (0.108)	-0.180+ (0.108)	-0.180+ (0.109)
Acquirer Age	0.129 (0.0798)	0.128 (0.0799)	0.126 (0.0797)
Target competition Intensity	0.0166 (0.439)	0.0244 (0.439)	0.0219 (0.438)
Acquirer Competition Intensity	-0.853+ (0.441)	-0.844+ (0.440)	-0.848+ (0.439)
Target Cumulative Alliances	0.00257 (0.0452)	0.00314 (0.0451)	0.00406 (0.0447)
Acquirer competition Intensity	0.112*** (0.0283)	0.112*** (0.0286)	0.112*** (0.0286)
Acquirer EPS	0.388*** (0.0878)	0.389*** (0.0872)	0.390*** (0.0876)
Target Eps	-0.0780 (0.0606)	-0.0779 (0.0609)	-0.0780 (0.0611)
Stakeholder Orientation Distance	1.900*** (0.317)	1.902*** (0.316)	1.965*** (0.323)
Board Interlock	(Omitted)		
Stakeholder Orientation Distance		0.658 (0.628)	0.705 (0.606)
Stakeholder Orientation Distance*Institutional investors			-2.648* (1.267)
Year Fixed Effect	Yes	Yes	Yes
Sector Fixed Effect	Yes	Yes	Yes
Observations	533,754	535,159	535,159
Dyad clustered standard errors in parentheses			
*** p<0.001, ** p<0.01, * p<0.05, + p<0.1			