RELATIONAL CAPABILITIES UNDER MODERATING AND MEDIATING EFFECTS TO UNDERSTAND THEIR IMPACTS ON FIRM FINANCIAL PERFORMANCE

Angelica PIGOLA*
Priscila Rezende DA COSTA
Fernando Antonio Ribeiro SERRA

‘Master at Nove de Julho University, Brazil.
‘Email: a_pigola@uninove.br Tel: +5511945870290
‘Professor and PhD at Nove de Julho University (UNINOVE), Brazil.
‘Email: priscilar@uninove.br Tel: +5511997657557
(+ Corresponding author)

ABSTRACT

Relational Capabilities (RC) appear as valuable capabilities not only for performance but also to generate profitability. In this vein, this study performed a meta-analytic investigation of RC dimensions influencing firm financial performance. It also examined the role of mediating and moderating effects of knowledge management and partners integration influencing this association. From a meta-analytic procedure, 54 empirical studies were examined through random-effects model of Pearson’s correlations as the effect size and a meta-analytical regression analysis (MARA) to examined moderation effects and meta-analytical structure equation modeling (MASEM) to examined mediation effects. Our findings confirm that firm financial performance is impacted directly and positively by RC itself excepting by the intrafirm relational capacity dimension. We also find that knowledge management and partner integration do not mediate positively the effect RC on firm financial performance. Further, RC dimensions effects on firm financial performance vary positively and negatively across partner integration and knowledge management moderation effects.

Contribution/Originality: This study challenges RC into firms’ business ecosystem as one of their sources of growth to create several opportunities. Therefore, by indicating a potential evolution of this dynamic capability in a more financial favorable comprehension, this article contributes to society, economy in general and to the science of business management.

1. INTRODUCTION

Relational Capabilities (RC) blow up into literature as precursors to orchestrate and enhance efficiency outcomes in innovation performance, internationalization, or coopetition in business network (Murray, 2020; Sraha, Sharma, Crick, & Crick, 2020; Wang, Jean, & Zhao, 2020). Further, RC as also a promising approach in the literature on strategic management and entrepreneurship (Cavicchi & Vagnoni, 2018; Fischer, 2019; Fujimoto & Uddin, 2020). However, the literature analysis shows that RC dimensions findings have confused research progress due to complexity on their effects on firm financial performance and the variety of measurement and ambiguity on what they are RC. These interrelated problems bring unclarity among empirical research and theorizing and have a clutter development on relational capabilities.

The influence of RC on firm performance have been recognized into the literature and have been increasing the number of scholars keen on investigating this research field (Kianto, Andreeva, & Pavlov, 2013; Nhon, Thong, & Trung, 2020). However, few studies have been looking for more clarification regarding RC effects on firm financial
performance. In this vein, we start going back our analysis to seminal authors who employed RC terms instinctively highlighting positive effect in business performance such as relational rents (Dyer & Singh, 1998) relational governance (Poppo & Zenger, 2002) relational capital (Kale, Singh, & Perlmutter, 2000) relational embeddedness (Kostova, 1999) relational assets (Saraf, Langdon, & Gosain, 2007) power relationships (Todorova & Durisin, 2007), relational capability itself (Lorenzoni & Lipparini, 1999).

More recently, the literature fragmented RC in different dimensions to pursue deeper clarification about its effects on performance which is the case of interfirm and intrafirm relationships (Ekanayake, Childerhouse, & Sun, 2017; Skarmeas, Zeriti, & Argouslidis, 2019; Sklyar, Kowalkowski, Tronvoll, & Sörhammar, 2019) to increase the competitiveness of firm's resources and capabilities (Rodríguez-Díaz & Rodríguez-Díaz, 2018) or still creating an extended enterprise networks, to achieve goals and profitability (Hensen & Dong, 2020). Therefore, we are looking for understanding 'RC in action' (Mouritsen, 2006) for the sake of identifying RC dimensions and its effect on firm financial performance.

Differently from many authors who only keen on finding gaps that identify the advancement of knowledge in some research field, we follow Sandberg and Alvesson (2011) cited in Rivard (2020) chapter 4) who identified gap-spotting modes about confusion literature, when evidence from extant research is contradictory (Rivard, 2020; Sandberg & Alvesson, 2011). Therefore, we purse to identify the accuracy of findings among different research that connect RC and firm financial performance to clarify any contradictory results and extend the dynamic capabilities literature field enriching its level of impact into business financial performance. Additionally, following some recommendations for future studies about understanding direct and indirect relationships of business relational ties on firm performance (Yeniaras, Kaya, & Dayan, 2020) or measuring financial performance through stakeholder-wide view in coopetition, where RC is irreplaceable (Crick, 2019) drawn our attention to identify to what extent of RC dimensions itself vary or through some moderating and mediating mechanisms they impact on firm financial performance.

This research brings some contributions. First, a setting of findings presenting patterns in RC dimensions and evidence about the positive relationship of RC dimensions on firm financial performance. Second, it also improves understandings about the importance of RC itself regardless any other influencer measurement variable. Third, our results shed light on some RC dimensions as relatively important to firm financial performance such as customer relationship quality and supply chain relation capacity and their contribution to the literature as predictors of productivity and profitability, as well as to the body of dynamic capabilities theory. Finally, we believe that our study improves precision in RC dimensions research empirically and presents the necessary theoretical development to clarify the multidimensional approach to RC.

2. CONCEPTUAL DEVELOPMENT

Concerning the RC dimensions, they appear in several models of firm performance (Kianto et al., 2013; Nhon et al., 2020). The idea that RC dimensions interact to influence firm financial performance has logical appeal regarding organizational efforts to standardized RC through alliances, supplier contracts, rental ties strength to overcome the dynamism of business market and the rapid changes caused by innovations, for instance. Demeter, Losonci, and Nagy (2020) RC is related to firms' ability to set up and keep closer relationships using resources available in their net to reach out objectives (Demeter et al., 2020).

The resource-based view theory (RBV) points out that relational capabilities may benefit firm financial performance in various paths (Wang, Dou, Zhu, & Zhou, 2015). First, RC may enhance the access of partners to assets and capabilities beyond other complementary resources that can enhance firm’s financial performance. Second, it encourages solving problems and conflicts, keeping beneficial relationships for firm's performance. Third, it enhances the ability to identify better costs and cycles reduction for development of technologies accepting
additional resources that may reduce financial risk and target appropriate customers (Choi & Hwang, 2015; Dubey et al., 2019; Wang et al., 2015).

2.1. RC Dimensions

An important scholars' recognition about RC dimensions is observed in prior literature. First, searching and identifying valuable customer relationship quality (Chierici, Mazzucchelli, Garcia-Perez, & Vrontis, 2019; Monteiro, Soares, & Rua, 2017) second, understanding, exploiting, and transforming interfirm relational capacity (Lee, Chen, Kim, & Johnson, 2008; Tzempelikos & Gounaris, 2015) which we suggest are the main functions of firms to survive and enhance innovation, third, converting the acquired intrafirm relational capacity to transfer individual knowledge to organization knowledge through sharing it Garcia-Perez-de-Lema, Madrid-Guijarro, and Martin (2017); Vela-Jiménez, Martínez-Sánchez, Pérez-Pérez, and Abella-Garcés (2014); Zollo and Reuer (2010) and fourth referring to supply chain relational capacity as performing the function of production productivity and technology converter and transmitter (Hofer, Hofer, & Waller, 2014; Lado, Paulraj, & Chen, 2012; Paulraj, 2011).

Customer Relationship Quality. It is related to relationship capacity to use customers engagement and their relational information (Harrigan, Evers, Miles, & Daly, 2018) to improve firm's sales growth, market share and profits (Chen, Li, & Arnold, 2013). This strong relational capability enables firms to hold customers increasing the product and / or service quality to benefit markets with incremental or radical innovations which can leverage profitability. And, better customer relationship quality may provoke higher value propositions to the market and therefore achieve better business performance (Chen et al., 2013). Further, the customer linkage also fortress value creation to delivery processes improvements of products and services (Grimmer, Miles, & Grimmer, 2015) ensuring that customers potentially could be more satisfied (Chen et al., 2013; Moorman & Rust, 1999). In addition, this closer relationship between shoppers and sellers conducts to greater customer retention ensuring profitability (Chen et al., 2013; Doney & Cannon, 1997).

This relational capability is critical for firms that increasingly exploit resources and new capabilities combined with customers channels to create knowledge that could enhance innovation and performance. However, it requires to firms to employ governance mechanisms to protect their interests with strong partnership and knowledge management (Adams & Graham, 2017) to keep a competitive advantage that could generate profitability.

Interfirm Relational Capacity. It identifies and understands the mechanisms of relationships that jeopardize the firm’s survival. It can be viewed as a form of relational capability embedded inside of a network constituting a major source of business competitive advantage to pavement a way of generating firm financial performance through knowledge transferring into an innovative ecosystem generation (Adams & Graham, 2017; Hensen & Dong, 2020). Interfirm relational capacity can be affected by cultural and language barriers, however an established connection that encourages frequent and open communications among partners helps overcome these barriers (Lee et al., 2008).

Interfirm relationships coordination mechanism depends on whether firms can fit internal and external resources characteristics and interorganizational relationship properties (Guo & Shi, 2011). Therefore, different dynamics can be adopted to develop, extend or upgrade firms activities through relationships that allow them to improve their chances of harnessing internal resources and capabilities for the sake of identifying and shaping new business opportunities (Claver-Cortés, Zaragoza-Sáez, Úbeda-García, Marco-Lajara, & García-Lillo, 2018) and profitable outcomes. Hence, interfirm relationships demand a superior relational capability to embrace different actors in different scenarios.

Intrafirm Relational Capacity. It can be important to transfer knowledge. For example, explicit knowledge of a technology for its understanding and usage. This tacit knowledge can facilitate implementation of processes or other incremental technologies to other actors among business ecosystem (Collins & Hitt, 2006). Intrafirm relational capacity also facilitates knowledge integration, supporting continuous trust interactions through
dialogues as central source of relational improvement and learning to performance prosperity (Einola, Kohtamäki, Parida, & Wincenc, 2017; Mastio, Chew, & Dovey, 2019).

Following Salvato and Vassolo (2018) a perspective for intrafirm relational capacity is in the soul of the collective praxis, that is, the firms’ capacity to examine criterial the internal actors’ bias, assumptions, and interests by debates and contested approach with productive dialogue which could fortified internal and interpersonal relationships. The defiance is to build individuals capabilities to improve social relations well-proportioned with learning requirements. It means, dispositions to make easier the collaborative mindset for value creation. Yet, it involves internal organizational practices and individuals abilities to manage operation and also someone else's cognitive aspects as a collective exercise to reduce losses, rework and time consuming with noncore business subjects (Mastio et al., 2019; Salvato & Vassolo, 2018).

Supply Chain Relational Capacity. is presented as a capacity to manage operational issues together with net partners for sake of suiting and respond market dynamism for rapid manufacture practices (Fosso & Akter, 2019; Liu, Ke, Wei, & Hua, 2013) and is considered extremely critical for supply chain Management. This relational capability is most often mentioned about handling supplier relationships, where buyer fits an strategic position in the domain of supply chain (Golgeci & Gilgör, 2017). It can be understood as the capacity of leveraging a network structure over time (Capaldo, 2007) or as a fundamental social capital enabler for manufacture activities and market innovations production (Li, Zhang, & Zheng, 2016).

As a facet of organizational strategy, supplier focus may offer a development of supply chain relation capacity through knowledge-based competences to manage relationship with partners (Chen et al., 2013). These competences include a long-term relations adoption, collaborative interactions fostered, cross-functional teams designed and partners involvement to create and delivery strategic value to stakeholders (Lado et al., 2012). These relational capabilities also embrace connection, coordination, and cooperation capability for reconfiguring supply chains to attend customers' needs and enhance production issues reducing manufacturing losses.

2.2. Potential Moderators of the RC Dimensions

Since RC dimensions are essentially about integrating resources, sharing, and acquiring knowledge to achieve firm financial performance, they are dependent on integrability of actors into business ecosystem. We identify two highlighted conditions: partner integration mode as a source of external knowledge (Adams & Graham, 2017) and the management of this knowledge (Susanty, Yuningsih, & Anggadwita, 2019). In what follows, we present these conditions influencing RC dimensions relationships as potential factors for firm financial performance.

Partners Integration. A higher inclination to collaborate with partners may enhance the probabilities of exposure to different and new ideas (Qi Dong, McCarthy, & Schoenmakers, 2017). Hensen and Dong (2020) pointed out that point out universities and research institutions as a science-based partners to exposure firms to broader R&D perspectives. Partners integration may provide a large range of information and additional resources benefits for co-development of products to the purpose of higher profitability (Hensen & Dong, 2020). However, managing all data around these relationships and knowing the market and customer’s needs are major activities. Partner’s integration demands additional dynamic capabilities as collaboration and internal resources reconfiguration (Hofer et al., 2014) to integrate different actors into a business ecosystem that would gather additional conditions for a potential financial performance and therefore can be seen as a higher level of capability.

Knowledge Management. Knowledge Management, since the 1990s, has become an emerged discipline in both the business and academic fields (Donate & Guadamillas, 2015). There is a concentrated literature in knowledge management processes (Inkinen, Kianto, & Vanhala, 2015) and static and dynamic streams interpretations about knowledge (Kianto, 2011) knowledge-based resources (Cabriló, Dahms, Mutuc, & Marlin, 2020) and knowledge-based capabilities, (Cabriló et al., 2020; Cabriló. & Dahms, 2018; Kogut & Zander, 2009; Teece, 2007) that reflect the complexity about knowledge management and its challenge to evaluate the effects that appear as long-term in
perspective (Carlucci, 2014; Gavrilova, Alsufyev, & Pleshkova, 2018). However, knowledge management is presented as a 'social art' and should not be evaluate under a group of techniques (Lundvall & Nielsen, 2007).

It’s necessary for managers to handle with finesse and under wisdom the challenge of knowledge management due to the fact that it is closer of human mind (Lundvall & Nielsen, 2007). Therefore, as a structured and systematic effort, knowledge management is crucial in decision-making process towards organizational performance (Susanty et al., 2019) and this process can leverage relational capabilities on the search of these performance achievements. For instance, knowledge management potentially differ according to social characteristics (Oliveira, Curado, Balle, & Kianto, 2020) which is the case of small businesses that have stronger relational connections and less complex organizational structures compared to large enterprises (Wee & Chua, 2013) and this can accelerate the causes of firms’ performance enhancements.

Having articulated the RC dimensions and potential moderators on firm financial performance, we steer these research questions: (1) to what extent the four RC dimensions vary in their effect on firm financial performance? (2) to what extent the effects of RC dimensions vary across knowledge management and partner integration on firm financial performance? (3) To what extent do the effects of knowledge management and partner integration influence the effect of RC dimensions on firm financial performance?

3. METHOD

Meta-analysis methodology was adopted due to its statistic robustness to integrate findings come across literature. The output of meta-analysis provides a consolidated review for a conflicted and complex body of literature. Hence, this technique depends on the relevance of a particular variable in each study identified. Additionally, meta-analysis of Pearson’s correlation as effect size is the adopted methodological procedure through the 'random-effects' model proposed by Hunter and Schmidt (1990).

3.1. Sample

The database was built from the main journals classified by the JCR (Journal Citation Reports), on the ISI - Web of Science portal. The main international journals in the social sciences are indexed in this database and is the most used in academic articles that review the literature (Vogel & Güttel, 2012). The definition of the sample consisted of researching, among the selected journals, works aimed at RC. For this, a set of keywords was used in the “topic” field of the search tool. This field searches for the title, summary, and keywords of the documents. The words used were relational capabilities AND financial performance OR management OR performance*”, without time constraint. The keywords that were followed by an asterisk (“*”) to search for all variations of the term. Thus, all articles listed in the database were considered in the collection. Preliminarily, a selection was made by reading the titles, abstracts, and introduction, eliminating articles not related to the theme.

The search initially identified 394 validated articles from 2005 to 2020 where titles, abstracts, and methods applied in the studies and, eventually, the entire document were read. To be maintained in the sample, the works should obey some criteria which are summarize in detail in Appendix A.

We built our sample of 54 empirical studies with 104 reported bivariate correlations and 29,570 sampled observations. For the list studies included in our sample, see Appendix B. The sample is consistent with the average of studies analyzed in recent meta-analyses in different fields, such as innovation [e.g., Biçakçı-Peynirci, Hizarci-Payne, Özgen, and Madran (2019)] who analyzed 38 studies and Khosravi, Newton, and Rezvani (2019) who analyzed 66 studies] and dynamic capabilities topics [e.g., Tang and Gudergan (2018) who analyzed 71 studies and Fainshmidt, Pezeshkan, Lance, Nair, and Markowski (2016) who analyzed 79 studies].
3.2. Data Coding Procedures

Following recommendations for meta-analysis steps (Steel, Beugelsdijk, & Aguinis, 2021) a code protocol was developed to capture the measures of variables and reduce errors in the coding process in order to ensure consistency in the extraction of information. The measures of variables used were identified and analyzed based on their similarities with the code protocol Table 1. The variables used to test the relationships were defined (using the code name) and publication details (author, journals, year of publication, sample size), data collection methods, and variables involved were recorded. We provide a syntax of data analytic approach in Appendix C.

| Variables                  | Definitions                                                                 | Studies Coded Examples                                                                 |
|----------------------------|-----------------------------------------------------------------------------|--------------------------------------------------------------------------------------|
| Financial Performance (FP) | Increased overall financial performance, Sales growth, Market share growth, Profit Growth, Return of Investment (ROI), Return of Assets. | (Hensen & Dong, 2020; Rudy & Johnson, 2019; Wang et al., 2015; Wang, Wang, & Liang, 2014) |
| Interfirm Relational Capacity (INTER) | Interaction with international companies or subsidiaries, global relationship with colleagues, partners, stakeholders, and shareholders. Relationship with global account customers to continue for a long time. Ability to strive and build a mutually beneficial partnership in response to requests for changes and accommodate unexpected situations. Adjust in the ongoing relationships and cope with any circumstances. | (Cabrilo & Dahms, 2018; Crick, 2019; Gounaris & Tzempelikos, 2013; Tzempelikos & Gounaris, 2015) |
| Intrafirm Relational Capacity (INTRA) | Actions and behaviors towards effective relationship with colleagues. Also, any political or relational activities associated with intrafirm relationship. And stay together during adversity/challenge sharing information and solve conflicts. | (Garcia-Perez-de-Lema et al., 2017; Hwang & Kim, 2019; Tasavori, Zafarian, & Eng, 2018; Vela-Jiménez et al., 2014; Zollo & Reuer, 2010) |
| Supply Chain Relational Capacity (SCRC) | Long-term relationships involve suppliers and high levels of trust between partners to stay within the terms of contract being skeptical of the information provided by the other party. Relationship with key supply chain partners. A set of trust and commitment among supplier involvement. | (Choi & Hwang, 2015; Hofer et al., 2014; Lado et al., 2012; Paulraj, 2011; Zhu, Krikke, Caniëls, & Wang, 2017) |
| Customer Relationship Quality (CRQ) | Focus on customer relationships as an asset in any level of organization, closeness of existing customer relationships, strong and long-term relationship with customers, invest time and efforts to build strong relationships with customers and commitment to retain strong relationships with customers. | (Chierici et al., 2019; Garrido-Moreno, Garcia-Morales, King, & Lockett, 2020; Grimmer et al., 2015; Monteiro et al., 2017; Pinjari & Mitrega, 2014) |
| Partner Integration (PI) | Intensive integration with internal and external partners. Improves functional integration facilitating the evaluation of financial performance. Enhancing communication level with partners. Synergistic ways to do business together. Integration that strives to build a mutually beneficial collaborative partnership to support financial performance. | (Adams & Graham, 2017; Hensen & Dong, 2020; Hofer et al., 2014; Hwang & Kim, 2019) |
| Knowledge Management (KM) | Promoting exchange, participatory techniques, electronic relationship-specific repositories to acquire and store common information gained from interfirm organization relationships. Sharing knowledge of know-where or know-whom with others. | (Chierici et al., 2019; Choi & Hwang, 2015; Claver-Cortés et al., 2018; Wang et al., 2014) |

3.3. Meta-Analysis Procedures

The meta-analytic procedures robustly answer the research questions first through the random effect of Hunter-Schmidt type meta-analysis (HSMA) to calculate and compare the mean effect sizes for the variables presented combinations (see Table 1). Second, through meta-analytic structural equation modeling (MASEM) we examine direct and indirect effects of RC dimensions on firm financial performance and conduct mediation tests. And third,
using the meta-analytic regression analysis (MARA) we test the moderating effects of Knowledge management and partner integration. We follow Bergh et al. (2016) to establish the guidelines for performing these analyses. Further details procedures are ahead (Bergh et al., 2016).

**HSMA procedures.** As a common input of management meta-analysis studies (Geyskens, Krishnan, Steenkamp, & Cunha, 2009; Song, Gnyawali, Srivastava, & Asgari, 2018) Pearson correlation (r) is used to estimate the mean effect sizes since it is a well-known statistic measure. Additionally, it is easy to convert the sizes of other effects such as Cohen (2013) and Hedges (1981) into Pearson ‘r’ when necessary (Field, 2001). This type of meta-analysis investigation is also popular in behavioral research (Lipsey & Wilson, 2001).

**MARA procedures.** We adopted PROCESS procedure for SPSS, version 3.5.3 to calculate moderation regression. Subsequently, we included RC dimensions (customer relationship quality, intrafirm relational capacity, interfirm relational capacity, and supply chain relational capacity) as independent variables; knowledge management and partner integration as moderators; and financial performance as dependent variables to test their effects.

**MASEM procedures.** We opt to MASEM (Meta-analysis structural equation modeling) as an opportunity to test and compare the structure of the theoretical models found into the literature and examine the direct and indirect effects of RC dimensions on firm financial performance. First, we conducted 21 separate HSMA analyses to build the correlation matrix (see Table 2). Second, we apply maximum likelihood structural equation modeling procedure and follow the recommendations from Bergh et al. (2016).

|       | CRQ     | INTER   | INTRA   | SCRC    | KM      | PI      | FP      |
|-------|---------|---------|---------|---------|---------|---------|---------|
| CRQ   | 9,811 (34) | 5,276 (22) | 5,996 (24) | 2,771 (11) | 148 (2) | 2,919 (18) |
| INTER  | 0.293   | 9,249 (30) | 9,969 (32) | 4,219 (12) | 2,572 (8) | 6,892 (21) |
| INTRA  | 0.588   | 0.289   | 5,434 (20) | 790 (3)   | 1,567 (6) | 2,557 (6)  |
| SCRC   | 0.563   | 0.214   | 0.353   | 396 (2)   | 1,862 (6) | 3,077 (11) |
| KM     | 0.536   | 0.259   | 0.326   | 0.302     | 14,325 (30) | 8,176 (28) |
| PI     | 0.553   | 0.256   | 0.345   | 0.309     | 0.308     | 6,149 (22) |
| FP     | 0.386   | 0.192   | 0.391   | 0.306     | 0.320     | 0.280     |

Table 2. MASEM correlation matrix.

Note: Italicized numbers on the above diagonal are sample size using in computing and in brackets are number of studies in computing. CRQ - Customer Relational Quality; INTER - Intrafirm Relational Capacity; INTRA - Intrafirm Relational Capacity; SCRC - Supply Chain Relational Capacity; KM - Knowledge Management; PI - Partner Integration; FP - Financial Performance.

4. RESULTS

We first present the overall effect of RC, knowledge management and partner integration on firm financial performance. Table 3 shows the results from the HSMA and the mean effect size (r) of .315 with a low standard error (0.040) and a small confidence interval (0.213 to 0.411) indicates a positive and significant effect of overall RC on firm financial performance. Variation in the effect sizes can be explained in the sample demonstrating a high level of heterogeneity (\(\tau^2 = 0.391\), \(\hat{\tau}^2 = 0.326\), \(\hat{\tau}^2 = 0.309\), \(\hat{\tau}^2 = 0.308\), \(\hat{\tau}^2 = 0.320\),). In contrast, the mean effect size of intrafirm relational capacity is the most used RC dimension, but it has the lowest mean effect size (r = 0.192). Among the variables, customer relationship quality yields the second highest mean effect size. And its mean effect size (r = 0.281) significantly greater (z test for difference \([\hat{\tau}^2 = 0.292]; \ p = 0.000\) than the mean effect size of supply chain relational capacity (r = 0.281). Intrafirm relational capacity assumes the highest mean effect size (r = 0.391) but not greater (z test for difference \([\hat{\tau}^2 = 0.332]; \ p = 0.000\) than the mean effect size of supply customer relationship quality.

The explanation for the highest effect size of intrafirm relational capacity might be that this dimension is highly influential because it is about internal organizational relationships, especially those that emphasize the ability of individual be engaged into organizational culture for knowledge transferring and where relational capabilities lay down initially through interactions among primary business actors, e.g. managers and employees who are highly involved with firm financial performance to survive (Kim, Lee, Paek, & Lee, 2013).
interfirm relational capacity focuses on knowledge-building endeavors that are more future oriented, and it may take more time to be built before all benefits become apparent (Wang et al., 2020). Supply chain relational capacity is built on foundations that are more involved specialized supplier to enhance productivity or technology-based oriented, and it has greater path dependency, which is helpful when innovativeness is related, and which could be one of the causes of firm financial performance (Lado et al., 2012; Paulraj, 2011). Other explanation is about studies that measure customer relationship quality are all survey based, and they may capture more aspects of RC with their measurement instruments and particularly interact with the proximity of customers involvement in product and/or services creation or incremental modification to attend market needs reaching out more profitability (Chierici et al., 2019; Monteiro et al., 2017). Relational Capabilities versus Knowledge Management and Partner Integration. To answer research question 2 about to what extent the effects of RC dimensions - customer relationship quality, intrafirm relational capacity, interfirm relational capacity, and supply chain relational capacity - vary across knowledge management and partner integration on firm financial performance, we examined the differential effects, as shown in Table 3, finding that customer relationship quality and intrafirm relational capacity have small effect sizes when predicting by knowledge management and partner integration on firm financial performance. In addition, we find that interfirm relational capacity and supply chain relational capacity have a greater effect size when predicting knowledge management and partner integration. Additionally, customer relationship quality has a greater effect size (z test for difference [2.94]; p = 0.000) when predicting partner integration (r = 0.353) than when predicting knowledge management (r = 0.336). Interfirm relational capacity has similar effect sizes when predicting partner integration (r = 0.256) and knowledge management (r = 0.259); (z test for difference [1.70]; p = 0.000). While supply chain relation capacity also has similar effect sizes when predicting partner integration (r = 0.309) and knowledge management (r = 0.302); (z test for difference [1.98]; p = 0.000). Comparing intrafirm relational capacity when predicting partner integration is higher (r = 0.345) but not greater (z test for difference [2.91]; p = 0.000) than intrafirm relational capacity predicting knowledge management (r = 0.326). One explanation for the findings would be that supply chain relational capacity is lightly higher when predicting knowledge management and partner integration because the need for a more interaction among actors to reach out new external knowledge to innovate process and production technologies assume greater importance for firms that pursue higher productivity or a new place into market share to enhance their financial performance (Hofer et al., 2014). Interfirm relational capacity also follows similar rational when predicting partner integration and knowledge management because the main purpose of creating partnership with external resources could be an exploitative innovation purpose when knowledge and integrability of partners assume greater importance, as well. Prior research (Adams & Graham, 2017; Hensen & Dong, 2020) suggest that network constitutes a major source of competitive advantage to pavement a way of generating financial performance through knowledge transferring or innovative ecosystem generation. Mediation and Moderation effects of knowledge management and partner integration. Using MASEM and MARA procedures to answer the research question 3 which asks to what extent do the effects of knowledge management and partner integration influence the effect of RC dimensions on firm financial performance, we additionally examined the effects of RC dimensions on firm financial performance mediated through knowledge management and partner integration. Using the MASEM procedure for the mediation analysis, we show in Table 4, that 73.87% of the total effect of RC is mediated through knowledge management and 26.13% of the total effect of RC is mediated through partner integration on firm financial performance. The effect of RC base on firm financial performance is negatively mediated through knowledge management (β = - 0.311, p = 0.001) and partner integration (β = - 0.110, p = 0.001). An explanation for this result could be that RC base itself plays a direct role in productivity, partnerships, knowledge, innovativeness, and even to integrate partners so to benefit from it requires first be utilized in value creation activities to potentially generate any financial outcomes (Garrido- Moreno et al., 2020; Saraf et al., 2007). Figure 1 show the results of MASEM analysis.
Table 3. Results of Hunter-Schmidt meta-analysis.

| Study name / Subgroup name | Number Studies | K | Total Sample | r | Z value | SE | CI LL | CI UL | Q | I2 | T2 | T | PI LL | PI UL |
|----------------------------|----------------|---|--------------|---|----------|----|--------|--------|----|----|-----|----|--------|--------|
| Overall Relationship of RC | 54             | 54| 15,245       | 0.315 | 7.780   | 0.040 | 0.213  | 0.411  | 1,143.627 | 0.954 | 0.075 | 0.274 | 0.109 | 0.495  |        |
| Customer Relational Quality| 13             | 13| 2,919        | 0.387 | 6.930   | 0.060 | 0.272  | 0.490  | 156.598   | 0.923 | 0.057 | 0.238 | -0.125 | 0.736  |        |
| Interfirm Relational Capacity| 21            | 21| 6,892        | 0.192 | 3.180   | 0.060 | 0.267  | 0.611  | 372.066   | 0.946 | 0.059 | 0.242 | -0.316 | 0.614  |        |
| Intrafirm Relational Capacity| 9             | 9 | 2,357        | 0.391 | 5.270   | 0.080 | 0.228  | 0.552  | 102.995   | 0.922 | 0.048 | 0.220 | -0.125 | 0.740  |        |
| SC Relational Capacity      | 11             | 11 | 3,077       | 0.281 | 2.710   | 0.110 | 0.052  | 0.482  | 277.870   | 0.964 | 0.106 | 0.325 | -0.441 | 0.782  |        |
| Knowledge Management        | 28             | 28| 8,176        | 0.304 | 8.940   | 0.040 | 0.238  | 0.368  | 397.073   | 0.932 | 0.050 | 0.224 | -0.150 | 0.653  |        |
| Partner Integration         | 22             | 22| 6,149        | 0.318 | 5.510   | 0.060 | 0.202  | 0.425  | 715.835   | 0.971 | 0.124 | 0.352 | -0.391 | 0.790  |        |
| Financial Performance       | 54             | 104| 29,570      | 0.302 | 12.290  | 0.030 | 0.255  | 0.347  | 2,457.177 | 0.958 | 0.082 | 0.287 | -0.254 | 0.707  |        |
| Customer Relational Quality → Knowledge Management | 11  | 11| 2,771        | 0.336 | 11.205  | 0.030 | 0.252  | 0.414  | 657.341   | 0.939 | 0.060 | 0.244 | 0.217  | 0.444  |        |
| Interfirm Relational Capacity → Knowledge Management | 12  | 12| 4,279        | 0.259 | 7.779   | 0.030 | 0.144  | 0.366  | 779.115   | 0.938 | 0.052 | 0.227 | 0.081  | 0.420  |        |
| Intrafirm Relational Capacity → Knowledge Management | 3   | 3 | 790          | 0.326 | 10.304  | 0.030 | 0.247  | 0.401  | 601.610   | 0.940 | 0.058 | 0.240 | 0.225  | 0.421  |        |
| SC Relational Capacity → Knowledge Management | 2   | 2 | 396          | 0.302 | 8.008   | 0.040 | 0.288  | 0.316  | 678.445   | 0.944 | 0.061 | 0.247 | 0.288  | 0.316  |        |
| Customer Relational Quality → Partner Integration | 2   | 2 | 148          | 0.353 | 8.268   | 0.040 | 0.281  | 0.421  | 872.780   | 0.961 | 0.098 | 0.313 | 0.281  | 0.421  |        |
| Interfirm Relational Capacity → Partner Integration | 8   | 8 | 2,572        | 0.256 | 6.078   | 0.040 | 0.125  | 0.378  | 1,351.307 | 0.969 | 0.107 | 0.327 | 0.060  | 0.433  |        |
| Intrafirm Relational Capacity → Partner Integration | 6   | 6 | 1,567        | 0.345 | 7.388   | 0.050 | 0.270  | 0.416  | 818.843   | 0.963 | 0.099 | 0.315 | 0.270  | 0.416  |        |
| SC Relational Capacity → Partner Integration | 6   | 6 | 1,862        | 0.309 | 6.024   | 0.050 | 0.277  | 0.340  | 1,070.412 | 0.970 | 0.120 | 0.347 | 0.277  | 0.340  |        |

Note: K = number of effect sizes; r = mean effect size for measurement error–corrected correlations; SE = standard error of r; CI = confidence interval; Q = Cochran’s homogeneity test (all Q values are significant at p ≤ 0.000).
Table 4. Meta-analytic structural equation modeling results.

| Model 1 Direct Effect | Model 2 Indirect Effect | Model 3 Total Effect |
|-----------------------|-------------------------|----------------------|
| **Knowledge Management** |                         |                      |
| Customer Relational Quality | -0.138                 |                      |
| Interfirm Relational Capacity | -0.180                 |                      |
| Intrafirm Relational Capacity | 0.436                  |                      |
| SC Relational Capacity | 0.871                   | 0.871                |
| **Partner Integration** |                         |                      |
| Customer Relational Quality | 0.125                  |                      |
| Interfirm Relational Capacity | 0.228                  |                      |
| Intrafirm Relational Capacity | -0.233                 |                      |
| SC Relational Capacity | 0.936                   | 0.936                |
| **Financial Performance** |                         |                      |
| Customer Relational Quality | 0.170                  | 0.029                |
| Interfirm Relational Capacity | 0.138                  | 0.031                |
| Intrafirm Relational Capacity | -0.061                 | -0.110               |
| SC Relational Capacity | 10.324                  | -0.374               |
| Knowledge Management | -0.311                  |                      |
| Partner Integration | -0.110                  | -0.110               |
| **Overall model** |                         |                      |
| R2 | 0.228                  |                      |
| RMSEA | 0.000                 |                      |
| CFI | 10.00                  |                      |

**Likelihood ratio test**

Baseline vs. saturated: -550,987
Model vs. Saturated: 00.00

Note: RMSEA = root mean square error of approximation; CFI = comparative fit index.

Figure 1. Meta-analytic structure equation modeling.

Using the MARA procedure, Table 5 shows the results of the moderation tests. In terms of Knowledge management in model 1, the coefficient of INTER is negative and not significant ($\beta = -0.3118, p = .181$). In comparison with the model 2 – partner integration, we find that the coefficient of interfirm relational capacity (INTER) is positive and significant ($\beta = 2.125, p = .007$). This finding is consistent with our expectations because partner integration provides a greater condition of firm to sharing knowledge and innovate or at least make improvements in process production or organizational structures to enhance productivity and as consequence profitability. Additionally, knowledge management can be seen as major consequent of the firm’s partners interaction after knowledge exchanging.
The coefficient of intrafirm relational capacity (INTRA) assumes other perspective in model 1 and appears positive and significant ($\beta = 13.215$, $p = 0.015$) when compare with model 2 ($\beta = -7.864$, $p = 0.010$). And this finding is also consistent with our expectations as seen in prior research (Andreeva & Kianto, 2012; Helfat & Martin, 2015; Kianto, Ritala, Spender, & Vanhala, 2014) where systematic internal mechanisms of firms with which practitioners can control and handle knowledge process and resources, typically called knowledge management practices, leverage effectively and efficiently to superior organizational performance (Cabrilo & Dahms, 2020).

Next, we compared customer relationship quality (CRQ) positive and significant in model 2 ($\beta = 3.161$, $p = 0.038$) but not significant in model 1 ($\beta = 5.539$, $p = 0.205$). This consistent with our expectations, as well considering prior research (Birkinshaw, Hamel, & Mol, 2008; Stephan, Andries, & Daou, 2019) where information sources are related to scanning external environments for new knowledge to the firm. As a good example is customers information which offer valuable resource to develop or improve products and services (Chiesa, Coughlan, & Voss, 1996; Khan & Manopichetwattana, 1989; Stephan et al., 2019).

Finally, we examined how the effects of supply chain relational capacity (SCRC) differ in model 1 positive and significant ($\beta = .971$, $p = .005$) when compared with model 2 negative and significant ($\beta = -1.605$, $p = 0.013$). This finding is not consistent with our expectation. One possible explanation would be that knowledge from suppliers represents a critical for manufacture technological advances (Nguyen, Onofrei, Akbari, & McClelland, 2020) and a developed process of knowledge sharing to enhance patents and know-how techniques require supplier communication and learning from them (Nguyen et al., 2020).

### Table 5. Meta-analytic regression analysis moderation results

| Coef. | SE  | $r^2$ | $t$  | $p$  | Coef. | SE  | $r^2$ | $t$  | $p$  |
|-------|-----|-------|------|------|-------|-----|-------|------|------|
| CRQ   | 5.539 | 28.805 | 0.192 | 0.857 | 4.015 | 0.205 | 3.161 | 8.878 | 0.960 | 0.360 | 0.974 | 25.189 | 0.038 |
| Constant | 0.539 | 3.625 | 0.149 |       |       |       | -0.135 | 1.159 | -0.117 |       |       |       |       |
| INTER | -31.118 | 34.591 | -0.570 | 0.875 | 4.669 | 0.181 | 2.125 | 2.571 | 0.926 | 0.995 | 128.910 | 0.007 |       |
| Constant | -3.499 | 5.074 | -0.690 |       |       |       | -0.031 | 0.209 | -0.146 |       |       |       |       |
| INTRA | 13.215 | 7.597 | 1.786 | 0.990 | 64.741 | 0.015 | -7.864 | 3.549 | -2.216 | 0.992 | 93.053 | 0.010 |       |
| Constant | 0.758 | 0.717 | 10.573 |       |       |       | -1.134 | 0.358 | -3.165 |       |       |       |       |
| SCRC | 0.592 | 2.426 | 0.400 | 0.997 | 199.550 | 0.005 | -1.605 | 3.748 | -0.428 | 0.991 | 73.414 | 0.013 |       |
| Constant | 0.332 | 0.193 | 1.722 |       |       |       | -0.372 | 0.364 | -1.023 |       |       |       |       |

*Note: Customer Relational Quality (CRQ); Interfirm Relational Capacity (INTER); Intrafirm Relational Capacity (INTRA); Supply Chain Relational Capacity (SCRC).*

Robustness Checking. Ensuring the robustness of our results, we conducted the sample-adjusted meta-analytic deviancy statistic method (Beal, Corey, & Dunlap, 2002) to adjust influences from potential outliers and we do not identify anyone in the sample. We report the result in Appendix D.

### 5. DISCUSSION

Given the relevance of firm financial performance aspects to the theory and practice, relational capabilities are presented as key predictors of performance, therefore our results are consistent and relevant in some respects: First, the analyses revealed that the overall relational capabilities might affect directly firm financial performance. Prior research (Bonner, Kim, & Cavusgil, 2005; Geletkanycz & Hambrick, 1997) highlighted that a strategic network identity is led by partner integration and relational embeddedness causing better performance in sales growth and market development. And external ties improve resources and financing or diversity of information to improve decisions towards firm financial performance. More recently, Chierici et al. (2019); Hwang and Kim (2019) knowledge management practice and innovation are affect by different practices from customers’ data gathering in social media which also affect customer relationship quality and potentially contribute to different levels of financial performance. In sum, RC dimensions are present among interactions of innovation efforts, entrepreneurship...
challenges, R&D demands, alliances, internalization, supply chain agility, globalization process, and other strategic management among firms.

Second, the RC dimensions might predict beyond their additive effects of ability and motivation (Van Iddekinge, Aguinis, Mackey, & DeOrtentiis, 2018). And third, the mediation analysis showed that partners integration and knowledge management interaction do not account to explain any variance in firm financial performance. This suggests an interactive effect of RC is not relatively important. And fourth, RC dimensions in some cases when moderated by knowledge management or partner integration present an invert effect on firm financial performance.

Overall, the findings quite clearly suggest the positive effects of RC dimensions on firm financial performance also in line with some existent research findings (Chierici et al., 2019; Lee et al., 2008). Lacking support for a direct hypothesis about RC acting in firm financial suggest the need to revisit models that predict or imply a non-interactive relation between RC dimensions and firm financial performance. It means, performance theories and models should specify RC dimensions exerting independent effects on financial performance and not only interactive effects (Crick, 2019; Torkkeli, Kuivalainen, Saarenketo, & Puimalainen, 2016; Van Iddekinge et al., 2018). In addition, RC should not be an asset highly demanded only towards specific tasks, such as alliances, internationalization, or overall networks. As highlighted by Srivastava, Iyer, and Rawwas (2017) it should support the conventional wisdom relating collaboration to operational and financial performance (Srivastava et al., 2017). This conclusion also has other implications for future research such as new estimates of statistics that can focus not only on interactive effects but also on additive effects of RC dimensions. This, in turn, can substantially improve the lack of clarity about relational capabilities requirements and make future research more practically effective.

6. CONCLUSION AND IMPLICATIONS

RC dimensions should be much more debate as a business strategy towards firm financial performance. This study adopted a meta-analysis approach to build a consensus on this relationship perspective through empirical studies reported in the literature from 2005 to 2020. Knowledge Management and Partner integration were explored as mediators and moderators of this relationship, as well. And the results reveal an aggregate level of positive association between RC dimensions itself and firm financial performance and slightly improvements when the presence of some moderating aspects.

Our findings contribute to theory by testing on understanding of the relative importance of RC dimensions for business survival. We shed light on whether RC dimensions is relatively more important to firm financial performance and how organizations might understand these dynamic capabilities to facilitate decision-making. The results also provide an impulse for practitioners to continue to pay attention on relationships quality into organizations practices.

However, this research offers certain limitations once prior research claims that contexts are important for RC dimensions success. Thus, we suggest to booster the RC dimensions research field alternative contexts such as, distance between partners, similarities, and discrepancies among type of industry, complexity of relationships to provide further insights into our proposed research questions.

Additionally, to examine this link more closely, the relationship between RC dimensions (intrafirm and interfirm relational capacity, customer, and supply chain relationships, and potential others relational capabilities) and firm financial performance measures can be investigated more explicitly without any other interactive variables. Furthermore, the upcoming studies could also understand direct and indirect relationship of business political and relational ties on firm financial performance also exploring the role of other moderators towards the association RC dimensions on firm financial performance.
Funding: This study was financed in part by the Coordenação de Aperfeiçoamento de Pessoal de Nível Superior - Brasil (CAPES).
Competing Interests: The authors declare that they have no competing interests.
Acknowledgement: All authors contributed equally to the conception and design of the study.

REFERENCES
Adams, F. G., & Graham, K. W. (2017). Integration, knowledge creation and B2B governance: The role of resource hierarchies in financial performance. Industrial Marketing Management, 63, 179-191. Available at: https://doi.org/10.1016/j.indmarman.2016.10.009.
Aguinis, H., Culpepper, S. A., & Pierce, C. A. (2016). Differential prediction generalization in college admissions testing. Journal of Educational Psychology, 108(7), 1045-1059. Available at: https://doi.org/10.1037/edu0000104.
Andreeva, T., & Kianto, A. (2012). Does knowledge management really matter? Linking knowledge management practices, competitiveness and economic performance. Journal of Knowledge Management, 16(4), 617–636. Available at: https://doi.org/10.1108/13673271211246185.
Beal, D. J., Corey, D. M., & Dunlap, W. P. (2002). On the bias of Huffcutt and Arthur’s (1995) procedure for identifying outliers in the meta-analysis of correlations. Journal of Applied Psychology, 87(3), 583–589. Available at: https://doi.org/10.1037/0021-9010.87.3.583.
Becker, B. J., & Wu, M.-J. (2007). The synthesis of regression slopes in meta-analysis. Statistical Science, 22(3), 414-429. Available at: https://doi.org/10.1214/07-sts243.
Bergh, D. D., Aguinis, H., Heavey, C., Ketchen, D. J., Boyd, B. K., Su, P., & Joo, H. (2016). Using meta-analytic structural equation modeling to advance strategic management research: Guidelines and an empirical illustration via the strategic leadership-performance relationship. Strategic Management Journal, 37(3), 477-497. Available at: https://doi.org/10.1002/smj.2338.
Bıçakçıoğlu-Peynirci, N., Hizarci-Payne, A. K., Özgen, O., & Madran, C. (2019). Innovation and export performance: A meta-analytic review and theoretical integration. European Journal of Innovation Management, 23(5), 789–812. Available at: https://doi.org/10.1108/EJIM-06-2019-0149.
Birkinshaw, J., Hamel, G., & Mol, M. J. (2008). Management innovation. Academy of Management Review, 33(4), 825-845. Available at: https://doi.org/10.5465/amr.2008.34421969.
Bonner, J. M., Kim, D., & Cavusgil, S. T. (2005). Self-perceived strategic network identity and its effects on market performance in alliance relationships. Journal of Business Research, 58(10), 1371-1380. Available at: https://doi.org/10.1016/j.jbusres.2004.07.002.
Brinckmann, J., & Hoegl, M. (2011). Effects of initial teamwork capability and initial relational capability on the development of new technology-based firms. Strategic Entrepreneurship Journal, 5(1), 57-57. Available at: https://doi.org/10.1002/sej.106.
Cabrilo, S., Dahms, S., Mutuc, E. B., & Marlin, J. (2020). The role of IT practices in facilitating relational and trust capital for superior innovation performance: The case of Taiwanese companies. Journal of Intellectual Capital, 21(5), 753-779. Available at: https://doi.org/jic-07-2019-0182.
Cabrilo, S., & Dahms, S. (2018). How strategic knowledge management drives intellectual capital to superior innovation and market performance. Journal of Knowledge Management, 22(3), 621–648. Available at: https://doi.org/10.1108/JKM-07-2017-0309.
Cabrilo, S., & Dahms, S. (2020). The role of multidimensional intellectual capital and organizational learning practices in innovation performance. European Management Review, 17(4), 835-855. Available at: https://doi.org/10.1111/emre.12396.
Capaldo, A. (2007). Network structure and innovation: The leveraging of a dual network as a distinctive relational capability. Strategic Management Journal, 28(6), 585–608. Available at: https://doi.org/10.1002/smj.621.
Carlucci, D. (2014). Grasping knowledge-based value creation dynamics in 21st century organizations. Measuring Business Excellence, 18(1), 1-14. Available at: https://doi.org/10.1108/MBE-11-2013-0056.
Cavicchi, C., & Vagnoni, E. (2018). Intellectual capital in support of farm businesses’ strategic management: A case study. *Journal of Intellectual Capital, 19*(4), 692–711. Available at: https://doi.org/10.1108/JIC-11-2017-0150.

Chen, Y.-C., Li, P.-C., & Arnold, T. J. (2013). Effects of collaborative communication on the development of market-relating capabilities and relational performance metrics in industrial markets. *Industrial Marketing Management, 42*(8), 1181–1191. Available at: https://doi.org/10.1016/j.indmarman.2013.03.014.

Chierici, R., Mazzucchelli, A., Garcia-Perez, A., & Vrontis, D. (2019). Transforming big data into knowledge: The role of knowledge management practice. *Management Decision, 57*(8), 1902–1922. Available at: https://doi.org/10.1108/MD-07-2018-0834.

Chiesa, V., Coughlan, P., & Voss, C. A. (1996). Development of a technical innovation audit. *Journal of Product Innovation Management, 13*(2), 105–136. Available at: https://doi.org/10.1111/1540-5885.1320105.

Choi, D., & Hwang, T. (2015). The impact of green supply chain management practices on firm performance: The role of collaborative capability. *Operations Management Research, 8*(3–4), 69–83. Available at: https://doi.org/10.1007/s12063-015-0100-x.

Choi, S. (2014). Developing relationship-specific memory and absorptive capacity in interorganizational relationships. *Information Technology and Management, 15*(4), 223–238. Available at: https://doi.org/10.1007/s10799-014-0181-5.

Choon Tan, K., Kannan, V. R., Hsu, C., & Keong Leong, G. (2010). Supply chain information and relational alignments: mediators of EDI on firm performance. *International Journal of Physical Distribution & Logistics Management, 40*(5), 377–394. Available at: https://doi.org/10.1108/0960003101052831.

Chowdhury, M. M. H., Quaddus, M., & Agarwal, R. (2019). Supply chain resilience for performance: Role of relational practices and network complexities. *Supply Chain Management, 24*(5), 659-676. Available at: https://doi.org/10.1108/SCM-09-2018-0392.

Claver-Cortés, E., Zaragoza-Sáez, P., Úbeda-García, M., Marco-Lajara, B., & García-Lillo, F. (2018). Strategic knowledge management in subsidiaries and MNC performance. The role of the relational context. *Journal of Knowledge Management, 22*(5), 1153–1175. Available at: https://doi.org/10.1108/JKM-07-2017-0805.

Cohen, J. C. P. (2013). *Applied multiple regression/correlation analysis for the behavioral sciences* (2nd ed.). New York: Psyclology Press.

Collins, J. D., & Hitt, M. A. (2006). Leveraging tacit knowledge in alliances: The importance of using relational capabilities to build and leverage relational capital. *Journal of Engineering and Technology Management, 23*(3), 147–167. Available at: https://doi.org/10.1016/j.jengtecman.2006.06.007.

Crick, J. M. (2019). The dark side of coopetition: When collaborating with competitors is harmful for company performance. *Journal of Business & Industrial Marketing, 35*(2), 318–337. Available at: https://doi.org/10.1108/JBIM-01-2019-0057.

Demeter, K., Losonci, D., & Nagy, J. (2020). Road to digital manufacturing – a longitudinal case-based analysis. *Journal of Manufacturing Technology Management, 32*(3), 820–839. Available at: https://doi.org/10.1108/JMTM-06-2019-0226.

Donate, M. J., & Guadamillas, F. (2015). An empirical study on the relationships between knowledge management, knowledge-oriented human resource practices and innovation. *Knowledge Management Research & Practice, 13*(2), 134–148. Available at: https://doi.org/10.1057/kmrp.2013.36.

Doney, P. M., & Cannon, J. P. (1997). An examination of the nature of trust in buyer–seller relationships. *Journal of Marketing, 61*(2), 35–51. Available at: https://doi.org/10.1177/00222429706100203.

Dubey, R., Gunasekaran, A., Childe, S. J., Papadopoulos, T., Blome, C., & Luo, Z. (2019). Antecedents of resilient supply chains: An empirical study. *IEEE Transactions on Engineering Management, 66*(1), 8–19. Available at: https://doi.org/10.1109/TEM.2017.2723042.

Dyer, J. H., & Singh, H. (1998). Cooperative the relational and sources of strategy competitive advantage. *The Academy of Management Review, 23*(4), 660–679. Available at: https://doi.org/10.5465/AMR.1998.1255632.

Dyer, J. H., & Singh, H. (1998). The relational view: Cooperative strategy and sources of interorganizational competitive advantage. *Academy of Management Review, 23*(4), 660-679. Available at: https://doi.org/10.5465/amr.1998.1255632.
Einola, S., Kohtamäki, M., Parida, V., & Wincent, J. (2017). Retrospective relational sensemaking in R&D offshoring. *Industrial Marketing Management, 63*, 205–216. Available at: https://doi.org/10.1016/j.indmarman.2016.10.001.

Ekanayake, S., Childerhouse, P., & Sun, P. (2017). The symbiotic existence of interorganizational and interpersonal ties in supply chain collaboration. *The International Journal of Logistics Management, 28*(3), 723–754. Available at: https://doi.org/10.1108/ILM-12-2014-0198.

Fainshmidt, S., Pezeshkian, A., Lance, F. M., Nair, A., & Markowski, E. (2016). Dynamic capabilities and organizational performance: A meta-analytic evaluation and extension: Dynamic capabilities and organizational performance. *Journal of Management Studies, 53*(8), 1348–1380. Available at: https://doi.org/10.1111/joms.12213.

Field, A. P. (2001). Meta-analysis of correlation coefficients: A Monte Carlo comparison of fixed- and random-effects methods. *Psychological Methods, 6*(2), 161–180. Available at: https://doi.org/10.1037/1082-989X.6.2.161.

Fischer, D. (2019). Relational leadership and regional development: A case study on new agriculture ventures in Uganda. *Journal of Developmental Entrepreneurship, 24*(2), 1950010. Available at: https://doi.org/10.1142/S108494719500109.

Fosso, W. S., & Akter, S. (2019). Understanding supply chain analytics capabilities and agility for data-rich environments. *International Journal of Operations & Production Management, 39*(6/7/8), 887–912. Available at: https://doi.org/10.1108/IOPM-01-2019-0025.

Fujimoto, Y., & Uddin, M. J. (2020). Poor-inclusive workplace model: A relational perspective. *Equality, Diversity and Inclusion: An International Journal, 39*(8), 881–900. Available at: https://doi.org/10.1080/1051712X.2019.1616297.

Gao, T., & Shi, L. H. (2011). How do multinational suppliers formulate mechanisms of global account coordination? An integrative framework and empirical study. *Journal of International Marketing, 19*(4), 61–87. Available at: https://doi.org/10.1509/jim.11.0005.

Gavrilova, T., Alsufyev, A., & Pleshkova, A. (2018). Formalizing company KM portrait: Pilot study with evidence from Russia. *Measuring Business Excellence, 22*(3), 315–332. Available at: https://doi.org/10.1108/MBE-09-2017-0067.

Geletkanycz, M. A., & Hambrick, D. C. (1997). The external ties of top executives: Implications for strategic choice and performance. *Administrative Science Quarterly, 42*(4), 654–681. Available at: https://doi.org/10.2307/2393653.

Geyskens, I., Krishnan, R., Steenkamp, J.-B. E. M., & Cunha, P. V. (2009). A review and evaluation of meta-analysis practices in management research. *Journal of Management, 35*(2), 393–419. Available at: https://doi.org/10.1177/0149206308328501.

Golgeci, I., & Gligor, D. M. (2017). The interplay between key marketing and supply chain management capabilities: The role of integrative mechanisms. *Journal of Business & Industrial Marketing, 32*(3), 472–483. Available at: https://doi.org/10.1108/JBIM-05-2016-0102.

Gounaris, S., & Tzempelikos, N. (2013). Key account management orientation and its implications: A conceptual and empirical examination. *Journal of Business-to-Business Marketing, 20*(1), 33–50. Available at: https://doi.org/10.1080/1051712X.2012.690173.

Grimmer, L., Miles, M. P., & Grimmer, M. (2013). A research note on the effect of entrepreneurial orientation on small retailer performance: A resource-advantage perspective. *International Entrepreneurship and Management Journal, 11*(2), 409–424. Available at: https://doi.org/10.1007/s11365-013-0279-x.

Harrigan, P., Evers, U., Miles, M. P., & Daly, T. (2018). Customer engagement and the relationship between involvement, engagement, self-brand connection and brand usage intent. *Journal of Business Research, 88*, 388–396. Available at: https://doi.org/10.1016/j.jbusres.2017.11.046.

© 2021 Conscientia Beam. All Rights Reserved.
Hedges, L. V. (1981). Distribution theory for glass’s estimator of effect size and related estimators. *Journal of Educational Statistics, 6*(2), 107–128. Available at: https://doi.org/10.3102/01629980060002107.

Helfat, C. E., & Martin, J. A. (2015). Dynamic managerial capabilities: Review and assessment of managerial impact on strategic change. *Journal of Management, 41*(5), 1281–1312. Available at: https://doi.org/10.1177/0149206314561301.

Hensen, A. H. R., & Dong, J. Q. (2020). Hierarchical business value of information technology: Toward a digital innovation value chain. *Information & Management, 57*(4), 103209. Available at: https://doi.org/10.1016/j.im.2019.103209.

Hofer, A. R., Hofer, C., & Waller, M. A. (2014). What gets suppliers to play and who gets the pay? On the antecedents and outcomes of collaboration in retailer-supplier dyads. *International Journal of Logistics Management, 25* (2), 226–244. Available at: https://doi.org/10.1108/IJLBM-01-2014-0012.

Hunter, J., & Schmidt, F. (2004). *Methods of meta-analysis Correcting error and bias in research findings*. Thousand Oaks, CA: Sage.

Hunter, J., & Schmidt, F. (1990). *Methods of meta-analysis, correcting error and bias in research findings*. London: Sage Publications.

Hwang, T., & Kim, S. T. (2019). Balancing in-house and outsourced logistics services: Effects on supply chain agility and firm performance. *Service Business, 13*(3), 531–556. Available at: https://doi.org/10.1007/s11628-018-00394-x.

Inkinen, H. T., Kianto, A., & Vanhala, M. (2015). Knowledge management practices and innovation performance in Finland. *Baltic Journal of Management, 10*(4), 432–455. Available at: https://doi.org/10.1108/BJM-10-2014-0178.

Johnson, J. W. (2000). A heuristic method for estimating the relative weight of predictor variables in multiple regression. *Multivariate Behavioral Research, 35*(1), 1–19. Available at: https://doi.org/10.1207/s15327906mbr3501_1.

Johnson, J. W., & LeBreton, J. M. (2004). History and use of relative importance indices in organizational research. *Organizational Research Methods, 7*(3), 238–257.

Kale, P., Singh, H., & Perlmutter, H. (2000). Learning and protection of proprietary assets in strategic alliances: Building relational capital. *Strategic Management Journal, 21*(5), 217–237. Available at: https://doi.org/10.1002/(SICI)1097-0266(200003)21:3<217::AID-SMJ653>3.0.CO;2-Y.

Khan, A. M., & Manopichetwattana, V. (1989). Innovative and noninnovative small firms: Types and characteristics. *Management Science, 35*(5), 597–606. Available at: https://doi.org/10.1287/mnsc.35.5.597.

Khosravi, P., Newton, C., & Rezvani, A. (2019). Management innovation: A systematic review and meta-analysis of past decades of research. *European Management Journal, 37*(6), 694–707. Available at: https://doi.org/10.1016/j.emj.2019.03.003.

Kianto, A. (2011). The influence of knowledge management on continuous innovation. *International Journal of Technology Management, 55*(1/2), 110. Available at: https://doi.org/10.1504/IJTM.2011.041682.

Kianto, A., Andreeva, T., & Pavlov, Y. (2013). The impact of intellectual capital management on company competitiveness and financial performance. *Knowledge Management Research & Practice, 11*(2), 112–122. Available at: https://doi.org/10.1057/kmpr.2013.9.

Kianto, A., Ritala, P., Spender, J.-C., & Vanhala, M. (2014). The interaction of intellectual capital assets and knowledge management practices in organizational value creation. *Journal of Intellectual Capital, 15*(3), 362–375. Available at: https://doi.org/10.1080/14696489.2014.900359.

Kim, T. T., Lee, G., Paek, S., & Lee, S. (2013). Social capital, knowledge sharing and organizational performance: What structural relationship do they have in hotels? *International Journal of Contemporary Hospitality Management, 25*(5), 683–704. Available at: https://doi.org/10.1108/IJCHM-jan-2012-0010.

Kogut, B., & Zander, U. (2009). Knowledge of the firm. Combinative capabilities, and the replication of technology. *Knowledge in Organisations, 17*–36. Available at: https://doi.org/10.1287/orsc.3.3.383.

Kohtamäki, M., Partanen, J., & Möller, K. (2013). Making a profit with R&D services - The critical role of relational capital. *Industrial Marketing Management, 42*(1), 71–81. Available at: https://doi.org/10.1016/j.indmarman.2012.11.001.

Kostova, T. (1999). Transnational transfer of strategic organizational practices: A contextual perspective. *The Academy of Management Review, 24*(2), 309. Available at: https://doi.org/10.2307/250084.

Kostova, T., & Roth, K. (2002). Adoption of an organizational practice by subsidiaries of multinational corporations: Institutional and relational effects. *Academy of Management Journal, 45*(1), 215–233. Available at: https://doi.org/10.5465/3069293.
Kyriakopoulos, K., Hughes, M., & Hughes, P. (2016). The role of marketing resources in radical innovation activity: antecedents and payoffs. *Journal of Product Innovation Management, 33*(4), 398-417. Available at: https://doi.org/10.1111/jpim.12285.

Lado, A. A., Paulraj, A., & Chen, I. J. (2012). Customer focus, supply-chain relational capabilities and performance: Evidence from US manufacturing industries. *International Journal of Logistics Management, 22*(2), 202–221. Available at: https://doi.org/10.1108/09574091111156550.

Lahiri, S., Kedia, B. L., & Mukherjee, D. (2012). The impact of management capability on the resource–performance linkage: Examining Indian outsourcing providers. *Journal of World Business, 47*(1), 145-155. Available at: https://doi.org/10.1016/j.jwb.2011.02.001.

Le, H., Schmidt, F. L., & Putka, D. J. (2009). The multifaceted nature of measurement artifacts and its implications for estimating construct-level relationships. *Organizational Research Methods, 12*(1), 165-200. Available at: https://doi.org/10.1177/1094428107302900.

Lee, R. P., Chen, Q., Kim, D., & Johnson, J. L. (2008). Knowledge transfer between multinational corporations' headquarters and their subsidiaries: Influences on and implications for new product outcomes. *Journal of International Marketing, 16*(2), 1–31. Available at: https://doi.org/10.1509/jimk.16.2.1.

Lee, S. M., Kim, S. T., & Choi, D. (2012). Green supply chain management and organizational performance. *Industrial Management & Data Systems, 112*(8), 1148-1180. Available at: https://doi.org/10.1108/02635571211264609.

Levin, D. Z., & Cross, R. (2004). The strength of weak ties you can trust: The mediating role of trust in effective knowledge transfer. *Management Science, 50*(11), 1477-1490. Available at: https://doi.org/10.1287/mnsc.1030.0136.

Lew, Y. K., Sinkovics, R. R., & Kuivalainen, O. (2013). Upstream internationalization process: Roles of social capital in creating exploratory capability and market performance. *International Business Review, 22*(6), 1101-1120. Available at: https://doi.org/10.1016/j.ibusrev.2013.03.001.

Li, Y., Zhang, Y., & Zheng, S. (2016). Social capital, portfolio management capability and exploratory innovation: Evidence from China. *Journal of Business & Industrial Marketing, 31*(6), 794–807. Available at: https://doi.org/10.1108/JBIM-09-2012-0166.

Lipsey, M. W., & Wilson, D. B. (2001). Practical meta-analysis (1st ed., pp. 1-247). Washington, DC: Sage Publications, Inc.

Liu, H., Ke, W., Wei, K. K., & Hua, Z. (2013). The impact of IT capabilities on firm performance: The mediating roles of absorptive capacity and supply chain agility. *Decision Support Systems, 54*(3), 1452–1462. Available at: https://doi.org/10.1016/j.dss.2012.12.016.

Lorenzoni, G., & Lipparini, A. (1999). The leveraging of interfirm relationships as a distinctive organizational capability: A longitudinal study. *Strategic Management Journal, 20*(4), 317–338. Available at: https://doi.org/10.1002/(SICI)1097-0266(199904)20:4<317::AID-SMJ28>3.0.CO;2-3.

Loukis, E., Janssen, M., & Mintchev, I. (2019). Determinants of software-as-a-service benefits and impact on firm performance. *Decision Support Systems, 117*, 38-47. Available at: https://doi.org/10.1016/j.dss.2018.12.005.

Lundvall, B. K., & Nielsen, P. (2007). Knowledge management and innovation performance. *International Journal of Manpower, 28*(3-4), 207–223. Available at: https://doi.org/10.1108/01437720710755218.

Mastio, E., Chew, E., & Dovey, K. A. (2019). The learning organization as a context for value co-creation. *The Learning Organization, 27*(1), 291–303. Available at: https://doi.org/10.1108/TL0-12-2018-0219.

Matikainen, M., Terho, H., Parvinen, P., & Juppo, A. (2016). The role and impact of firm's strategic orientations on launch performance: Significance of relationship orientation. *Journal of Business & Industrial Marketing, 31*(5), 625-639. Available at: https://doi.org/10.1108/JIBM-12-2014-0250.

Mitrega, M., Spăcilă, V., & Pafiţar, G. (2019). Is partner knowledge equally important for businesses from post-communist countries?—comparative study of Polish and Slovenian companies. *JEEMS Journal of East European Management Studies, 24*(1), 155-177. Available at: https://doi.org/10.5771/0949-6181-2019-1-155.
Monteiro, A. P., Soares, A. M., & Rua, O. L. (2017). Entrepreneurial orientation and export performance: The mediating effect of organisational resources and dynamic capabilities. *Journal for International Business and Entrepreneurship Development, 10*(1), 3. Available at: https://doi.org/10.1504/jibed.2017.082749.

Monteiro, A. P., Soares, A. M., & Rua, O. L. (2019). Linking intangible resources and entrepreneurial orientation to export performance: The mediating effect of dynamic capabilities. *Journal of Innovation & Knowledge, 4*(3), 179-187. Available at: https://doi.org/10.1016/j.jik.2019.04.001.

Moorman, C., & Rust, R. T. (1999). The role of marketing. *Journal of Marketing, 63*(4_suppl1), 180–197. Available at: https://doi.org/10.1177/002224939906341117.

Mouritsen, J. (2006). Problematising intellectual capital research: Ostensive versus performative IC. *Accounting, Auditing & Accountability Journal, 19*(6), 820–841. Available at: https://doi.org/10.1108/095135706106709881.

Murray, C. (2020). Imperial dialectics and epistemic mapping: From decolonisation to anti-Eurocentric IR. *European Journal of International Relations, 26*(2), 419–442. Available at: https://doi.org/10.1017/1354066198730380.

Nguyen, H., Onofrei, G., Akbari, M., & McClelland, R. (2020). Enhancing quality and innovation performance: The role of supplier communication and knowledge development. *Total Quality Management and Business Excellence, 1*–24. Available at: https://doi.org/10.1080/14783363.2020.1858711.

Nhon, H. T., Thong, B. Q., & Trung, N. Q. (2020). The effects of intellectual capital on information communication technology firm performance: A moderated mediation analysis of environmental uncertainty. *Cogent Business and Management, 7*(1), 1825584. Available at: https://doi.org/10.1080/23311975.2020.1825584.

Ni, W., & Sun, H. (2018). A contingent perspective on the synergistic effect of governance mechanisms on sustainable supply chain. *Supply Chain Management, 23*(3), 153-170. Available at: https://doi.org/10.1108/SCM-08-2017-0260.

Oliveira, M., Curado, C., Balle, A. R., & Kianto, A. (2020). Knowledge sharing, intellectual capital and organizational results in SMES: Are they related? *Journal of Intellectual Capital, 21*(6), 803–911. Available at: https://doi.org/10.1108/JIC-04-2019-0077.

Paulraj, A. (2011). Understanding the relationships between internal resources and capabilities, sustainable supply management and organizational sustainability. *Journal of Supply Chain Management, 47*(1), 19–37. Available at: https://doi.org/10.1111/j1.1744-4957.2010.00212.x.

Peterson, R. A., & Brown, S. P. (2005). On the use of beta coefficients in meta-analysis. *Journal of Applied Psychology, 90*(1), 175–181.

Pfajfar, G., & Mitrega, M. (2014). Leveraging business partnerships with internal relationships—moderating effects of special investments in social ties under pressure of recession. *Transformations in Business and Economics, 13*(3), 79–95.

Poppo, L., & Zenger, T. (2002). Do formal contracts and relational governance function as substitutes or complements? *Strategic Management Journal, 23*(8), 707–725. Available at: https://doi.org/10.1002/smj.249.

Prashar, A. (2018). TQM as business strategy: A meta-analysis review. *International Journal of Productivity and Quality Management, 23*(1), 74-89.

Qi Dong, J., McCarthy, K. J., & Schoenmakers, W. W. (2017). How central is too central? Organizing interorganizational collaboration networks for breakthrough innovation. *Journal of Product Innovation Management, 34*(4), 526-542. Available at: https://doi.org/10.1111/jpim.12584.

Raju, N. S., Pappas, S., & Williams, C. P. (1989). An empirical Monte Carlo test of the accuracy of the correlation, covariance, and regression slope models for assessing validity generalization. *Journal of Applied Psychology, 74*(6), 901-911. Available at: https://doi.org/10.1037/0021-9010.74.6.901.

Raman, R., Chadee, D., Roxas, B., & Michailova, S. (2018). Effects of partnership quality, talent management, and global mindset on performance of offshore IT service providers in India. *Journal of International Management, 19*(4), 333-346. Available at: https://doi.org/10.1016/j.jintman.2013.03.010.

Renouard, C. (2011). Corporate social responsibility, utilitarianism, and the capabilities approach. *Journal of Business Ethics, 98*(1), 85-97. Available at: https://doi.org/10.1007/s10551-010-0536-8.
Rivard, S. (2020). Theory building is neither an art nor a science. It is a craft. *Journal of Information Technology, 1*(1), 1-13. Available at: https://doi.org/10.1057/s41267-020-00385-z.

Rodríguez-Díaz, M., & Rodríguez-Díaz, R. (2018). A decision-making and governance framework for the renewal of tourism destinations: The case of the Canary Islands. *Sustainability, 10*(2), 310. Available at: https://doi.org/10.3390/su10020310.

Rudy, B. C., & Johnson, A. F. (2019). The chief political officer: CEO characteristics and firm investment in corporate political activity. *Business & Society, 58*(3), 616-643. Available at: https://doi.org/10.1177/0007650316675606.

Salvato, C., & Vassolo, R. (2018). The sources of dynamism in dynamic capabilities. *Strategic Management Journal, 39*(6), 1728-1752. Available at: https://doi.org/10.1002/smj.2703.

Sandberg, J., & Alvesson, M. (2011). Ways of constructing research questions: Gap-spotting or problematization? *Organization, 18*(1), 23-44. Available at: https://doi.org/10.1177/1350508410372151.

Saraf, N., Langdon, C. S., & Gosain, S. (2007). IS application capabilities and relational value in interfirm partnerships. *Information Systems Research, 18*(3), 320–339. Available at: https://doi.org/10.1287/isre.1070.0133.

Shou, Y., Shao, J., & Chen, A. (2017). Relational resources and performance of Chinese third-party logistics providers: The mediating role of innovation capability. *International Journal of Physical Distribution & Logistics Management, 47*(9), 864-883. Available at: https://doi.org/10.1108/IJPDLM-09-2016-0271.

Skarmeas, D., Zeriti, A., & Argouslidis, P. (2019). Importer and exporter capabilities, governance mechanisms, and environmental factors determining customer-perceived relationship value. *Industrial Marketing Management, 78*(November), 158–168. Available at: https://doi.org/10.1016/j.indmarman.2017.11.004.

Sklyar, A., Kowalkowski, C., Tronvoll, B., & Sörhammar, D. (2019). Organizing for digital servitization: A service ecosystem perspective. *Journal of Business Research, 104*, 450–460. Available at: https://doi.org/10.1016/j.jbusres.2019.02.012.

Smirnova, M. M., Rebiazina, V. A., & Khomich, S. G. (2018). When does innovation collaboration pay off? The role of relational learning and the timing of collaboration. *Industrial Marketing Management, 73*, 126-137. Available at: https://doi.org/10.1016/j.indmarman.2017.11.001.

Song, Y., Gnyawali, D. R., Srivastava, M. K., & Asgari, E. (2018). In search of precision in absorptive capacity research: A synthesis of the literature and consolidation of findings. *Journal of Management, 44*(6), 2343–2374. Available at: https://doi.org/10.1177/1059107917738361.

Sraha, G., Sharma, R. R., Crick, D., & Crick, J. M. (2020). International experience, commitment, distribution adaptation and performance: A study of Ghanaian firms in B2B export markets. *The Journal of Business and Industrial Marketing, 35*(11), 1715-1738. Available at: https://doi.org/10.1108/jbim-05-2019-0197.

Srivastava, P., Iyer, K. N. S., & Rawwas, M. Y. A. (2017). Performance impact of supply chain partnership strategy-environment co-alignment. *International Journal of Operations & Production Management, 37*(7), 927–949. Available at: https://doi.org/10.1108/IIJOPM-06-2015-0586.

Stanko, M. A., & Bonner, J. M. (2013). Projective customer competence: Projecting future customer needs that drive innovation performance. *Industrial Marketing Management, 42*(8), 1255-1265. Available at: https://doi.org/10.1016/j.indmarman.2013.05.016.

Steel, P., Beugelsdijk, S., & Aguinis, H. (2021). The anatomy of an award-winning meta-analysis: Recommendations for authors, reviewers, and readers of meta-analytic reviews. *Journal of International Business Studies, 52*(1), 23–44. Available at: https://doi.org/10.1057/s41267-020-00385-z.

Stephan, U., Andries, P., & Daou, A. (2019). Goal multiplicity and innovation: How social and economic goals affect open innovation and innovation performance. *Journal of Product Innovation Management, 36*(6), 721-748. Available at: https://doi.org/10.1111/jpim.12511.

Susanty, A. I., Yuningsih, Y., & Anggadwita, G. (2019). Knowledge management practices and innovation performance: A study at Indonesian government apparatus research and training center. *Journal of Science and Technology Policy Management, 10*(2), 301–318. Available at: https://doi.org/10.1108/JSTPM-03-2018-0030.
Suurmond, R., van Rhee, H., & Hak, T. (2017). Introduction, comparison, and validation of meta-essentials: A free and simple tool for meta-analysis. Research Synthesis Methods, 8(4), 537-553. Available at: https://doi.org/10.1002/jrsm.1260.

Tang, R. W., & Gudergan, S. P. (2018). A Meta-analysis of the international experience–ownership strategy relationship: A dynamic capabilities view. Management International Review, 58(4), 541-570. Available at: https://doi.org/10.1007/s11575-018-0549-z.

Tasavori, M., Zaefarian, R., & Eng, T. Y. (2018). Internal social capital and international firm performance in emerging market family firms: The mediating role of participative governance. International Small Business Journal: Researching Entrepreneurship, 36(8), 887–910. Available at: https://doi.org/10.1177/0266242617731415.

Teece, D. J. (2007). Explicating dynamic capabilities: The nature and microfoundations of (sustainable) enterprise performance. Strategic Management Journal, 28, 1319–1350. Available at: https://doi.org/10.1002/smj.640.

Todorova, G., & Durisin, B. (2007). Absorptive capacity: Valuing a reconceptualization. Academy of Management Review, 32(3), 774-786. Available at: https://doi.org/10.5465/amr.2007.25275513.

Torkkeli, L., Kuivalainen, O., Saarenketo, S., & Puumalainen, K. (2016). Network competence in Finnish SMEs: Implications for growth. Baltic Journal of Management, 11(2), 207–230. Available at: https://doi.org/10.1108/BJM-02-2015-0032.

Tzempelikos, N., & Gounaris, S. (2015). Linking key account management practices to performance outcomes. Industrial Marketing Management, 44(1), 22–34. Available at: https://doi.org/10.1016/j.indmarman.2015.02.018.

Van Iddekinge, C. H., Aguinis, H., Mackey, J. D., & DeOrentiis, P. S. (2018). A meta-analysis of the interactive, additive, and relative effects of cognitive ability and motivation on performance. Journal of Management, 44(1), 249-279. Available at: https://doi.org/10.1177/0149206317702220.

Vela-Jiménez, M. J., Martínez-Sánchez, Á., Pérez-Pérez, M., & Abella-Garcés, S. (2014). How environmental changes and cooperation moderate labour flexibility and firm performance? Personnel Review, 43(6), 915–936. Available at: https://doi.org/10.1108/PR-01-2013-0014.

Vogel, R., & Güttel, W. H. (2012). The dynamic capability view in strategic management: A bibliometric review: DCV in strategic management. International Journal of Management Reviews, 15(1), 426–446. Available at: https://doi.org/10.1111/ijmr.12000.

Wang, Z., Jean, R. J. B., & Zhao, X. (2020). The direct and indirect impact of relational ties on innovation performance: An empirical study in China. IEEE Transactions on Engineering Management, 67(2), 295–308. Available at: https://doi.org/10.1109/TEM.2018.2883481.

Wang, G., Dou, W., Zhu, W., & Zhou, N. (2015). The effects of firm capabilities on external collaboration and performance: The moderating role of market turbulence. Journal of Business Research, 68(9), 1928–1936. Available at: https://doi.org/10.1016/j.jbusres.2015.01.002.

Wang, Z., Wang, N., & Liang, H. (2014). Knowledge sharing, intellectual capital and firm performance. Management Decision, 52(2), 230–258. Available at: https://doi.org/10.1108/MD-02-2013-0064.

Wee, J., & Chua, A. Y. K. (2013). The peculiarities of knowledge management processes in SMEs: The case of Singapore. Journal of Knowledge Management, 17(6), 958–972. Available at: https://doi.org/10.1108/JKM-04-2013-0163.

Yeniaras, V., Kaya, I., & Dayan, M. (2020). Mixed effects of business and political ties in planning flexibility: Insights from Turkey. Industrial Marketing Management, 87, 208–224. Available at: https://doi.org/10.1016/j.indmarman.2020.01.002.

Yi, Y., Li, Y., Hitt, M. A., Liu, Y., & Wei, Z. (2016). The influence of resource bundling on the speed of strategic change: Moderating effects of relational capital. Asia Pacific Journal of Management, 33(2), 455–467. Available at: https://doi.org/10.1007/s10490-016-9458-z.

Zhao, Z., Meng, F., He, Y., & Gu, Z. (2019). The influence of corporate social responsibility on competitive advantage with multiple mediations from social capital and dynamic capabilities. Sustainability, 11(1), 218-239. Available at: https://doi.org/10.3390/su11010218.
Appendix-A. Inclusion Criteria

This appendix expands upon information included in the article’s Method section. We used some criteria to determine parameters to include primary studies in the meta-analysis. First, we only included studies that measured in some way relational capabilities and firm financial performance. This approach allowed the estimates to be based on a common set of studies, rather than on different studies for each relation in the model. It also enabled us to directly compare the different effects and avoid concerns about relations being based on different numbers and types of primary studies. Further, to test relational capabilities interaction, we needed raw data on all possible variables because we could not test the interaction, or the relative effects of the interaction and first-order effects, using correlations from different studies that did not include the product term.

Second, we only included studies that measured capability using objective tests that assessed general capability in different fields or more specific abilities, such as supply chain relational capability, customer relationship quality, interfirm or intrafirm relational capacity. Most studies used established measures of specific relational capabilities to identify their effects on financial performance. If we had questions about a particular test, we contacted the authors and/or researched other information about the statistics methods before we included the study in the meta-analysis.

The third criterion pertained to how we conceptualized relational capabilities. Consistent with previous definitions (e.g., (Dyer & Singh, 1998; Tatiana Kostova & Roth, 2002; Levin & Cross, 2004; Renouard, 2011; Todorova & Durisin, 2007)) we defined RC as factors that support or moderate the value co-creation and value capture in intrafirm and interfirm context. It is composed of interconnected and interdependent networked actors, which includes the local firm, parent firms, customers, suppliers, employees, partners, and other agents. Its ability to collaborate and exchange information to promote flexibility, innovation, and competitive advantage. It can translate into long-term agreements, thereby promoting deeper relationships and trust, which facilitates knowledge transferring, product development for businesses performance and growth. We used this definition as a basis to determine which RC measures to include and exclude from the meta-analysis. Specifically, we focused on measures that reflect direction, intensity, and/or persistence of effort. We chose this approach because the “unobservable force” that initiates behavior is influenced by myriad factors and can vary greatly across people and situations. For example, certain job characteristics (e.g., autonomy, job pressure) may be motivating to some actors involved in a context but not to others.

We also reviewed studies that measured knowledge management and partner integration as a potential predictor to enhance financial performance through relational capabilities. If the measure included items or facets that were not related to these two moderators (e.g., partners integration and knowledge management), we excluded the study. Finally, we also included studies that measured relational capabilities goals in the participants set for performing tasks or their level of commitment to financial goals.

Our fourth criterion focused on the financial performance measures we included. First, we included studies in which the performance measure(s) reflected one or more of the following: profitability, sales growth, profit growth, financial growth, or overall financial performance. Second, we only included studies that measured financial performance using clear ratings, peer ratings, or some objective criterion (e.g., sales as mentioned). We excluded studies that used self-ratings of financial performance (e.g., perceptions). We also excluded studies that measured financial performance using salary increase, internal investments, acquisitions, or promotions because such criteria...
do not measure financial performance directly and can be influenced by factors other than performance (e.g., tenure and merger).

Finally, we only included studies that reported results for which we or the original authors could estimate effects for a model that included relational capabilities interaction with financial performance and the influence of two moderators, partners integration and knowledge management as predictors of this impact. We excluded studies that included other predictors in the model (e.g., market dynamism, stakeholders).

Appendix-B. Primary Studies.

| Code | Author/s (publication year) | Source | DOI |
|------|-----------------------------|--------|-----|
| 1    | Adams and Graham (2017)     | Industrial Marketing Management | 10.1016/j.indmarman.2016.10.009 |
| 2    | Bonner et al. (2005)        | Journal of Business Research | 10.1016/j.busres.2004.07.002 |
| 3    | Brinckmann and Hoegl (2011) | Strategic Entrepreneurship Journal | 10.1002/sej.106 |
| 4    | Cabrilo and Dahms (2018)    | Journal of Knowledge Management | 10.1108/JKM-07-2017-0309 |
| 5    | Chen et al. (2013)          | Industrial Marketing Management | 10.1016/j.indmarman.2013.03.014 |
| 6    | Chierici et al. (2019)      | Management Decision | 10.1108/MD-07-2018-0834 |
| 7    | Choi and Hwang (2015)       | Operations Management Research | 10.1007/s12063-015-0100-x |
| 8    | Choi (2014)                 | Information Technology & Management | 10.1007/s10799-014-0181-5 |
| 9    | Choon Tan, Kannan, Hsu, and | International Journal of Physical Distribution & Logistics Management | 10.1108/09600031011052831 |
| 10   | Chowdhury, Quadudd, and     | Supply Chain Management - An International Journal | 10.1108/SCM-09-2018-0332 |
| 11   | Agarwal (2019)              | Journal of Knowledge Management | 10.1108/JKM-07-2017-0305 |
| 12   | Claver-Cortés et al. (2018) | Journal of Business & Industrial Marketing | 10.1108/JBIM-01-2019-0057 |
| 13   | Crick (2019)                | International Journal of Operations & Production Management | 10.1108/IJOPM-01-2019-0025 |
| 14   | Fosso and Akter (2019)      | Journal of International Marketing | 10.1509/jimk.19.4.61 |
| 15   | Garcia-Perez-de-Lema et al. (2017) | Technological Forecasting and Social Change | 10.1016/j.techfore.2016.04.003 |
| 16   | Garrido-Moreno et al. (2020) | Journal of Service Management | 10.1108/JOSM-09-2018-0286 |
| 17   | Gounaris and Tzempelikos (2013) | Journal of Business-To-Business Marketing | 10.1080/1051712X.2012.690173 |
| 18   | Grimmer et al. (2015)       | International Entrepreneurship and Management Journal | 10.1007/s11365-015-0279-y |
| 19   | Hensen and Dong (2020)      | Information & Management | 10.1016/j.jim.2019.103209 |
| 20   | Hofer et al. (2014)         | International Journal of logistics Management | 10.1108/IJLM-01-2014-0012 |
| 21   | Hwang and Kim (2019)        | Service Business | 10.1007/s11628-018-00394-x |
| 22   | Kim et al. (2019)           | International Journal of Contemporary Hospitality Management | 10.1108/IJCHM-Jan-2012-0010 |
| 23   | Kohtamäki, Partanen, and Möller (2013) | Industrial Marketing Management | 10.1016/j.indmarman.2012.11.001 |
| 24   | Kyriakopoulos, Hughes, and Hughes (2016) | Journal of Product Innovation Management | 10.1111/jpim.12285 |
| 25   | Lado et al. (2012)          | International Journal of logistics Management | 10.1108/09574091111156550 |
| 26   | Lahiri, Kedia, and Mukherjee (2012) | Journal of World Business | 10.1016/j.jwb.2011.02.001 |
| 27   | R. P. Lee et al. (2008)     | Journal of International Marketing | 10.1509/jimk.16.2.1 |
| 28   | Lee, Kim, and Choi (2012)   | Industrial Management & Data Systemas | 10.1108/02635571211264609 |
| 29   | Lew, Sinkovics, and Kuivalainen (2013) | International Business Review | 10.1016/j.ibusrev.2013.03.001 |
Appendix C. Data-Analytic Approach

We used Hunter and Schmidt (2004) psychometric meta-analysis to analyze the data. The analyses involved six main steps. First, we recorded zero-order correlations among supply chain relational capacity, customer relationship relational quality, interfirm and intrafirm relational capacity, and financial performance. We had this information for all 54 samples. To estimate the model, we needed correlations between the financial performance interaction term and the other variables.

Second, we computed composite variables for primary studies that included multiple measures of relational capabilities, and financial performance. For studies that used multiple relational capabilities measures, we standardized the scores from each measure and created a composite that reflected the mean score across the measures. We adopted this approach because we wanted to incorporate as much of the original relational capabilities data as possible. In addition, because scores on different capability measures tended to be moderately

© 2021 Conscientia Beam. All Rights Reserved.
lowly correlated (mean r = .282), combining multiple measures into a single ability composite would increase reliability and not greatly affect the meaning of the measure.

Some studies included multiple measures of relational capabilities (e.g., intra and interfirm relational capacity). Because these measures were not always highly correlated, we used the measure that appeared most proximal to effort in the overall analyses, rather than create an overall composite variable. However, we retained all relational capabilities measures for use in subsequent, measure-specific analyses. Finally, for studies that included multiple measures of the same financial performance construct (e.g., profit growth, sales growth), we used the same approach we used for studies that used multiple capability tests. Specifically, we standardized the scores from each performance measure and created a variable that reflected the mean of the measures.

Third, because we primarily were interested in relations at the construct level and not at the measure level (Le, Schmidt, & Putka, 2009) and to be consistent with Hunter and Schmidt (1990) psychometric meta-analytic procedures, we corrected the observed correlations for measurement error in all the variables. We also corrected relations for range restriction.

Fourth, we used the observed and corrected correlations among relational capabilities to estimate the additive effects on financial performance. These analyses yielded observed and corrected Rs, as well as observed and corrected coefficients for each study. We used the same observed and corrected correlations for the multiplicative model, but also included the correlations involving relational capabilities product term. However, we were able to assess the multiplicative model only for studies for which we had access to the raw data or for which the primary authors conducted the analyses and provide the output. Output from the regression analysis also provided intercorrelations (among partners integration, knowledge management and financial performance), which we used to estimate the corrected correlations and regression coefficients, as well as the observed and corrected relative weights.

There has been some discussion about the appropriateness of meta-analyzing regression coefficients compared to the typical approach based on correlation coefficients (e.g., (Aguinis, Culpepper, & Pierce, 2016; Becker & Wu, 2007; Peterson & Brown, 2005; Raju, Pappas, & Williams, 1989)). The main challenges with doing so are that (a) primary studies rarely include the exact same variables in the regression model and (b) studies use different scales to measure the variables. We were able to address the first challenge by ensuring the primary studies included the exact same constructs, so that the models were equivalent across studies. In addition, we addressed the concern about differing scales across studies by meta-analyzing the standardized regression coefficients rather than the unstandardized coefficients.

Fifth, we computed relative weight statistics for the model used by Prashar (2018) residualizing relative importance analysis. Relative weight analysis (Johnson, 2000) assesses the contribution each predictor makes to the regression model, considering both the predictor’s individual effect and its effect when combined with the other predictors (Johnson & LeBreton, 2004). The relative weights indicate the percentage of variance in the criterion each predictor explains.

Finally, to examine the form of any relational capability’s interactions, we used meta-essentials tools (Suurmond, van Rhee, & Hak, 2017) and Microsoft Excel to conduct a simple slopes analysis for 54 samples for which we had the raw data. This syntax calculates the standardized simple slopes for the relation between an independent variable (relational capabilities) and dependent variable (financial performance) at levels of the moderator variable (partners integration and knowledge management). These analyses are conducted on the raw data and thus reflect the observed (i.e., uncorrected) relations among the variables.
Appendix-D. Sample-adjusted meta-analytic deviancy statistic results

| Code Study | N     | ES (r) | Var (i)   | Var (r)   | √ Var (i) - Var (r) | SAMD |
|------------|-------|--------|-----------|-----------|---------------------|------|
| 1          | 630   | 0.250  | 1.000     | -0.023    | 0.011               | 0.201|
| 2          | 184   | 0.341  | 1.000     | -0.019    | 0.010               | 0.201|
| 3          | 212   | 0.370  | 1.000     | -0.019    | 0.010               | 0.201|
| 4          | 88    | 0.602  | 1.000     | -0.019    | 0.009               | 0.200|
| 5          | 167   | 0.400  | 1.000     | -0.019    | 0.010               | 0.201|
| 6          | 418   | 0.662  | 1.000     | -0.021    | 0.010               | 0.200|
| 7          | 230   | -0.504 | 1.000     | -0.020    | 0.010               | 0.205|
| 8          | 115   | 0.360  | 1.000     | -0.019    | 0.009               | 0.201|
| 9          | 625   | 0.370  | 1.000     | -0.023    | 0.011               | 0.201|
| 10         | 274   | -0.670 | 1.000     | -0.020    | 0.010               | 0.205|
| 11         | 102   | 0.489  | 1.000     | -0.019    | 0.009               | 0.201|
| 12         | 102   | 0.341  | 1.000     | -0.019    | 0.009               | 0.201|
| 13         | 281   | 0.520  | 1.000     | -0.020    | 0.010               | 0.200|
| 14         | 85    | 0.430  | 1.000     | -0.020    | 0.010               | 0.200|
| 15         | 600   | 0.480  | 1.000     | -0.023    | 0.011               | 0.200|
| 16         | 212   | 0.640  | 1.000     | -0.019    | 0.010               | 0.200|
| 17         | 304   | 0.190  | 1.000     | -0.020    | 0.010               | 0.202|
| 18         | 304   | 0.180  | 1.000     | -0.020    | 0.010               | 0.202|
| 19         | 101   | 0.040  | 1.000     | -0.019    | 0.009               | 0.203|
| 20         | 281   | 0.507  | 1.000     | -0.020    | 0.010               | 0.200|
| 21         | 91    | 0.400  | 1.000     | -0.021    | 0.010               | 0.202|
| 22         | 91    | -0.240 | 1.000     | -0.019    | 0.009               | 0.201|
| 23         | 211   | 0.210  | 1.000     | -0.019    | 0.009               | 0.202|
| 24         | 111   | 0.380  | 1.000     | -0.019    | 0.009               | 0.201|
| 25         | 42    | 0.140  | 1.000     | -0.018    | 0.009               | 0.202|
| 26         | 42    | 0.250  | 1.000     | -0.018    | 0.009               | 0.202|
| 27         | 105   | 0.224  | 1.000     | -0.019    | 0.009               | 0.202|
| 28         | 139   | 0.130  | 1.000     | -0.019    | 0.009               | 0.202|
| 29         | 139   | 0.130  | 1.000     | -0.019    | 0.009               | 0.202|
| 30         | 223   | 0.620  | 1.000     | -0.020    | 0.010               | 0.200|
| 31         | 109   | 0.420  | 1.000     | -0.019    | 0.009               | 0.201|

© 2021 Conscientia Beem. All Rights Reserved.
31  109  0.350  1.000  -0.019  1.009  0.201
32  568  0.346  1.000  -0.022  1.011  0.201
32  568  0.206  1.000  -0.022  1.011  0.201
33  265  0.450  1.000  -0.020  1.010  0.201
33  265  0.270  1.000  -0.020  1.010  0.201
34  265  0.480  1.000  -0.020  1.010  0.201
34  265  0.370  1.000  -0.020  1.010  0.201
35  898  0.099  1.000  -0.026  1.013  0.202
35  898  0.800  1.000  -0.026  1.013  0.199
36  145  0.350  1.000  -0.019  1.009  0.201
36  145  0.410  1.000  -0.019  1.009  0.201
37  304  0.382  1.000  -0.020  1.010  0.201
37  304  0.254  1.000  -0.020  1.010  0.201
38  68  0.460  1.000  -0.018  1.009  0.201
38  68  0.410  1.000  -0.018  1.009  0.201
39  1.955  0.080  1.000  -0.053  1.026  0.199
39  1.955  -0.100  1.000  -0.053  1.026  0.200
40  63  0.294  1.000  -0.018  1.009  0.202
40  63  0.285  1.000  -0.018  1.009  0.202
41  203  0.250  1.000  -0.019  1.010  0.202
41  203  0.470  1.000  -0.019  1.010  0.201
42  155  0.154  1.000  -0.019  1.009  0.202
42  155  0.149  1.000  -0.019  1.009  0.202
43  115  0.275  1.000  -0.019  1.009  0.202
43  115  0.282  1.000  -0.019  1.009  0.202
44  128  0.350  1.000  -0.019  1.009  0.201
44  128  0.268  1.000  -0.019  1.009  0.202
45  192  0.110  1.000  -0.019  1.010  0.202
45  192  0.270  1.000  -0.019  1.010  0.202
46  298  0.230  1.000  -0.020  1.010  0.202
46  298  0.130  1.000  -0.020  1.010  0.202
47  304  0.110  1.000  -0.020  1.010  0.202
47  304  0.265  1.000  -0.020  1.010  0.201
48  156  0.490  1.000  -0.019  1.009  0.201
48  156  0.360  1.000  -0.019  1.009  0.201
49  235  0.290  1.000  -0.020  1.010  0.201
49  235  0.250  1.000  -0.020  1.010  0.202
50  57  0.120  1.000  -0.018  1.009  0.202
50  57  0.130  1.000  -0.018  1.009  0.202
51  508  0.158  1.000  -0.022  1.011  0.202
51  508  0.348  1.000  -0.022  1.011  0.201
52  269  0.374  1.000  -0.020  1.010  0.201
52  269  0.483  1.000  -0.020  1.010  0.201
53  366  0.120  1.000  -0.021  1.010  0.202
54  150  0.140  1.000  -0.019  1.009  0.202
54  150  0.110  1.000  -0.019  1.009  0.202