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A FRAMEWORK OF ORGANIZATION LEARNING, ENTREPRENEURIAL ORIENTATION, AND EXTERNAL RELATIONAL NETWORKS: A STUDY OF MINORITY ETHNIC BUSINESS PERFORMANCE

Presented by Camelia L. Clarke

a candidate for the degree of Doctor of Business Administration

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A FRAMEWORK OF ORGANIZATION LEARNING, ENTREPRENEURIAL ORIENTATION, AND EXTERNAL RELATIONAL NETWORKS: A STUDY OF MINORITY ETHNIC BUSINESS PERFORMANCE

A Dissertation

Presented to

The Graduate Faculty of

The University of Wisconsin -- Whitewater

In Partial Fulfillment

Of the Requirements for the Degree

Doctor of Business Administration

By

CAMELIA L. CLARKE

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AUGUST 2019

ACKNOWLEDGMENTS

This dissertation would not be complete without the assistance of God, my family, friends, and committee members. First and foremost, I give honor to God the Almighty, for without his divine intervention, this journey could not have been navigated, managed, or completed. Second, I want to extend a heartfelt thanks for the love of my family and friends. I want to thank my amazing husband, Marcel. Your love, support, and encouragement never wavered. I am genuinely grateful for your patience and selflessness whenever I opened my laptop to work on my dissertation during the holidays, family vacation, or at other planned events. You were my most prominent advocate, always rooting me on and encouraging me. I could not have completed this journey without you by my side. I have been truly blessed with four amazing children: Raja'ee, Jazzmin, Mariah, and Mia. They have been amazing dealing with the sacrifice of time that they have endured to support my quest for knowledge at a higher level. I hope that my journey has somehow inspired and will inspire each one of them to dig deep within themselves to be the best that they can be—even when it means fighting for their dreams. I want to thank my dearest siblings, Taahiraa and Jerry for co-existing with me as my foundation. I am thankful for my dearest cousin and friend, Darlene. We have never needed words to describe the support that we have for each other. Auntie Mary, thank you for all the times that you watched Mariah and Mia so that I could work on my dissertation. To my colleagues at work, thank you for your quest to serve others when I could not. Your support throughout my journey did not go

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unnoticed. To my cohort: you ladies and gentlemen never stopped rooting for one another. I could not imagine being on this journey without you all.

Finally, I want to sincerely acknowledge and thank my committee members Jimmy, Sam, and Victor. Sam and Victor, I thank you both for your genuine interest in my dissertation topic and for serving on my committee. Your feedback and direction have been an invaluable contribution to this study. Jimmy, last but certainly not the least, I want to thank you for being my dissertation chair. Wow, what can I say? This is a journey of which there is *no* part I would change. You are genuinely a scholar. I appreciate the phone calls, WebEx meetings, emails, and texts, as each one contributed significantly to the theoretical and empirical examination of my study. Your guidance and mentorship were instrumental in supporting my academic quest to bridge theory with practice. With your guidance, I entered the program as a practitioner and exited as a researcher. I can only imagine that as an advisor that was hard to achieve. Your leadership has certainly met my expectations, and I can only hope that my work ethic has met yours.

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ABSTRACT

This study proposed an empirical model to investigate the impact of organizational learning (OL) and entrepreneurial orientation (EO) on the external relational network's (ERN) engagement with and firm performance of minority ethnic businesses (MEBs). Multivariate regression analysis and structural equation modeling (SEM) were used to examine the individual and combined relationships of the variables. The study population comprised of African American, Asian, Latino, and Native-American business owners located in the Midwest region of the United States. The results indicated that OL and EO incentivize MEBs to engage with ERNs to extract knowledge-based resources to gain superior performance.

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Education

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A Framework of Organization Learning, Entrepreneurial Orientation, and External Relational Networks: A Study of Minority Ethnic Business Performance

Entrepreneurial firms are viewed as economic powerhouses that may develop superior organizational learning (OL) competence to increase firm performance. Qi and Chau (2018) conceptualized OL as the process of acquiring and integrating information in an attempt to develop knowledge-based resources that will enhance firm performance. Muñoz, Mosey, and Binks (2011) argued that for entrepreneurship to maximize its economic influence, it is vital to direct efforts toward enhancing the OL competence of a firm. Entrepreneurial learning-related activities are essential to a firm's survival. In today's complex economic environment, entrepreneurship has become even more critical in advancing a firm's growth (Nasir, Mamun, & Breen, 2017). The degree to which a firm's entrepreneurial orientation (EO) affects its OL competence is of critical importance (Real, Roldán, & Leal, 2014). Current literature has conceptualized EO as the extent to which a firm's posture is entrepreneurial or conservative (Gupta & Wales, 2017). Understanding the EO–OL relationship is necessary to empirically evaluate the mechanisms through which the value of engagement within external relational networks (ERN) and firm performance is promotable in minority ethnic businesses (MEBs).

Because of the economic landscape, MEBs face increasing pressure from non-minority small and medium-sized enterprises (SMEs) to change, adapt and learn through the organization (Mishra, 2017). Compounded with the current competitive landscape, it is apparent that MEBs face great difficulty in maintaining, much less improving, firm performance (Engelen, Gupta, Strenger, & Brettel, 2015). Recent studies have called for operators of MEBs to adopt an entrepreneurial mindset because it directs human behavior towards increasing OL (Williams, Gavino, & Jacobson, 2017). In a similar vein, researchers have also called for MEBs to increase

entrepreneurial and learning-related activities because MEBs continue to lag in firm performance when compared to non-minority SMEs (Ortiz-Walters, Gavino, & Williams, 2015).

The results of the U.S. Census Bureau's 2012 Survey of Business Owners noted that MEBs grow faster than non-minority SMEs (Parker, 2014). In 2017, the Minority Business Development Agency (MBDA) reported that MEBs earned over $1.2 trillion. As impressive as this figure is, the average non-minority SME generated five times that amount (MBDA, 2017). Various resource-based theorists have identified that the performance lag is due to resource constraints related to OL and EO (Fayolle & Gailly, 2013; Heilman & Chen, 2003; McMullen & Shepard, 2006). To overcome this challenge, operators of MEBs should adopt an entrepreneurial mindset because it establishes the foundation to acquire knowledge-based assets. An entrepreneurial mindset can influence not only a firm's OL competence but also EO posture. The strategic combination will improve an MEB's ability to acquire information and then convert it to knowledge-based resources, from social networks into firm assets (Dada & Fogg, 2016). Knowledge-based theorists have contended that MEBs should engage within resource-based channels such as ERNs because it advances the firms' growth (Soetanto, 2017).

Despite many studies on firm performance, the literature has been silent in three key areas:

1. The literature has focused singularly on the overall concept of OL in the context of non-minority SMEs (Narver & Slater, 1990). However, it has not fully explored the OL linkage with ERNs to explain MEB firm performance.

2. Even with an increasing call to analyze strategic management practices, researchers have not thoroughly investigated how EO multidimensionality impacts the ERN engagement and firm performance of an MEB.

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3. Finally, the literature has provided insight relating to benefits that non-minority firms derive from EO–OL relationships (Baum & Locke, 2004; Leitch & Harrison, 1999), but there is a need to further explore comprehensive models specific to the unique challenges of MEBs. Virtually absent is empirical evidence that explores the EO–OL relational impact on ERN engagement and firm performance in the context of MEBs.

Dada and Fogg (2016) advocated that the key ingredient to improving a firm's organizational performance is incorporating the right combination of strategic orientation coupled with the utilization of knowledge-based resources. The strategic orientation is the DNA make-up of a firm that dictates the proper behaviors and links to both OL and EO (Real, Roldán, & Leal, 2012). Understanding the relational dynamics of EO–OL is necessary because EO creates a fertile environment that increases the firm's OL (Wang, 2008; Wiklund & Shepherd, 2009). Investigating the degree to which EOs impact MEB firms is critically important because the relationship influences the firm's attitude towards networking and engagement behaviors within ERNs (Gibson, McDowell, & Harris, 2011).

Missing from the literature is empirical evidence that examines the relational impact of a firm's EO on growth relative to MEB firms (Gibson et al., 2011; Pokharel & Ok Choi, 2013; Wang, 2008). Covin and Lumpkin (2011) suggested that the EO of a firm represents what it means to be entrepreneurially like-minded at the most fundamental level. A firm's coordinated strategic exhibition of autonomy, competitive aggressiveness, innovativeness, risk-taking, and proactiveness within its actionable behaviors confirms the entrepreneurial posture (Anderson, Kreiser, Kuratko, Hornsby, & Eshima, 2015). Further, tacit knowledge as a strategic resource complements EO (Covin & Lumpkin, 2011). When a learning organization combines tacit knowledge in its EO with specific OL processes, then the firm increases its assets (Engelen,

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Gupta, Strenger, & Brettel, 2015; Gupta & Wales, 2017). However, it is unknown whether the findings hold for MEBs that have a learning organization culture.

Recent scholarship has suggested that OL is the state in which organizations can cultivate organizational development via four processes (Kim, Watkins, & Lu, 2017). The OL processes are (a) information acquisition, (b) information dissemination, (c) information interpretation, and (d) organizational memory to create high-performance outcomes (Pokharel & Ok Choi, 2015). Huber (1991) proposed that organizations create high-performance outcomes by acquiring knowledge-based assets from internal and external sources, disseminating information efficiently through the firm, interpreting information to enhance OL, and increasing organizational memory to retain the acquired information. A firm's LO highlights its internal and external characteristics of learning.

Real et al. (2012) defined LO as organizational values that facilitate a firm's strategic attitude towards learning. The firm's values, such as commitment to learning, open-mindedness, and shared vision, foster the ability to consume knowledge. The values are instrumental in guiding the acquisition of information for the benefit of the organization (Fiol & Lyles, 1985). The firm's internal characteristics influence how it manages its learning process, questions new assumptions, and adapt to new ways of learning (Song, Joo & Chermack, 2009).

In short, the internal strategy affects the firm's ability to create, disseminate, and extract knowledge-based resources. In contrast, external characteristics influence the firm's learning that occurs externally (Wu & Lin, 2009). A firm's LO is a bonding mechanism that allows organizations with similar interests to integrate knowledge Real et al. (2012). Effective OL processes are critical for firms seeking to develop strategic capabilities to compete (Goh, Elliott, & Quon, 2012), and MEBs are no exception.

Past research within the OL literature has suggested that ERNs can offer MEBs a mechanism to manage knowledge-based assets (Conradie, 2010; Dutta & Crossan, 2005; McGrath & O'Toole, 2014). The management of knowledge is at the core of entrepreneurship (Dosi & Teece, 1998; Dutta & Crossan, 2005; Hitt & Ireland, 2002), mitigated by the ability of a firm to assimilate knowledge-based assets to their OL processes from ERNs (Mena & Chabowski, 2015). Thus, the establishment of a LO is a necessary requisite for MEBs to manage ERN engagement (Theodorakopoulos & Figueira, 2012). Despite this acknowledgment, MEBs often have severe resource constraints, making it difficult for them to capture, integrate, and utilize knowledge-based assets (Gibson et al., 2011).

The network literature has conceptualized that efficient management of relational networks critically impacts a firm's asset growth. (Gupta & Wales, 2017; Peltier & Naidu, 2012). These unique networks have more relevance for MEBs because they can increase the OL competence by engagement with others connected externally to the network (McGrath & O'Toole, 2014). Because of the dynamic and free-flowing nature of ERNs, MEBs that maintain long-term relationships with these socioeconomic systems can exploit environments where knowledge is exchangeable and transferable (Jerez-Gómez, Céspedes-Lorente, and Valle-Cabrera, 2005). Through network engagement, the shared transfer of knowledge improves the MEBs response to unfavorable operational conditions and business environments (Mena & Chabowski, 2015).

The willingness of MEBs to engage with ERNs stems from the desire to build and mobilize relationships (Ritter & Gemünden, 2003). Prior studies have shown that strategic capabilities acquired by a firm, through active ERN engagement and efficient knowledge transfer, play a significant role in increasing a firm's growth through assets (Gordon & Jack,

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2010; Greve and Salaff, 2003). Knowledge transfer from the ERN to the firm will take place

primarily under two conditions. First, the MEB must value the relationship and have an active

culture suitable for network absorption (Dutta & Crossan, 2005). Second, the ERN must execute

a relationship marketing (RM) strategy so compelling that it influences the MEB to have high

levels of engagement within the network (Tschirhart and Gazley, 2014).

The entrepreneurship domain has advanced because scholars continue to develop new

frameworks by integrating theoretical perspectives from mature fields such as the organizational

sciences (Real et al., 2014). This study leveraged three viewpoints to understand how MEBs can

increase firm assets. The first, from OL theory, explores when a firm's OL competence can

maximize its competitive advantage (Wang, 2008). The next viewpoint, from EO literature

studies, shows that firms engaged in entrepreneurial activities benefit from increased

performance (del Mar Fuentes-Fuentes, Bojica, & Ruiz-Arroyo, 2015). This same study

examined knowledge-based views (KBV) stemming from the resource-based theory (RBV)

because knowledge-based resources directly impact organizational performance (Conner &

Prahalad, 1996). Finally, to strengthen the OL and EO frameworks (Kellermans, Walter, Crook,

Kemmerer, & Narayanan, 2016), network theory was added because it is the core of

entrepreneurship (Pollack, Forster, Johnson, Coy, & Molden, 2015). Although OL, EO, RBV,

and network literature coexist in separate domains, they provide research scholars with a

roadmap to better understand how MEBs can enhance firm performance.

The preceding paragraphs set the stage for the research setting and purpose, the literature

review and theoretical framework, the data analysis, results, and the implications and

discussions. Two large trade associations located in the United States were selected for this

research study. Minority members of the associations were identified because they face a steep

climb to achieve equality with non-minority SMEs due to knowledge-based resource constraints (National Minority Supplier Development Council, 2018). Not surprisingly, these members continually face the challenge of tailoring unique support services which help MEBs maximize OL and EO to increase growth. The shortage of empirical evaluation of firm performance from an OL viewpoint is striking when studying MEBs and is the inspiration for this dissertation. This study bridges the empirical gap of an ERN's impact on MEBs and contributes to the extant literature as it establishes the causal relationship between OL, EO, ERN engagement, and firm performance. This study proposed three models to answer the following research questions:

1. In the OL process, what effect does (a) information acquisition, (b) information dissemination, (c) information interpretation, and (d) organizational memory have on ERN engagement and firm performance in the context of MEBs (Model 1)?

2. When considering EO input, what impact does (a) innovativeness, (b) risk-taking, (c) proactiveness, (d) competitive aggressiveness, and (e) autonomy have on ERN engagement and firm performance relative to MEBs (Model 2)?

3. How does the EO index influence the OL process such that ERN engagement and firm performance are impacted (Model 3)?

Scope and Importance of the Study

The degree to which OL and EO have a positive impact on ERN engagement is of critical importance. It is vital to recognize the influence that OL and EO have on ERN engagement to empirically examine processes through which firm performance can be increased in MEBs. To undertake this task, the study divided the OL, EO, and network frameworks into three models. Model 1 utilized multivariate regression analysis to identify the effects of the four OL processes, (a) information acquisition, (b) information dissemination, (c) information interpretation, and (d)

organizational memory, on MEB engagement with ERNs and firm performance. Model 2 used

multivariate regression analysis to assess the effects of EO inputs, (a) innovativeness, (b) risk-

taking, (c) proactiveness, (d) competitive aggressiveness, and (e) autonomy, on MEB

engagement with ERNs and firm performance. Model 3 used AMOS structural equation

modeling (SEM) path analysis to identify how the overall level of EO impacts the OL process,

ERN engagement, and firm performance among MEBs.

Summary of Contribution to Theory and Practice

The entrepreneurship domain has advanced because scholars continue to develop new

frameworks by combining theoretical viewpoints from other mature fields. This study makes a

distinct theoretical contribution to the OL, EO, and network literature. This study is one of a few

studies that investigate how OL and EO impact ERN engagement and firm performance in

MEBs. The present study used three models with a multi-construct framework to understand the

relationship between the four variables. The meta-analysis study on the EO–performance

relationship by Gupta and Wales (2017) called for further research on the simultaneous effects of

learning networks on firm performance. This study responded to calls for research by

investigating MEB performance, analyzing the combined effects of OL, EO, and ERN

engagement on growth performance measures.

This study guides MEB practitioners. It is evident that the OL role is a determinate of

entrepreneurial behavior. The results indicated OL and EO as predictors of ERN engagement and

firm performance. ERNs are a bundle of information and resources (Khizindar & Darley, 2017).

Therefore, MEBs must identify relevant information and resources to gain superior performance.

MEBs must be able to acquire, disseminate, interpret, and store knowledge-based assets to

increase their entrepreneurial behaviors. By building on the literature of OL, EO, and networks,

this study aimed to support the strategic development of MEB business management processes designed to increase firm performance.

Organization of the Dissertation

This dissertation includes the research setting and purpose, literature review and theoretical framework, data analysis, results, and the implications and discussion. The following section summarizes the OL, EO, and network literature, with a specific focus on increasing an MEB firms' performance, and provides the theoretical framework and hypotheses development to explain the interrelatedness of the studied variables. The next section defines research methods, followed by data analysis and interpretation of the results. Finally, implications for theory and practice are shared, addressing study limitations, and suggesting future research directions.

Literature Review and Hypotheses Development

Eiriz, Gonçalves, and Areias (2017) suggested that for a small business to maximize its economic influence, it is necessary to concentrate on developing an approach to enhance the firm's OL competence. In the modern business environment, various tangibles play a significant role in enhancing OL. Together, intangibles such as OL, EO, and ERNs enhance the competitive advantage of a small business. Small businesses such as MEBs can benefit from the strategic combination that OL, EO, and ERNs offer, relative to firm performance. Two interrelated theories, OL theory, and social network theory were used for this research.

The extant literature has regarded OL as one of the most critical strategic factors that impact organizational success (Senge, 1990; Soetanto, 2017). Thus, the empirical examination of OL has become an important, relevant area of study. OL promotes combining a firm's current resources and capabilities and transforming them into unique advantages which help sustain competitiveness (Real et al., 2014). The concept of OL is of particular interest in the

context of MEBs' critical contributions to the modern economy (Spicer & Sadler-Smith, 2006).

The strengths of OL assist MEBs with anticipating and accordingly adjusting to ambiguous

environments (Hansen & Hamilton, 2011). As a result of facing these ambiguous environments

with limited resources, MEBs need to access learning networks to exploit knowledge-based

resources.

The social network approach to asset building suggests that engagement within learning

networks is a catalyst to many aspects of organizational growth (Aldrich & Zimmer, Sexton, &

Smilor, 1986; Peltier & Naidu, 2012). Broadly defined, ERNs represent the collective

interactions through membership organizations and relational encounters that small businesses

create with other participants (Dodd & Patra, 2002). The services offered by ERNs provide

small businesses with network support, network communications, and network programs. Both

the RBV and KBV contend firms can use network resources, such as those with ERNs, to

acquire and then convert knowledge-based resources into a sustained competitive advantage

(Dada & Fogg, 2016; Soetanto, 2017).

Kreiser (2011) defined the relationship between OL and networks such as ERNs as

intimate and argued that access to network resources creates opportunities for learning.

Networks provide firms with access to knowledge-based resources and improve the quality,

relevance, and timeliness of information (Adler & Kwon, 2002). In turn, ERNs play an essential

role in determining the levels of OL created through EO (Ajayi, 2016; Gupta & Wales, 2017).

Jones and Macpherson (2006) put forth that the quantity and quality of relationships that a small

business develops determine in part the regularity with which it can benefit from learning

opportunities. Further, a firm's network position can impact the flow of strategic resources that

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are critical to the manifestation of EO (Covin & Miller, 2013). As such, this viewpoint plays a vital role in the EO–OL relationship.

Several studies have examined the specific processes through which firm-related learning activities influence EO (Lee & Sukoco, 2007; Li, Huang, & Tsai, 2009; Slater & Narver, 1998). The process viewpoint examines the extent to which EO facilitates the creation of knowledge (Ajayi, 2016; Romano & Secundo, 2009). When viewed broadly, this perspective posits that EO can play a vital role in nurturing an environment where OL can occur within firms.

There are sufficient studies on OL, EO, ERN engagement, and firm performance, but literature exploring the relationship between these variables has been anemic. More specifically, the extant literature has been silent on the relationships between OL, EO, ERN engagement, and firm performance in MEBs. This dissertation expounds on the previous literature on OL, EO, ERN engagement, and firm performance.

Minority Ethnic Businesses

An issue of increasing concern among policymakers and scholars, MEBs are generating considerable debate regarding their distinctiveness and needs (Ortiz-Walters, Gavino, & Williams, 2015; Ram & Smallbone, 2002). In 2017, the MBDA of the U.S. Department of Commerce reported in the 2012 Survey of Business Owners that MEBs generated over $1.2 trillion in combined annual receipts. As the number of MEBs in the United States continues to grow, a broader and more profound reality looms ahead. The NMSDC (2018) posited that by the year 2050, the United States would become a minority-majority nation.

The U.S. minority ethnic population includes a variety of groups within multiple communities. These ethnic minority populations reflect the Asian, Black, Hispanic, and Native American communities. According to the extant literature, there appears to be considerable

uncertainty and misunderstanding regarding the meaning of the word ethnic. Defining an ethnic minority is a complicated undertaking, leaving the term open to theoretical debate (Ram & Smallbone, 2005). As yet, scholars have not reached a universally accepted definition. However, the frequent use of the term ethnic within the literature refers to a subculture that is distinguishable from the dominant culture and heritage (Emslie & Bent, 2007).

Similarly, after a review of the literature, it was discovered that no universally accepted definition of MEB exists. However, research in the United Kingdom in 2001 defined it as the owner-managers ethnicity (Ram & Smallbone, 2005). This present study adopts the UK viewpoint for defining an MEB. Managing OL in the unique context of MEBs is of interest, given its economic impact on the economy (MBDA, 2017). Even with MEBs' significance, these businesses carry the onus of newness, smallness, and inexperience, making them vulnerable to environmental changes (Spicer & Sadler-Smith, 2006). Despite the growing consensus that OL may be the only source of sustainable competitive advantage for MEBs (Dickson, 1992), relatively few empirical studies have investigated the link between OL and MEBs (Gibson, McDowell, & Harris, 2011).

Several factors inhibit the performance of MEBs, such as the lack of internal and external resources (Khizindar & Darley, 2017). As MEBs are typically resource-constrained, they are aligned with the KBV that stems from the RBV of the firm. The intellectual roots of RBV roots date back to Penrose (2009), who focused on the effect that resources have on organizational growth. Since Barney (1991) conceptualized resources as the information and knowledge capabilities that an organization controls, knowledge-based theorists have maintained that knowledge management activities influence RBV (Grant, 1996; McFadyen, Semadeni, &

Cannella, 2009). Prior work has established that the economy is knowledge-based driven (Fuentes-Fuentes, Bojica, and Ruiz-Arroyo, 2015; Zahra and George, 2002).

Most MEBs, due to their resource-constraints, need to access resource bundles that include knowledge-based resources. The RBV contends that knowledge is the most significant resource a firm possesses (Dada & Fogg, 2016; Grant, 1996). As expected, knowledge-based theorists uphold that knowledge is a direct extension of the RBV, as privately held knowledge is a leading source of competitive advantage (Conner & Prahalad, 1996). The RBV suggests that rare resources such as knowledge-based resources can enhance a firm's performance (Barney, 1991; Javalgi & Martin, 2007). Logically, the RBV's central assertion theorizes that strategic resources have leveraged value, are rare and inaccessible to competitors, and are difficult to imitate (Barney, 1991). Consistent with emerging research, a recent meta-analysis that empirically examined the RBV in entrepreneurship supported both viewpoints (Crook, Ketchen, Combs, & Todd, 2008; Kellermanns, Walter, Crook, Kemmerer, & Narayanan, 2016).

As MEBs lack additional access to resources, they can increase performance by adopting managerial practices from the KBV of the firm (Buli, 2017). The KBV suggests that a firm should strategically focus on the creation, absorption, and application of knowledge (Conner & Prahalad, 1996; Grant, 1996; Splender, 1996). Organizational knowledge includes a combination of intangible resources that improve the firm's performance (Hitt, Ireland, and Hoskisson, 2003). For instance, knowledge enables a firm to increase the reliability of environmental predictions, allowing them to take tactically strategic actions (Cohen & Levinthal, 1994). Typically, knowledge of firms like MEBs stems from human capital, that is, the owner or manager who leads the actors within the organization (Menon & Pfeffer, 2003). However, organizational knowledge not only derives from inside but also from outside of the organization

(Argote & Reagans, 2003; Menon & Pfeffer, 2003). The KBV differentiates between internal knowledge creation and external knowledge acquisition. Kreiser (2011) defined knowledge acquisition as the identification and absorption of external knowledge. Kreiser's (2011) viewpoint suggests that OL can be both internal and external, which is consistent with the KBV.

The Value of Engagement with External Relational Networks

Successful resource acquisition is vital to small business development and survival. The relational theory of the firm proposes that firms can use relational networks as an asset, and eventually, the utilization of the relational asset enhances the firm's performance (Dyer & Singh, 1998; Qi & Chau, 2017; Wiklund & Shepherd, 2009). This perspective was advanced recently by integrating network theory to explain how firms manage their network capacities to improve resource acquisition (Ajayi, 2016; Soetanto, 2017). The network perspectives are reliant on the idea that economic activity determines the social context in which they are embedded and explained by the actor's position within the network (O'Connor, 2008). The network theory research has continued to provide empirical evidence that relational networks link entrepreneurs to markets, information, opportunities, and resources (McGrath & O'Toole, 2014). Furthermore, these networks offer entrepreneurs the opportunity to enhance their OL capabilities via engagement with others connected externally to the network (McGrath & O'Toole, 2014).

Entrepreneurs must interact with others connected to their external environments to acquire needed resources. Consistent with prior research by Peltier et al. (2009, 2012), the self-identification of entrepreneurs plays a role in the external orientation of strategic decision making. Being a part of the right relational network determines firm performance (Stoian, Rialp, & Dimitratos, 2016). One benefit of this entrepreneurial activity is that it allows firms to use available resources to increase success (Ireland, Hitt, & Sirmon, 2003). Through such

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interactions, the shared transfer of knowledge and response to market opportunities enhances OL competence (Mena & Chabowski, 2015). According to Malewicki (2005), networks allow firms to expand information gathering with less expense than if it occurred within the firm's hierarchy. Providing entrepreneurial firms with the use of external organizations like ERNs leads to competitive advantages, an extensive resource base, and expansive opportunities for learning (Ajayi, 2016; Peltier & Naidu, 2012).

As noted previously, ERNs are formal networks in that a firm and a structure exist exclusively to facilitate networking and knowledge exchange for entrepreneurial growth (Leick & Gretzinger, 2018). These networks create non-competitive environments where like-minded entrepreneurs are brought together to develop social bonds, trust, and coordinated interactions (Granovetter, 2005). A common goal driving the willingness of entrepreneurs to engage with ERNs is the desire to exploit external relationships (Ritter & Gemünden, 2003). Teckchandani (2014) contended that relationships between smaller firms and membership organizations enable firms to access a more excellent range of resources. Through engagement with membership associations, a small business can gain access to outreach programs designed to transfer knowledge-based resources to the entrepreneur. Membership within ERNs provides a wide range of services, such as engagement via network support, network communications, and network programming (Bennett & Ramsden, 2007).

Strong absorption of network resources is achievable if there is a traditional culture of learning (Bennett & Ramsden, 2007). Individuals influence the relationship between network absorption and OL within the network. The closer the members are within the network, the more efficiently knowledge can be transferred and absorbed (Pollack, Forster, Johnson, Coy, &

Molden, 2014). Network absorption is critical because mutual trust increases personal

engagement between it and the firm's performance.

Equally important to a member's active network absorption is the disseminative capacity

of the ERN to successfully convert knowledge to the member's OL competence (Conradie,

2010). Sroka, Cygler, & Gajdzik (2014) described disseminative capacity as the ability to

contextualize and diffuse knowledge through the network, building high levels of stakeholder

engagement. The disseminative capacity is essential because of its useful articulation and

practical implementation by members (Sroka, Cygler, & Gajdzik, 2014). An ERN's

disseminative capacity is adequate when the organizational approach to the marketing of ERN

resources implements a sound communication and accountability strategy. When the ERN

transfers quality knowledge, then members can increase their OL competence via tangible

benefits such as network support, network communication, and network programming (Pollack,

Coy, Green, & Davis, 2015).

At the heart of entrepreneurship exist embedded processes for which knowledge

development is critical. Knowledge-based theorists Siguaw, Simpson, & Enz (2006) posited that

the development and distribution of knowledge for sustained competitive advantage arise as a

result of a firm's EO. Both the KBV and RBV put forth that firms with higher EO levels will

accrue knowledge-based resources as their EO levels increase (Rua and França, 2018).

Accordingly, as EO increases, a firm will likely be more committed to learning to absorb

information and exploit opportunities (Rua and França, 2018).

Conceptualization of Organizational Learning

Academic scholars and practitioners have devoted significant attention to understanding

the manner of learning that occurs at the firm level. A fundamental belief driving this attention

is the importance that learning has to a firm's adaptability in competitive conditions (Jain &

Moreno, 2015; Moingeon & Edmundson, 1996). Thus, a firm's values, behaviors, and processes

can connect with OL. Firms that manage the learning process stand a better chance of pivoting

to the demands of a competitive environment (Molodchik & Jardon, 2015).

Visser & Tolhurst (2017) noted that the contribution of the seminal theorist Argyris to the

OL field is profound. Argyris and Schön (1977) defined the concept of OL as learning that

occurs when organizational members act as learning agents and respond to internal and external

environmental changes. Nearly twenty years later, Argyris and Schön (1996) suggested that in

many cases, OL is not the same as individual learning when specific knowledge fails to enter the

stream of organizational thought and action. Further, the authors denoted two conditions under

which specific knowledge converts to organizational knowledge (Argyris & Schön, 1996). The

first condition occurs when organizations serve as environmental hubs for specific knowledge,

organizational files, and policies (Argyris & Schön, 1996). The second condition occurs when

the organization represents knowledge directly; that is, organizational knowledge becomes

embedded in routines and practices which are representative of the culture and beliefs (Argyris &

Schön, 1996). Argyris (1977) put forth that authentic organizational learning is a function of

how people feel and think.

Sinkula, Baker, and Noordewier (1997) did not propose a specific model of OL but

instead suggested that the efficiency with which a firm learns is a function of its core values.

When analyzing the firm's overall learning orientation, Baker and Sinkula (1999) saw essential

values as fundamental to a firm's learning propensity. In particular, the learning orientation

identifies these three core values:

1. Placing value on learning (Sackmann, 1991). The commitment to learning as related to Senge's (1990) principles of learning calls for organizations to place a precise value on learning activities. In other words, to stay competitive firms need to develop the strategic ability to think and reason and to value the need to understand the consequences of the firm's behaviors (Tobin, 1993).

2. Being open-minded. Open-mindedness refers to the scope within which a firm proactively questions standing routines, assumptions, and beliefs (Wange, 2008). This learning orientation relates to the concept of unlearning (Nystrom & Starbuck, 1984). Firms that learn from prior success and failure can process and embed information which influences thinking and actions.

3. Sharing a vision. Vision sharing denotes the degree to which a firm develops and maintains a comprehensively understood organizational focus (Day, 1994). Baker & Sinkula (1999) theorized that a shared vision provides the learning agents with organizational expectations, measurable outcomes, and theories in use. Collectively, entrepreneurs who have an open mind and commitment to learning are motivated to learn but may experience difficulty unless a shared vision is in place (Slater & Narver, 1995).

How Organizational Learning Occurs Within Firms

As OL has expanded its perspectives, the literature has achieved different understandings, interpretations, and insights relative to the organization (Visser & Tolhurst, 2017). However, the literature consistently has posited that OL takes place over three stages. Examining the OL concepts, Argyris (1976) noted that learning concepts are either single-loop or double-loop. Single-loop or adaptive learning fits a learner's prior experiences and pre-existing values, empowering the learner to respond automatically. Double-loop also called generative learnings

involves organizational activities. A firm's ability to analyze different situations, recognize recurring patterns, and arrive at premeditated conclusions is also double-loop learning (Li, 2016). Another option is triple-loop learning, which involves the external environment. In the framework of RBV, double-loop heuristic-based learning increases the probability that a firm will create or recognize valuable, rare, or imitable ideas faster, potentially increasing performance (Alvarez & Busenitz, 2001). Therefore, the idea that OL can yield improved performance is intrinsically appealing and vital to understanding organizational function.

Theoretically, OL is a meta-construct that incorporates three elements. The first is a predisposition to learning, which is an organizational adaptation via the exploitation and facilitation of learning (Wolff, Pett, & Ring, 2015). The firm's culture is a system of shared beliefs and values that govern how people behave and influence predisposition to learn. (Sinkula, Baker, & Noordewier, 1997). The second element captures the notion that unidentified perception is a direct result of learning. The final element is learning facilitation, which impacts the organization's ability to recognize and assimilate new information and knowledge. Cyert and March (1963) introduced this concept as the ability to adopt a firm's behavior over time systematically. This concept has expanded to viewpoints, such as the absorptive capacity (Cohen & Levinthal, 1994; Zahra & George, 2002). Research on absorptive capacity has explored whether the firm can efficiently obtain and integrate external knowledge (potential absorptive capacity) or convert and exploit the knowledge internally realized absorptive capacity (Zahra & George, 2002). Absorptive capacity connects the firm's external information with the internal capability to develop or gain access to knowledge-based resources (Cohen & Levinthal, 1994; Rua & França, 2018).

Overview of the Organizational Learning Processes

The literature on OL is populated with many theories and frameworks, many of which consist of a sequence of OL processes. Typically, OL has been conceptualized as including four constructs (Haryanto, Haryono, & Sawitri, 2017). Huber (1991) identified these core constructs: (a) information acquisition, (b) information dissemination, (c) information interpretation, and (d) organizational memory.

O'Connor and Kelly (2017) suggested that the information acquisition process is the first stage an organization strategically seeks to gather useful information. The next process of OL is the dissemination of information throughout the organization (Huber, 1991). Huber's (1991) OL framework defined the interpretation of information as the third process by which information acquires shared understandings. Lastly, researchers have proposed that organizational memory is the fourth process, entailing coding, storing, and retrieving lessons learned from an organization's history (Santos-Vijande, Lopez-Sanchez, & Trespalacios, 2012).

Information Acquisition

Information acquisition is the first stage in which an organization strategically seeks to gather useful information (O'Connor and Kelly, 2017). The capacity for organizations to obtain information from internal and external sources has elicited many studies (O'Connor and Kelly, 2017). Huber (1991) noted that an organization is capable of learning if any units acquire knowledge that it recognizes as a potential competitive advantage. As stated previously, OL occurs when organizational members act as learning agents for the organization and respond to internal and external changes (Argyris & Schön, 1978).

The founder of an organization significantly influences the internal learning capability of the organization (del Mar Fuentes-Fuentes et al., 2015). Upon the emergence of an organization,

knowledge is acquired through the founding member's direct experience (Huber, 1991).

Organizations can acquire information internally through their founders (Huber, 1991),

exemplified through experiential learning (Levitt & March, 1993) and experiential learning, each

the development of innovations (Jordao & Novas, 2017). Experiential learning is improved by

analyzing relevant feedback to organizational members. The analysis of organizational, or

natural, experiments involve market testing and includes both approaches. This type of learning

is more frequently unintentionally or unsystematically acquired. Intentional OL facilitates the

increased accuracy of feedback relative to the cause and effect relationships between the

organizational actions and outcomes. Intentional learning ensures the collection and accuracy of

the feedback (Levinthal & March, 1993).

Organizations externally acquire information using three strategies:

1. Borrowing information from ERNs (Soetanto, 2017). These networks may be able to provide

   tailored services to MEBs. The MEB may acquire information about the competitive market

   conditions. Extensive research has focused on the network value to the entrepreneur,

   including the network role in a new venture formation (Bygrave & Minniti, 2000),

   competitiveness (Johannisson, 2000), and growth (Huggins, 2000).

2. Information acquisition. The acquisition of information is attainable through strategic

   searching, scanning, and the monitoring of performance (Daft & Weick, 1984). Strategic

   searching occurs when the entrepreneur actively seeks a niche segment of the firm's

   environment. This search usually occurs in response to potential opportunities or challenges.

   Organizational scanning identifies environmental changes. Miller and Friesen (1980) posited

   that an organization would not survive if it fails to adapt to turbulent conditions within the

   marketplace.

3. Performance monitoring assesses organizational effectiveness in achieving pre-established

   goals (Daft & Weick, 1984). Performance monitoring allows organizations to integrate

   critical thinking in OL, that is, the careful questioning of organizational assumptions or norms

   (Hooi & Ngui, 2014).

Information, whether acquired externally or internally, is susceptible to individual

perceptions that make up the organization's norms, procedures, or beliefs (Daft & Weick, 1984).

These perceptions influence the acquisition of information and what the organization attends to

and ultimately accepts (Hooi & Ngui, 2014). This information acquisition leads to the subject of

dissemination of information.

Information Dissemination

The next stage of organizational learning is the distribution of information throughout the

organization (Huber, 1991). The dissemination of information leads to an increase in the OL

competence of a firm. Often, a firm does not know the extent of its knowledge. Except for

conventional systems that routinely store hard information, small firms tend to have weak

systems for retrieving specific information stored internally in the firm's repository (Dassler,

Seaman, Bent, Lamb, & Mateer, 2007; Flores, Zheng, Rau, & Thomas, 2010). However, when

information disseminates widely within a firm, more varied sources exist, and retrieval efforts

are more successful (Altarawneh & Altarawneh, 2017).

There are, however, specific factors that limit the dissemination of information within a

small business. The first factor that has a noticeable impact on the extent of dissemination is

cost. Small businesses will often not possess the financial resources to codify useful knowledge

(O'Connor & Kelly, 2017). The second factor is the cognitive capacity of the individual

receiving the information, which can result in information overload (Daft & Huber, 1987). The

OL literature has identified two processes that can manage the overload of information: message routing and message summarizing (Hussain & Yazdani, 2013). Message routing is the selective dissemination of information. Similarly, message summarizing reduces the size of the message without changing the meaning; for instance, reducing large financial numbers to averages.

The distribution of acquired information usually takes place through formal (internal office meetings and discussions) and informal interactions with other individuals, departments, and organizations (Teo & Wang, 2005). Lioa, Chen, Hu, Chung, and Yang (2017) posited that the distribution of information impacts the knowledge value for an organization. Literature also has indicated that the formation of formal networks and databases improves communication by ensuring the accuracy and rapid spread of the acquired information (Teo & Wang, 2005). The literature on learning curves has established the importance of disseminating information to improve productivity (Daft & Weick, 1984). Scholars have continued to agree that without knowledge sharing and the distribution of information, knowledge absorption within an organization is not possible (Jordao & Novas, 2017). Combining information from various individuals leads to not only the acquisition of new information but also new interpretations. The third stage of the OL process is the interpretation of information.

Information Interpretation

Huber's (1991) OL framework defined the interpretation of information as the process by which information acquires new meaning or shared understandings. An organization must give meaning to collected and shared information. The OL processes described previously provide insight into how an organization can assign meaning to information (Cegarra-Navarro et al., 2017). The organization tries to analyze the environment sufficiently to determine the appropriate action. Daft and Weick (1984) explained interpretation as an enactment, selection,

and retention model of sensemaking, wherein individuals interpret organizational goals through two-way negotiations of cognitive maps. An accurate interpretation of information helps to reduce ambiguity and is a critical element in developing shared understandings that lead to OL (Zahra & George, 2002).

A potential feedback barrier may exist between the interpretation and the two processes of acquisition and distribution of information. As information interpretation plays a similar role in organizations as in individuals with cognitive filters, it may limit the information that the organization accumulates and disseminates (Ismail et al., 2017). For example, an exploitation-orientated firm may have an interpretation process that predisposes employees to specific forms of acquisition and distribution of knowledge, making it harder to accumulate, disseminate, and interpret other information (Gupta, Smith, & Shalley, 2006). For this reason, attaining organizational consensus regarding the implications and meaning of the information is a priority. In this regard, organizations develop shared cognitive maps and operate by agreement. The richness of strategic communication tools enhances the shared interpretation of information. However, to interpret information appropriately, organizations may have to engage in the unlearning process (Chiva & Habib, 2015). In other words, organizations must question standing cognitive maps and stored knowledge and reject outdated beliefs or data that lead to ineffective decision-making (De Holan, Phillips, & Lawrence, 2004). The idea of comprehensive learning leads to the OL concept of organizational memory.

Organizational Memory

Learning can be irrelevant if the organization neglects to capture the knowledge-based assets that it generates during the acquisition, dissemination, and interpretation of the information process. Cegarra-Navarro et al. (2017) suggested that knowledge needs to be stored

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securely in a repository so that it is accessible over time. Some researchers have viewed

organizational memory as an object (Argyris & Schön, 1978). Other researchers have proposed

that organizational memory is a subprocess that entails coding, storing, and retrieving lessons

learned from an organization's history, even with the turnover of employees (Levitt & March,

1993; Santos-Vijande, Lopez-Sanchez, & Trespalacios, 2012). This study adopted the view that

organizational memory is a subprocess that impacts OL.

The extant literature has established that organizational memory has a positive influence

on organizational learning (Flores et al., 2010). The influence occurs because the retrieved

learning of the organization can influence behaviors towards new situations. The organizational

memory can help make sense of the information overload that occurs in most situations by first

identifying what information is the most important and then by reducing a wide range of

explanations to a manageable size (Soto-Acosta & Cegarra-Navarro, 2016). Cegarra-Navarro et

al. (2017) suggested that organizational memory makes available the history of what has and has

not worked and, accordingly, has the potential for averting decision-makers from making the

same mistakes again. Weick (1979) recommended that primary decision-makers should treat

organizational memory as a pest and try to discredit it. This doubtful attitude toward the

organization's memory would cause the decision-makers to establish the predictable outcome of

acquired information.

Given the amount of information that faces all small businesses, there is a critical need

for MEBs to have knowledgeable individuals who can identify where the organizational

memories exist, for instance, knowing about a particular problem or a specific process. ERNs

can play a role in helping MEBs to develop internal and external systems to store and retrieve

information from the four storage silos where organizational memory exists. These silos include,

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(a) individuals, (b) culture, (c) transformations, and (d) structures (Walsh & Ungson, 1991).

Individuals retain memories of past transactions. Culture is the organizational learned critical

thinking and perceptions about problems communicated to members intentionally or

unintentionally. Transformations are the logic that influences the input and output of the

organizational processes. Structure refers to the organizational design. ERNs can help MEBs

take on the responsibility of creating systematic processes designed to collect the firm's learned

lessons.

The Relationship Between Entrepreneurial Orientation and Organizational Learning

A steady stream of the existing literature has argued that prior research on the EO–OL

relationship has three viewpoints (Wales, 2015). The first viewpoint investigates how EO

enhances a firm's capability to develop a learning orientation (Lua & Shi, 2002; Wang, 2008).

Capability or orientation identifies EO as a vital factor that creates a learning-oriented culture

within a firm. The second view assesses the process by which EO impacts the learning that

occurs within an organization (Lee & Sukoco, 2007); this view examines how EO enables either

knowledge creation or knowledge combination. The final perspective examines the OL role that

EO plays in promoting engagement of learning-related activities. Bierly et al. (2009) examined

the EO impact on what was termed an external knowledge application and found a positive

relationship between EO and learning activities in dynamic environments. These three

viewpoints offer several conclusions about the EO–OL relationship. Primarily, EO is critical and

fosters an organizational environment where learning is encouraged, and individual dimensions

of EO yield different outcomes of OL.

The rapid development of the EO domain reflects the significance of the entrepreneurship

field. There exists an abundance of empirical evidence that establishes a positive relationship

between EO and performance. Data from a recent meta-analysis of 119 articles revealed the

positive correlation between the most common EO dimensions and various firm performance

metrics such as profitability and growth (Gupta & Wales, 2017).

As the EO domain evolves, researchers have begun to answer the enduring call to explore

the various relationships between EO and organizational phenomenon such as learning (Covin &

Lumpkin, 2011; Covin & Miller, 2013; Wales, Wiklund, & Mckelvie, 2015). Liu, Luo, & Shi

(2002) suggested that EO and learning orientation are theoretically congruent. The Zahra,

Nielson, and Bogner (1996) study provided empirical evidence that supports the view that EO

enhances the relationship between knowledge-based resources and firm performance. Further,

Wiklund and Shepherd's (2003) work expanded on Zahra, Nielson, and Bogner's (1996) model

and found that EO behaviors generate knowledge through both internal and external means.

Current literature has added to the EO knowledge base relative to the observed linkage

with myriad manifestations of learning (Srećković, 2018; Wang, 2008), but there is still an

underexplored focus among EO theorists. What is underexplored is whether behaving

entrepreneurially actually improves a firm's capability to be a better learner so that a firm can

engage more with ERNs to extract knowledge-based resources. The missing link to

understanding the growth potential that MEBs can accomplish by implementing a learning

organization is EO.

Entrepreneurial Orientation

Most scholars agree that EO captures specific behavioral aspects of decision-making

styles and processes (Mishra, 2017; Wiklund & Shepherd, 2005). Theorists have outlined two

opinions regarding the conceptualization of EO dimensionality (Yang & Ju, 2018). Some

scholars have regarded EO as a unidimensional construct (Covin & Slevin, 1989) that

incorporates innovativeness, risk-taking, and proactiveness (Miller, 1983). In contrast, other

scholars have submitted that EO constructs are multi-dimensional (Lumpkin & Dess, 1996) and

characterized by five independent dimensions: (a) innovativeness, (b) risk-taking, (c)

proactiveness, (d) autonomy, and (e) competitive aggressiveness. A multi-dimensional approach

to conceptualizing EO was adapted because EO dimensions may act independently and not co-

vary. According to Covin and Slevin's (1991) original theory, all firms can be plotted within the

strategic dimensions of EO because they exhibit some entrepreneurial behavior over time. Thus,

the unidimensional approach may be too narrow to explain all the EO behaviors (Lumpkin &

Dess, 1996). Also, the unidimensional approach of EO as an overall strategy may neglect the

unique effects of each independent EO dimension (Wales, Patel, Parida, & Kreiser, 2013).

Most scholars have agreed that Miller (1983) borrowed the EO concept from the strategic

management literature and introduced it to the entrepreneurial domain (Anderson, Kreiser, &

Kuratko, 2015). Many organizational strategies impacting EO effectiveness should be viewed as

indispensable components of an identifiable strategy, such as an entrepreneurial strategy (Covin

& Slevin, 1991; Covin & Wales, 2012). Thus, EO firms exhibit recurring and intentional

entrepreneurial behavior patterns. Anderson, Kreiser, & Kuratko (2015) referred to this as

temporal stability, which is identifiable in the EO literature through the inclusion of EO attitudes.

For a firm to obtain an EO, the firm must combine sustained entrepreneurial behavior with a

managerial posture toward engagement with uncertain activities over time (Edmond & Wiklund,

2010).

The sustainment of entrepreneurial behaviors and activities returns a great deal of

variance in the performance of EO firms (George & Marino, 2011; Yang & Ju, 2017). As

scholars and the business press have reported, some EO firm activities will lack success because

some behaviors fail to produce an economic return (Lumpkin & Dess, 1996). When EO levels are elevated, and engagement occurs with riskier and more innovative projects, performance outcomes increase dramatically (Wales et al., 2013).

Firm posture (high-low). Martins and Rialp (2013) developed an EO index to measure a firm's high or low EO posture. A firm's EO posture is identified by several behavioral characteristics, such as proactiveness, risk-taking, innovativeness, competitive aggressiveness, and autonomy (Lumpkin & Dess, 1996). These EO firms vary from one to another, from mom and pop convenience stores to large companies such as Apple or Google.

Covin and Slevin (1989) proposed that entrepreneurial firms with a high EO posture measure success through creating a product or service, that is, something not yet available in the marketplace. These firms are autonomous, innovative, and have a propensity for increased risk-taking. The firm leaders never retreat from proactiveness, risk-taking, and competing for competence (Carland & Carland, 1997). Ambitious entrepreneurial firms with a high EO posture are measured by unprecedented firm performance (Dai, Maksimov, Gilbert, & Fernhaber, 2014). In a framework developed by Kilenthong, Hultman, and Hills (2016), a high EO index score was projected to increase the firm's ability to create market innovations. Kilenthong et al.'s (2016) conceptual evidence reported that several EO behaviors were more evident in EO firms than in non-EO firms.

Firms with a low EO posture are antithetical to firms with a high EO posture. The leaders of the two postures often have a unique view of their firms' success. Nwankwo, Akunuri, and Madichie (2010) suggested that leaders of low EO posture firms might see the business venture as a primary source of family income or employment. For these firms, the leaders are often unaware of the firm's actual performance. Martins and Rialp (2013) put forth

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that both high and low EO posture firms can be represented in any given data set. The mixture

of EO firms and their specific behaviors are inconsistent in the entrepreneurial literature.

Innovativeness. Shumpeter's (1934) seminal work was among the first to link innovation

with the entrepreneurial process. Shane and Venkataraman (2000) defined innovativeness, or

creative destruction, as the economic process that creates wealth when the introduction of new

goods or services disrupts existing marketplaces. The conceptualization of entrepreneurial

innovativeness emerged from the work of Shane and Venkataraman (2000).

A firm's innovativeness is measurable in several ways. Broadly, innovativeness can

range from a willingness to adopt new knowledge-based resources to experimentation with new

technological advances. Miller's (1988) study used research and development costs as a

proportion of sales and empirically examined the financial resources allocated to innovation.

Gupta and Wales (2017) identified 119 articles and tested 182 EO–performance relationships.

The test included two main categories which were comparable: performance (relative to

competitors) and absolute performance (independent of competitors; Gupta & Wales, 2017).

Thus, even though the results range varied by industry, just a small allocation of financial or

knowledge-based resources committed to innovation activities enhanced the operationalization

of innovativeness (Gupta & Wales, 2017).

Risk-taking. Risk-taking has quite a few meanings depending on the contextual setting

(Mishra, 2017). In the context of entrepreneurship, Lumpkin and Dess (1996) identified

venturing into the unknown and taking action without specialized knowledge of probable

outcomes as a strategic risk. Relative to financial analysis, the risk is used in the context of risk-

return trade-off, where it is specific to a high probability of an adverse outcome (Baird &

Thomas, 1985, 231–232). Miller and Friesen (1978) adopted this definition when they defined

risk-taking as the degree of willingness among managers when considering high-risk resource commitments. Thus, firms that engage in risk-taking behavior, such as making commitments to acquire knowledge-based resources, have an EO posture.

The extant literature has established that most business ventures involve some degree of risk-taking (Anderson et al., 2015; Gupta & Gupta, 2015). Beyond this universal agreement, methods for measuring risk-taking vary. For instance, Brockhaus's (1980) study on risk-taking propensity used an early version of Wallach et al. (1964) dilemmas questionnaire that presented respondents with various hypothetical situations that ranged from safe to risky. Sitkin and Pablo (1992) adopted Brockhaus's (1980) conceptualization of risk-taking propensity; however, they measured this concept as a mediator between risk preference and behavior. They argued that the mere desire to pursue or evade risk, not determine specific risk-taking behaviors, affects the likelihood of engaging in riskier performance improvement (Sitkin & Pablo, 1992, 14–15).

The existing literature has established effective operationalization of firm-level risk-taking (Covin & Slevin, 1989; Gupta & Wales, 2017; Miller, 1988). There is a widely accepted scale used based on Miller's (1983) conceptualization of EO; this scale measures risk-taking at the firm level by gauging leaders' perceptions of their firms' proclivity to engage in risk-taking behaviors.

Proactiveness. Schumpeter (1934) stressed the importance of resourcefulness in the entrepreneurial process. Penrose (1959) argued that managers with an entrepreneurial posture provide the visionary leadership necessary for opportunity exploration. Lieberman and Montgomery (1988) first emphasized the importance of first-mover advantage to capitalize on a new opportunity; their theory put forth that the first-mover could capture abnormal profits by exploiting irregularities in the marketplace. Therefore, participating in opportunity recognition

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and expending resources to participate in new markets is a characteristic that has become

associated with EO (Lakshman, Kumra, and Adhikari, 2016). Lumpkin and Dess (1996), EO

theorists, have referred to this characteristic as proactiveness.

Lumpkin and Dess (2005) defined proactiveness as a marketplace leader that has a

forward-looking perspective to identify opportunities based on anticipated future demand.

Proactiveness is vital to a firm's EO because it suggests innovation accompanies a forward-

looking perspective. Operationalized proactiveness at the firm level by measures a leader's

perception of the firm's tendency to lead the development of new products or services (Miller,

1983; Venkatraman, 1989).

Autonomy. Entrepreneurship continues to flourish because strong-minded people dare

to explore new markets and opportunities (Bird, 1988). Thus, the impetus for increased business

performance relies on the independent spirit who can champion what is needed for

entrepreneurship to occur (Burgelman, 1983). The autonomy dimension has emerged as a

critical concept of EO (Wiklund and Lumpkin, 2009).

The EO autonomy dimension is linked to the individual action of developing a new idea

from conception to completion (Lumpkin & Dess, 1996; Mishra, 2017). In an organizational

setting, this refers to actions that are free of organizational constraints. Although resource

constraint, actions by competitive opponents, or intra-organizational challenges may influence

performance initiatives, these are not enough to extinguish the entrepreneurial processes that lead

to better performance (Gupta & Wales, 2017). Throughout the exploratory process, the

organizational actor has free rein to act independently and to make decisions. The extent to

which the organizational actor exercises autonomy may be related to the size of a firm

(Shrivastava & Grant, 1985). Research on SMEs has examined the scope of autonomous

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behavior by investigating managerial delegation authority. Miller (1983) found that most SMEs have autonomous leaders. In small firms with high levels of EO, organizational leaders maintained persuasive authority and were the firms' knowledge leaders. In Shrivastava and Grant's (1985), a similar reliance on managerial authority was revealed, with ten firms identifying a single manager as the primary decision-maker. As a result, the study classified eight of the ten firms as entrepreneurial (Shrivastava & Grant, 1985).

Competitive Aggressiveness. Stinchcombe et al. (1965) seminal paper suggested that new firms are particularly vulnerable to the liability of newness and, consequently, must take extraordinary steps to establish legitimacy and power relative to competitors, suppliers, and customers. Scholars have maintained that an aggressive stance and intense competition is critical to survival because of the high failure rates of a new firm (Meutia et al., 2017; Porter, 1985). Accordingly, the fifth dimension of EO is competitive aggressiveness. Competitive aggressiveness denotes a concentrated effort to outperform the competition and is characterized by an aggressive response aimed at eliminating a marketplace threat (Lumpkin & Dess, 1996, 2005). MacMillan and Day (1987) suggested that aggressive firms may enter the competitor's weak market segments by investing more in marketing. Such firms often establish market share goals to keep pace with competitors and learn from them.

Model 1 Development and Hypotheses

MEBs are judged by the eternal world, such as financial institutions, private investors, suppliers, and customers, on their ability to learn faster than competitors (Khizindar & Darley, 2017). The burden rests with MEBs to show the depth of their expertise and their capabilities in leveraging knowledge-based resources. For MEBs, the management of knowledge and network-based resources can be tricky as their characteristics impede the influence of firm resources

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needed within the organization to increase performance (Valkokari & Helander, 2007). With

limited control of environmental uncertainty and resources, MEBs confront difficulties in

initiating OL and implementing the appropriate change to overcome problems. The organization

needs to be an active processor of knowledge to build a strong base of competitive MEBs that

are resilient to challenges. Given the need to manage OL in MEBs, an empirical examination is

needed to understand how MEBs fair in developing OL competence. Model 1 examined the

process of OL that involves vital components that increase network engagement and firm

performance. These components are (a) acquisition of information, (b) dissemination of

information, (c) interpretation of information, and (d) organizational memory.
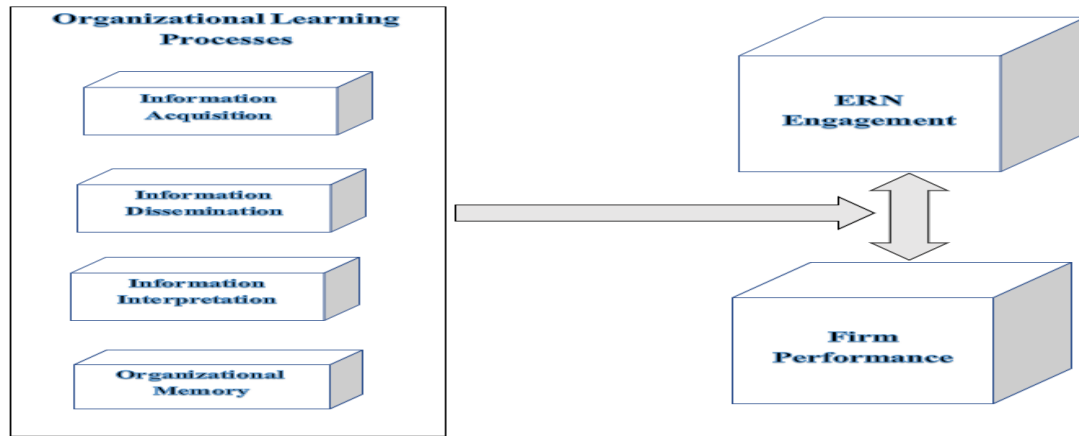
Figure 1. Model 1: Examining the impact of the organizational learning processes on external relational network engagement and firm performance.

Information acquisition, external relational network engagement, and firm performance. The KBV puts forth that a firm's primary functions are the acquisition of information and application of knowledge (Conner & Prahalad, 1996; Kellermans et al., 2016). Zahara and George (2002) referred to information acquisition as the organizational ability to identify and acquire information critical to its survival from its external environment. Verbano and Crema (2014) proposed that knowledge-based resources play a strategic role in small businesses traditionally impeded by resource deficiencies. The extant literature has established that small businesses find it challenging to compete with larger competitors and need to engage within ERNs to acquire knowledge-based resources to improve their performance (Leick & Gretzinger, 2018). However, several factors contribute to knowledge generation that increases a firm's performance.

Among primary factors, the literature has suggested that strategic searching for information from the external environment is a significant way to overcome competitive weaknesses (Chiva & Habib, 2015) like the liability of newness that most MEBs endure (Fairlie & Robb, 2008). Channels for acquiring this external information include ERNs where professional meetings, consultants, and networks of professionals are accessible. As stated previously, knowledge acquisition through searching can occur via scanning, focused searching, and performance monitoring. Findings from Wang and Ellinger (2011) validated that the knowledge acquisition subprocesses of scanning, searching, and performance monitoring contribute to firm performance.

The more information that MEBs acquire through the ERN search process, the more options there are for identifying environmental changes and threats that increase performance (Wang and Ellinger, 2011). If MEBs can acquire relevant information to advance products and

services or establish efficient processes that lead to new information acquisition, they will obtain better financial performance. Similarly, the findings of Jordao and Novas (2017) suggested that the active process of searching for information to acquire intensifies the need for firms to engage within ERNs. Accordingly, MEBs that acquire information from ERNs are probably more able to enhance OL competence and performance by helping to motivate the workforce, customers, and suppliers to adopt the firm's goals and strategies. Further, when MEBs engage within ERNs, they can increase workforce development via organizational learning programs to reach the objectives of increased firm performance. In this sense, theoretical evidence has suggested that the information acquisition of the OL process affects the ERN engagement and performance of MEBs. The following hypotheses were formulated:

H_{1a}: The information acquisition OL process positively impacts MEBs' engagement within ERNs.

H_{1b}: The information acquisition OL process positively impacts MEBs' firm performance.

Information dissemination, external relational network engagement, and firm performance. The information dissemination process relies on the OL concept. Firms that want to increase competitiveness via knowledge management can only attain this through a learning culture. It has been well established in the OL literature that dissemination of information improves the firm's ability to execute rapid decisions effectively (Mena & Chabowski, 2015). The process of information dissemination influences the strategic direction of the firm (Jaworski et al. 1990). A factor that influences the way a firm disseminates organizational information is the firm's ability to absorb knowledge through engagement with ERNs. The level of knowledge absorption relates to the individuals who are involved in the creation of the information. The

development of entrepreneurial and innovative individuals is necessary to maintain high levels of absorptive capacity (Zahra et al. 2002). Sroka, Cygler, and Gajdzik (2014) acknowledged two primary factors that affect a firm's absorptive capacity. The first relates to the organizational structure, including strategic orientation and organizational responsiveness (Sroka, Cygler, & Gajdzik, 2014). The other factor is external and includes the knowledge environment and network engagement (Sroka, Cygler, & Gajdzik, 2014).

Equally crucial to the knowledge transfer process is the sender's ability to disseminate the acquired information (Rua and França, 2018). The knowledge transfer process has received little attention from scholars, despite the significant impact that the sender's disseminative skill has on the success of the information transfer (Blackler, 1993). Some OL theorists have emphasized that the transformation of information by the sender may be valuable and can increase firm performance. As a result, the sender should have skills such as creativity, communication, and appropriate personality traits that will help to ensure the successful transmission of knowledge-based assets (Rua and França, 2018). Lave and Wenger (1991) described the disseminative capacity as the ability to translate and diffuse knowledge through social networks. Lave and Wenger (1991) suggested that this social perspective identifies the individual actor as someone who has knowledge-based assets and modifies mental structures to accommodate that information. The social network perspective further suggests that strategic learning is best achieved via active network engagement (Blackler, 1993).

Besides acquiring and disseminating information directly, the owners of MEBs must also strategically transfer knowledge to the firm's most significant assets, the employees. Seldom do MEBs have the resource capabilities to hire the upper echelon within their industries. Owners of MEBs must settle for less qualified but motivated employees who receive training. Training

calls for the MEB owner to disseminate information to newly hired employees who increase the firm's performance. However, the firm's performance is also contingent upon the MEB's ability to efficiently extract information from ERNs. This study proposed that an MEB owner's motivation to increase performance is affected positively by the firm's ERN engagement. Örtenblad and Koris (2014) conducted a comprehensive review of 73 articles and found that increased financial performance was the most significant factor in OL.

Further, Bailey, Alfes, and Fletcher's (2015) conducted a meta-analysis of 214 articles and found that collective engagement was the most impactful relative to firm performance. Therefore, this study assumed that the OL process of information dissemination could affect an MEB's willingness to engage in ERNs and ultimately increase firm performance. Consequently, positive relationships between information dissemination, ERN engagement, and firm performance were assumed, and the second hypothesis was as follows:

H_{2a}: The information dissemination OL process positively impacts MEBs' engagement within ERNs.

H_{2b}: The information dissemination OL process positively impacts MEBs' firm performance.

Information interpretation, external relational network engagement, and firm performance. As stated previously, OL theorists have defined the interpretation of information as the process of how firms make sense of newly acquired and disseminated information (Flores et al., 2010; Qi & Chau, 2017). Daft and Weick (1984) recognized that a possible feedback loop exists between the interpretation of information and the OL's subprocesses of knowledge acquisition and information distribution. The feedback loop may exist in many small businesses because the owner takes on the central role that may limit the amount of newly acquired and

distributed information. In turn, the owner's central role may influence the interpretation of new information, making it hard for the owner to engage in entrepreneurial activities (Gupta et al., 2006). The entrepreneur's centrality suggests that that individual is responsible for recognizing the benefit of the OL subprocess of interpreting information to support the business operations. However, small businesses like MEBs' day-to-day operations require specific and close attention (Hofer & Charan, 1984). The required attention usually results in situations where the entrepreneur has insufficient time available to oversee knowledge management issues. Insufficient time and scarcity of financial resources and expertise (Bridge, O'Neill, & Cromie, 2003) frequently result in the entrepreneur concealing knowledge rather than sharing the interpreted information with the firm (Bridge, O'Neill, & Cromie, 2003).

There are unique challenges facing MEBs in managing OL that are distinct from their larger SME counterparts. The extant literature on smaller businesses has suggested that MEBs should engage in ERNs to increase firm performance (Bridge, O'Neill, & Cromie, 2003). Choo, (1998) concluded that network theory would benefit significantly by encompassing knowledge and network management. However, a critical issue related to network management is the commitment of MEBs to engage actively in ERNs as they face many barriers to growth. Ram and Smallbone (2003) identified a lack of confidence, lack of awareness of support, and lack of understanding of the support type as barriers to MEB growth. To overcome the barriers to growth, Ramsden and Bennett (2005) posited that MEBs should develop a network engagement strategy where external advice is available from a range of providers who can help establish OL processes. Stated previously, the main problem with the information interpretation OL process (Choo, 1998) is how to develop shared meanings so that the entire firm may collaborate. Providers of ERNs can help MEBs develop sense-making blueprints and help coordinate support

services that increase MEB firm performance (Soetanto, 2017). These ERN support providers

can help MEBs tackle what is known as the knowledge awareness deficit. Based on these ideas,

this study suggested that the information interpretation OL process that an MEB uses positively

impacts ERN engagement and firm performance.

H_{3a}: The information interpretation OL process positively impacts MEBs' engagement

with ERNs.

H_{3b}: The information interpretation OL process positively impacts MEBs' firm

performance.

Organizational memory, external relational network engagement, and firm

performance. A firm's decisions are informed by and solve problems over time from learned

information determined by the strength of a firm's organizational memory (Walsh & Ungson,

1991). A dominant trait of organizational memory is its role in influencing actions (Moorman &

Miner, 1997). For example, a firm's memory may contain procedural policies for dealing with

specific stakeholders (Mena & Chabowski, 2015). These procedural policies dictate the firm's

actions towards the stakeholders. Further, the information stored in the organization's memory

about stakeholders can contribute to a firm's productive decision making (Walsh & Ungson,

1991). By assessing prior decisions, a firm can determine which actions better satisfy

stakeholder demands and produce outcomes such as knowledge retention.

Moorman and Miner's (1997) research on knowledge retention focused on the stock and

flow of knowledge stored in the organization's memory. Further research has examined how

firms reuse information in the organizations' memories (Majchrzak, Cooper, & Neece, 2004).

The literature also has examined whether the firm forgets about the information learned (De

Holan & Philips, 2004). Additionally, the literature has investigated whether information

acquired through OL prevails through time or decays (Cegarra-Navarro et al., 2017). Benkard's (2000) study found considerable evidence of knowledge depreciation, but organizations varied in the amount. Information embedded in firms' procedural policies and processes can buffer firms from the adverse effects of knowledge decay.

Because MEB risk can only be balanced internally to an insufficient extent, an MEB error in judgment can mean the difference between knowledge retention or decay. Therefore, MEB management decisions are critical and cannot be based solely on the expertise of the primary decision-maker. Owing to the substantial impact of network support, ERNs play a role in helping MEBs to develop internal systems to store and retrieve information from the firm's organizational memory (Walsh & Ungson, 1991). More, ERNs can help MEBs increase the effectiveness of organizational memory by designing internal storage bins that collect the firm's learned lessons so that the firm does not forget about the acquired information. In the competitive environment, MEBs that operate ERNs emerge as an alternative to managing the firm's learned lessons to improve its performance.

Balestrin et al. (2014) found that it is possible to achieve increased performance through ERN engagement to manage knowledge-based assets. More, Mertins and Orth (2011) found that management of the firm's memory helps to fulfill objectives such as increased engagement with ERNs and firm performance.

H_{4a}: The organizational memory OL process positively impacts MEBs' engagement with

ERNs.

H_{4b}: The organizational memory OL process positively impacts MEBs' firm

performance.

Model 2 Development and Hypotheses

Model 2 examined how MEBs can grow to overcome exogenous shocks in turbulent environments. The empirical examination illuminated the relationship between three critical constructs: EO, ERN engagement, and firm performance. Scholars have examined the impact of these theoretical constructs, independently, on small businesses (Mertins & Orth, 2011); they have not examined how the dimensionality of EO, ERN engagement, and specifically firm performance relate to MEB growth. This examination is necessary for two reasons. First, MEB growth is a primary driver of domestic economic growth and thus critical to gaining better insights into processes by which MEBs can grow. Second, MEB growth may initiate long-term survival by insulating other small businesses from exogenous shocks that may manifest within any business environment. Therefore, Model 2 of this study sought to develop a useful understanding of relationships that lead to MEBs' increased firm performance. The results of this study illuminate these areas.
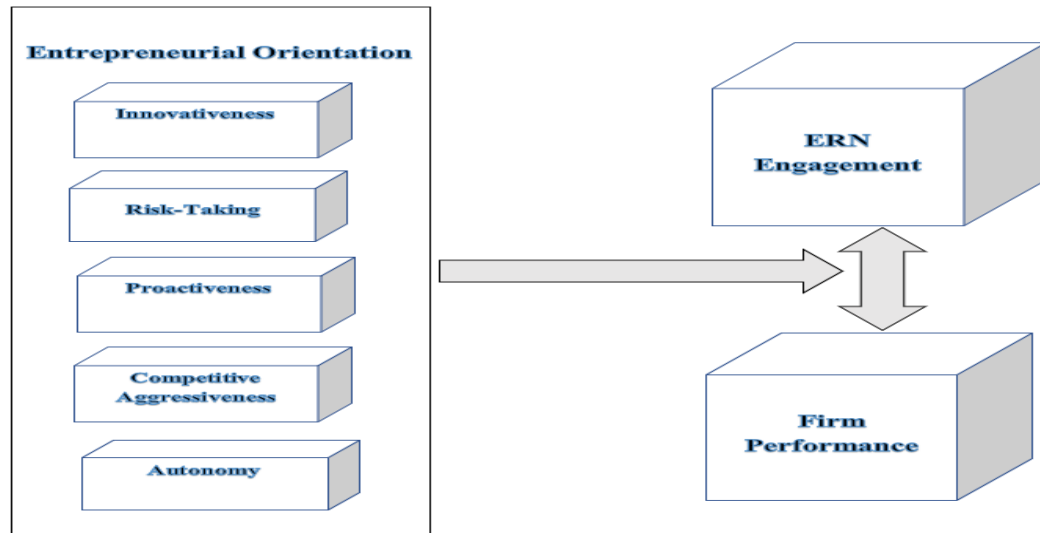
Figure 2. Model 2: Examining the impact of entrepreneurial orientation on external relational network engagement and firm performance.

Innovativeness, external relational network engagement, and firm performance. A fundamental element of EO is an innovation known as an internal resource by which small businesses foster increased growth and competitiveness (Huggins & Thompson, 2015). The tendency to exhibit EO and engage in new ideas and creative processes reflects the firm's innovativeness (Huggins & Thompson, 2015). Landström (2005) proposed that innovativeness is interrelated to creativity. Creativity is a pooled source of ideas that lead to the innovativeness of products, services, and processes (Miller, 1983). Without creativity, it is difficult for smaller firms to compete innovatively with larger competitors. Given this, the capability of MEBs to influence economic growth relates to their capacity to acquire knowledge-based assets from ERNs that can generate creativity and innovation.

A growing school of thought suggests that ERNs that enable the flow of knowledge to small businesses are a dynamic source for growth and innovation for MEBs (Jordao & Novas, 2017). Equally, scientific literature has established that ERN engagement is related to small business growth, particularly ERNs that include the flow of knowledge (Wiklund & Shepherd, 2005). Further, ERNs are a vital aspect of the innovative process, with network theorists stressing that small businesses should invest in building a strategic EO posture to increase performance (Atuahene-Gima & Ko, 2001;). In the face of complex and environmental uncertainty, the innovative EO posture would lead MEB operators to interpret events that result from environmental uncertainty. As such, MEB firm performance would be expected to increase. In adopting Wiklund and Shepherd's (2003) viewpoint, this study proposes that the EO innovation dimension is likely a prominent construct that plays an essential role in the relationship of a firm's growth. Unlike Wiklund and Shepherd's (2003) viewpoint, this study examined the potential for the EO innovation dimension of the intervening construct between

ERN engagement and growth performance of MEBs. To the extent that innovativeness allows

MEB firms to be more creative in their activities, they may be able to create a competitive

advantage that enhances growth (Wang, 2008). Given the consistency of general support from

other studies examining EO impact on small businesses, this study postulated the following:

H_{5a}: EO innovativeness positively impacts MEBs' engagement with ERNs.

H_{5b}: EO innovativeness positively impacts MEBs' firm performance.

Risk-taking, external relational network engagement, and firm performance. The

concept of risk-taking propensity is an EO behavior used to frequently describe a firm's

willingness to make strategic decisions when outcomes are uncertain. A firm's strategic risk

involves venturing into the unknown and engaging in high resource commitments to venture

forward (Anderson et al., 2015). Several studies have shown that firms that engage in EO risk-

taking behavior are aggressive in exploiting new opportunities provided by the environment (del

Mar Fuentes-Fuentes, Bojica et al, 2014). Covin and Slevin (1991) found that risk-taking

positively impacts firm performance in uncertain environments.

Concerning EO risk-taking propensity, Emslie, and Bent (2007) found that MEBs are

more likely to engage in non-priority markets and high failure rate activities. Ram and

Smallbone (2003) confirmed that MEBs are more likely to prefer low-entry and low-risk return

businesses. Avlonitis and Salavou (2007) added that risk-averse firms avoid engagement in

activities that provide uncertain outcomes in a changing environment. These findings suggest

this behavior will result in lower performance, as the firm is not prepared to compete in turbulent

environments. Kreiser and Davis (2010) found that uncertain environments impact the

relationship between a firm's risk-taking and growth.

According to Stoian et al. (2016), small businesses need to make bold decisions that are calculated and strategic. From this perspective, MEBs face a significant resource barrier in the development of an EO, as risk-taking behavior correlates with knowledge-based resources. The results of various studies have emphasized that ERNs provide knowledge-based resources that play an essential role in helping a firm translate EO risk-taking behaviors into increased performance (Engel, Kaandorp, & Elfring, 2017; Pett & Wolff, 2016). MEBs should adopt this EO behavior by engaging with ERNs, as prior research has shown that it enables firms to increase strategic risk-taking behaviors via advice from network advisors. In line with other EO performance studies, the firm is expected to improve due to the benefits that ERNs offer MEBs. Thus, this study postulated that the direct effect of EO risk-taking would positively relate to MEB engagement with ERNs and firm performance.

H_{6a}: EO risk-taking positively impacts MEBs' engagement with ERNs.

H_{6b}: EO risk-taking positively impacts MEBs' firm performance.

Proactiveness, external relational network engagement, and firm performance. The entrepreneurship literature has established proactiveness as a vital component of an EO with a perspective that anticipates a firm's future problems, needs, or changes (Engel, Kaandrop, & Elfring, 2017). A proactive firm is a marketplace leader rather than a follower because it has the autonomous ability to engage in new opportunities even if the firm does not always have the first-mover advantage (Kreiser, 2011). More, a proactive firm takes the initiative in shaping the firm's environment to its advantage. The proactive behaviors, as discussed, represent an even more critical element that directly impacts MEB performance (Kreiser, 2011).

McPherson's (2010) study of MEBs found that owner-managers adapt slowly to environmental changes, preferring instead to pursue a myopic style of management. In a related

study, Bewaji et al., (2014) suggested that MEB entrepreneurs that adopt and exhibit myopic management processes severely impair the firm's propensity to engage in proactive activities. This assessment of MEBs' EO reflects not only low involvement with proactive behaviors but also low engagement with ERNs (Engel, Kaandrop, & Elfring, 2017). In a similar vein, Bewaji et al., (2014) examination found that MEBs that lacked core management knowledge practices exhibited low network competence.

Nahapiet and Ghoshal (1998) theorized that firms that engage in proactive activities are more knowledgeable regarding the availability of resources from ERNs. This viewpoint suggests that MEBs that increase their proactiveness are more likely to place themselves in information-rich situations where the firm can acquire knowledge-based resources (Hayter, 2013). Further, when MEBs encounter new information, increasing proactiveness will allow them to acquire and integrate information more quickly to increase the firm's performance. Proactive behaviors drive resource acquisition by placing the firm in the position to obtain the information from ERNs. Putting it all together, the higher the MEBs' proactive EO, the more willing and able the firm is to engage in and extract knowledge-based resources from ERNs. Further, resources obtained through proactive EO behaviors foster MEB engagement with ERNs and firm performance.

This study posited:

H_{7a}: EO proactiveness positively impacts MEBs' engagement with ERNs.

H_{7b}: EO proactiveness positively impacts MEBs' firm performance.

Autonomy, external relational engagement, and firm performance. As defined by Lumpkin and Dess (1996), autonomy is the independent action that an individual or team brings forth as a vision or ideal carried through to completion. In promoting entrepreneurship (Engel,

Kaandrop, & Elfring, 2017), many SMEs have engaged in organizational changes such as flattening bureaucracy and delegating authority to organizational units. These strategic moves are intended to promote autonomy, but organizational autonomy requires more than structural change (Dess, Lumpkin, & Covin, 1997). Mirshra (2018) advised that organizations must grant autonomy and encourage organizational actors to use it. This process involves organizational champions who promote entrepreneurship by protecting the firm's innovators from norms and resource constraints, such as knowledge deficiency, which might cause the new project to fail. Burgelman (1983) found that organizational champions formed the link between internal and external resources. In an MEB context, it is often the owner-manager who exhibits increased autonomy by scavenging for knowledge-based resources at the network-level.

The challenge of limited resources forces MEBs to inhibit aspects of autonomous behaviors via engagement with ERNs (Huggins & Thompson, 2015). Covin and Slevin (1991) suggested that the autonomy EO dimension is a resource-consuming orientation. The predisposition to engage with ERNs may increase performance among MEBs (Engel et al., 2017). Identifying the influence of the autonomy EO dimension exclusively, without considering external resources from ERNs, may not provide the complete influence of an MEB's internal resources on firm performance. Stam, Arzlanian, and Elfring's (2014) meta-analysis of small firm performance acknowledged that the social capital embedded in ERNs affects the performance. Therefore, the following was posited:

H_{8a}: EO autonomy positively impacts MEBs' engagement with ERNs.

H_{8b}: EO autonomy positively impacts MEBs' firm performance.

Competitive aggressiveness, external relational network engagement, and firm performance. A firm's competitive aggressiveness influences its propensity to challenge

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competitors to achieve entry or outperform rivals (Lumpkin & Dess, 2005). Thus, competitive

aggressiveness is a vital behavior that small businesses should adopt to pursue competitive rivals.

The extant literature has established that competitive aggressiveness takes place in various

forms. One form of aggressiveness strategically analyzes competitors' weaknesses, while

another form commits resources to risky ventures with uncertain outcomes. Kraus, Rigtering,

Hughes, and Hosman (2011) found that aggressive firms extract intangible resources such as

knowledge-based resources from networks. Thus, in the uncertain and competitive context in

which small businesses operate (Jordao & Novas, 2017), ERNs emerge as an alternative for

MEBs to become more competitive by gaining direct access to new products, services, and

markets (Engel et al., 2017).

The literature has recognized the significant role of ERNs in influencing the processes

and behaviors of EO (Hoang & Antoncic, 2003; Kirkels & Duysters, 2010; Kusumawardhani,

McCarthy, & Perera, 2009). The entrepreneurship literature has implied that the core of

entrepreneurship is the ability to aggressively pursue and exploit marketplace opportunities

(Shane & Venkataraman, 2000). Prior literature has established that the barriers that MEBs face

limit their ability to exploit many opportunities (McPherson, 2010). To overcome barriers,

MEBs need to collaborate with network actors who enable them to carry out aggressive and

competitive activities to increase access to resources (Zain & Ng, 2006). MEBs need to develop

business networks to increase competitive aggressiveness, acquire knowledge, and benefit from

the synergistic pool of resources (Chetty & Holm, 2000). ERNs are considered valuable assets

that provide access to information, knowledge, and power (Elfring & Hulsink, 2003; Inkpen &

Tsang, 2005). For that reason, Hoang and Antoncic (2003) acknowledged that ERN engagement

is an activity that increases the performance of small businesses. MEBs can increase their

competitive aggressiveness with ERN engagement, enhancing firm performance. Hence:

H$_{9a}$: EO competitive aggressiveness positively impacts MEBs' engagement with ERNs.

H$_{9b}$: EO competitive aggressiveness positively impacts MEBs' firm performance.

Model 3 Development and Hypotheses

Model 3 was comprehensive and sought to develop an understanding of the relationship

between the EO, OL theory, and network theory on MEB performance. Model 3 provides the

basis for the general assumption that a logical link exists between a firm's overall EO inputs, OL

process, and performance outputs relative to ERN engagement and increased growth. If the

hypotheses from Model I and Model 2 hold, then this study expected high performing MEBs to

possess a well-configured OL, EO, and ERN engagement strategy as a reason for their high

performance.

This study adapted Martins and Rialp's (2013) EO index, ranging from 1 to 5 with a

midpoint of 3. Thus, an entrepreneurial firm should have an EO index greater than or equal to 3.

Consequently, a non-EO firm theoretically has an EO index of less than 3. By using cutoff

points, survey respondents could be classified as firms with EO postures that were high or low.
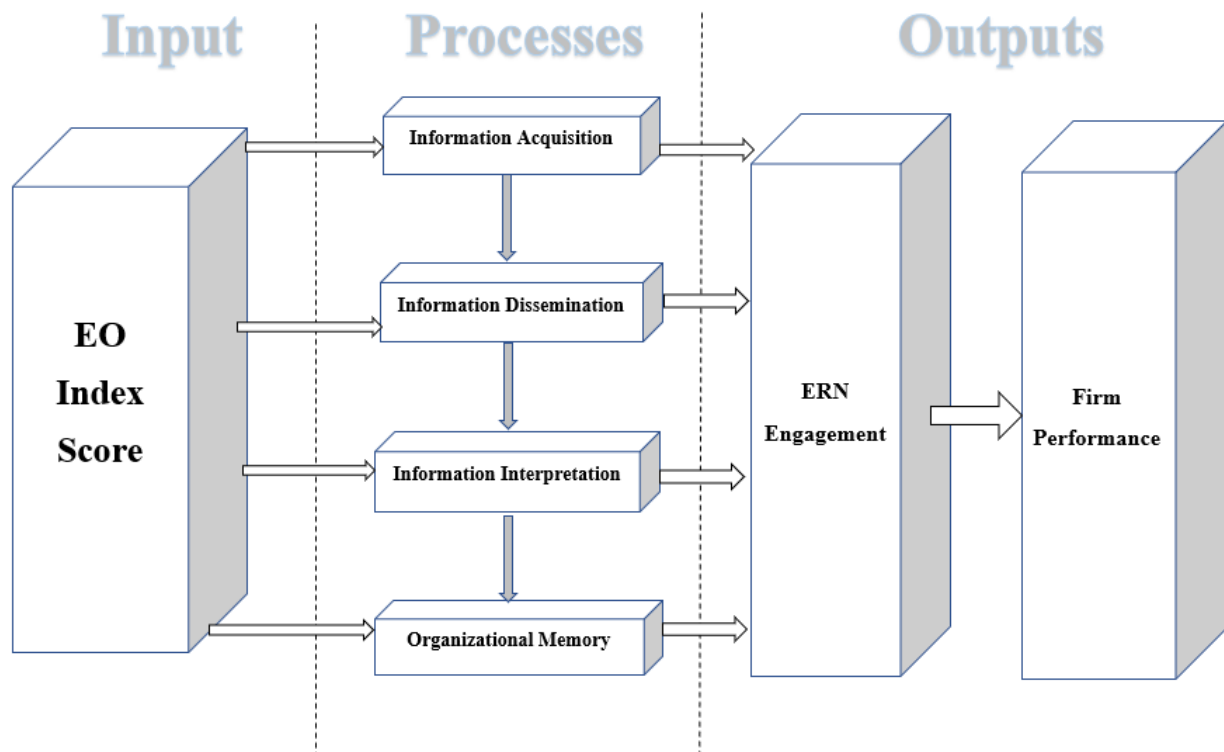
Figure 3. Model 3: Examining the entrepreneurial orientation–organizational learning relationship on minority ethnic businesses' engagement and firm performance.

Entrepreneurial orientation impact on the organizational learning processes. At the center of entrepreneurship, Wiklund and Shepherd (2003) suggested there is embeddedness of processes that require a small business to have both EO and OL. As noted by Beneke et al. (2016), small businesses that have an EO posture are more inclined to focus their attention on exploiting and identifying new opportunities. Meutia, Ismail, & Ummi (2017). (2017) proposed that entrepreneurial firms proactively scan their external environments and that this exploration process requires a learning capability. Kreiser (2011) postulated that a small business with high EO levels will have extended opportunities to exchange knowledge-based assets and will be encouraged to participate in future exchanges. Rhee, Park, and Lee (2010) submitted that as EO increases, it is likely that the firm's concerns with, and commitment to, learning will increase due to the urgent need to collect relevant information about opportunities.

In the prior discussion, Wang (2008) contended that EO creates a fertile internal environment for OL to take place. Based on this viewpoint, an EO firm will be much more attentive to the LO (Ruiz-Jimenez, & Fuentes, 2015). A recent study by Ameh and Udu (2016) found that Malaysian SMEs that adopted an EO offered innovative products due to higher levels of OL; this empirical evidence suggests that MEBs with high EO levels will actively seek to acquire new knowledge from the external environment.

Most MEBs, due to resource barriers, need to acquire bundles of resources from ERNs (Ram & Smallbone, 2005). Prior research has established that engagement with ERNs leads small businesses to develop market innovations, take risks, and engage in proactive behaviors that encourage OL (Miller, 1983). Operators of MEBs who are aware of the benefits of ERN engagement can use knowledge-based resources to enhance firm performance. If MEB operators

transfer knowledge-based resource bundles through ERN engagement, then MEBs with

increased levels of EO will have an advantage regarding increased firm performance.

        Entrepreneurial orientation and information acquisition. The EO competitive

aggressiveness and innovativeness dimensions play an essential role in a firm's OL process of

acquiring information from ERNs. When network actors combine dispersed information with

pre-existing know-how, new knowledge-based resources may be created (Chaston & Scott,

2012). Due to the competitive landscape of markets, small businesses must develop an

aggressive and innovative orientation towards acquiring knowledge-based assets. For example,

Rua and França (2018) conducted a study on 42 small businesses and found that EO had a

positive and significant influence on a firm's knowledge exploitation strategy. Petrou and

Daskalopoulou (2013) suggested that knowledge-based assets help small businesses to compete

in outperforming rivals aggressively. Zacca et al. (2015) found that small businesses that

acquired information from ERNs were more likely to pursue an innovative and competitive

posture aimed at increasing customer satisfaction and financial performance. To be able to

innovate and compete aggressively in complex environments, MEBs must have the propensity to

acquire information.

        Ventkataraman (1997) acknowledged that the exploitation of entrepreneurial

opportunities results from information about prior markets. This study hypothesized that MEBs

that score high on the EO index would intensively engage in aggressive and innovative behaviors

since their goal is to increase the firm's performance. To the contrary, it was hypothesized that

MEBs that score low on the EO index would not focus on innovativeness or competitive

aggressiveness. The reason for this hypothesis is that firms that do not exhibit EO behaviors are

typically not concerned with their innovativeness and may not even recognize that an opponent is

attacking their market share. Therefore:

H_{10}: EO positively impacts the information acquisition OL process.

Entrepreneurial orientation index and information dissemination. The complex

environment in which MEBs operate calls for a sophisticated style of leadership. The

complexity of a firm's EO values defines the way a firm operates (Sciascia, D'Oria, Bruni, &

Larreneta, 2014) and helps to make the firm's culture hard to imitate. Pett and Wolff (2016)

argued that small firms that exhibit autonomy and LO would outperform rival firms that do not.

Slater and Narver (1995) advised that firms with an autonomous environment should achieve

higher innovativeness.

An innovative environment can take place when employees perceive that leaders are

autonomous and encourage learning (Cabrera, Collins, & Salgado, 2006). An autonomous

environment encourages employees to resolve new and developing problems in innovative ways

because employees are free to engage in innovative solutions (Covin & Levinthal, 1990).

Huang, Lin, Wu, and Yu (2015) found that firms with higher research and development

autonomy encourage an innovative culture that inspires employees to behave innovatively.

According to a recent study on the managerial capabilities of 179 architecture and real estate

firms, Srećković (2018) found that the autonomous real estate leaders revealed both EO posture

and formal OL processes for information processing and decision-making.

Autonomous leaders can provoke or change a firm's OL process that may have been

underdeveloped and foster a culture in which the commitment to learning is the norm (Hang et

al., 2015). Such autonomous leaders aim to develop employees by disseminating and sharing

relevant information about the firm's performance. They share information about the firm's

business trends and competitor actions. Further, autonomous leaders disseminate information to keep employees informed about the firm's overall performance. Therefore, an MEB that exhibits high levels of autonomy can facilitate a learning environment that inspires the firm's employees to behave innovatively (Srećković, 2018). It is easy to see that firms with a high EO posture would be autonomous and innovative. These firms independently reach their goals at almost any cost. On the other hand, firms with a low EO posture will also exhibit autonomous behaviors. The classical study of Carlands and Carlands (1997) suggested that operators of firms with a low EO posture may operate their businesses to be free from career demands. These firms will also work hard to reach their goals at almost any cost. Therefore:

H_{11}: EO positively impacts the information dissemination OL process.

Entrepreneurial orientation index and information interpretation. Prior studies have found that a firm's risk-taking orientation will result in a strong link between OL and firm performance (Dada & Fogg, 2016). As highlighted by Rua and França (2018), calculated risk-taking offers firms increased payoffs in complex environments. Consistent with Covin and Slevin (1989), entrepreneurial firms are commonly regarded as risk-takers regarding their decision-making because of their ability to manage knowledge-based assets. Rua and França (2018) surveyed 42 firms, and empirical results indicated that EO dimensions that contribute most to knowledge exploitation are innovation and risk-taking.

Economic logic suggests that a small firm's competitive advantage relies on the ability to excel at calculated risk-taking activities (Dutta, Gupta, & Chen, 2016). Inevitably, MEBs must interact with ERNs that provide complementary resources (services or expertise) on which their risk-taking activities depend. A significant challenge that MEBs face is how to collaborate with

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network partners to have secure access to knowledge-based assets. To achieve this, MEBs must have the ability to interpret the acquired information from ERNs.

A central tenant of the OL information processing literature is that a firm's interpretation of information about its external environment is influenced by the firm's risk-taking orientation (Mena & Chabowski, 2015). Flores et al. (2012) suggested that the interpretation of a firm's opportunities and problems is determined by a firm's strategic direction for risk-taking activity. Srećković (2018) advanced that firms that engage in high EO activities are significant risk-takers. On the other hand, firms that do not engage in EO activities are not said to be risk-takers. Thus:

H_{12}: EO positively impacts the information interpretation OL process.

Entrepreneurial orientation index and organizational memory. EO is assuming that entrepreneurial firms operate differently than non-entrepreneurial firms (Pett & Wolff, 2016) because entrepreneurial firms are more likely to behave proactively by seeking new opportunities (Wolff, Pett, & Ring, 2015). Covin and Slevin (1989) linked proactiveness to aggressive action toward rivals when trying to gain a competitive advantage. With a more proactive strategic orientation, MEBs can become more responsive to the externally acquired information. Furthermore, with increased levels of EO, MEBs can enhance performance by intensifying their information utilization efforts (Liao, Welsch, & Stoica, 2003). Keh, Nguyen, and Ng (2007) found that marketing information acquisition and utilization partially mediated the EO–performance relationship.

An MEB's ability to proactively seek new opportunities will enable the firm to acquire increased levels of knowledge-based resources (Engel et al., 2017). A recent study of 350 SMEs in North Cyprus found a positive relationship between OL capability, EO, and SME growth

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(Altinay, Madanogluu, DeVita, Arasli, & Ekinci, 2016). As indicated by Rhee et al. (2010),

entrepreneurial firms proactively scan the external environment, and this exploration process

requires a capability to learn via the organization's memory.

A compelling benefit of organizational memory is its role in guiding the firm actions

(Cegarra-Navarro et al., 2017). For example, an organization's memory may contain policies

and procedures for dealing with individual customers (Moorman & Miner, 1997). Knowledge

embedded in the firm's memory is dictated by the firm's proactive behavior towards the customer

(Argote, McEvily, & Regans, 2003). For MEBs, because of limited internal resources,

organizational memory is likely to be related to the proactive responsiveness to manage internal

resources. In this study, MEBs with an EO posture were predicted to found to be proactive.

These firms want to increase firm performance to compete for competence, the foundation of

proactiveness. In contrast, firms that do not engage in EO behaviors are not going to be

proactive because they are satisfied with their current situation. Therefore, they were not

hypothesized to be found proactive. Then:

H_{13}: EO positively impacts the organizational memory OL process.

The relatedness of the organizational learning processes. Many studies have

suggested that the organizational ability to decode and respond to environmental uncertainty

leads to sustained competitive advantage (Baker & Sinkula, 2002; Qi & Chau, 2017). It is now

widely recognized that OL plays a significant role in enhancing the performance of an

entrepreneurial firm (Hansen & Hamilton, 2011). Empirical findings support OL's positive

effect on growth (Hansen & Hamilton, 2011) and financial performance (Baker & Sinkula, 1999;

Kreiser, 2011). However, research has shown that OL in many MEBs is unplanned and reactive

(del Mar Fuentes-Fuentes et al., 2014). The OL competence MEBs can increase with

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engagement with ERNs. One of the most strategically significant resources that can mediate networks and OL relationships is the information acquisition process (Cygler, Gajdzik, & Sroka, 2014). The information acquisition process requires that all organizational members exert effort and continual experimentation to acquire knowledge-based resources (Chiva & Habib, 2015). Thus, when a member acquires knowledge, the firm has to disseminate the information to the rest of the organizational members (Huber, 1991). Hence:

H_{14a}: Information acquisition positively impacts information dissemination.

Goh et al. (2012) advised that the information acquisition process is useless unless the information can be disseminated within the firm. Over time, the acquired and disseminated information would result in the firm developing a process to interpret the new information. The newly interpreted information could lead to employees having more choices with using the information. Therefore:

H_{14b}: Information dissemination positively impacts information interpretation.

For the interpretation of information to occur, key individuals must translate and develop models of understanding, develop meaning, and store this information in the firm's repository (Argote, 2011; Argote & Miron-Spektor, 2011). Organizational memory is the broad knowledge base of a firm that contains concepts in use, shared mental models, formalized procedures, and cultural mores that guide organizational behavior (Slater & Narver, 1998). Equally, the greater the extent of the information, the higher the need for the information to be stored and retrieved from the organizational memory. This view led to the following hypothesis:

H_{14c}: Information interpretation positively impacts organizational memory OL processes.

Organizational learning processes and external relational network engagement. This study expected high performing MEBs to possess a well-configured OL strategy that

increases engagement with ERNs. As noted previously, Model I examined the impact of the information acquisition, information dissemination, information interpretation, and organizational memory OL processes on ERN engagement. The hypothesis was already supported in Model I.

External relational networks and firm performance. One of the primary objectives in OL is to enhance the quality of membership through the tangible benefits that an ERN offers, such as programming that drives OL and resource acquisition (Gronroos, 2000). The ERN executes interest-driven programming where educational opportunities and special events allow entrepreneurs to acquire knowledge at a reduced cost. Past research has suggested that ERNs that are effective at delivering a wider variety of quality programs create more opportunities for members to develop OL capabilities that can mediate the relationship between their resource acquisition practices (Mowday, Porter, & Steers, 2013). Further, when the ERN offers a program that exceeds the expectations of the members, it influences members to participate in professional activities offered by the ERN (Gronroos, 2000). Members who actively participate in the ERN's programming benefit from direct access to industry knowledge, which impacts entrepreneurs' business performance.

Entrepreneurs who have higher levels of participation within ERNs are more likely to obtain benefits that impact firm performance. As with employee engagement, member engagement is the degree to which a member actively or passively participates in a network (Caldwell, Farmer, & Fedor, 2008). Those MEBs that are actively engaged and participate in ERN activities gain greater access to professional knowledge, loan assistance, and expert advice. More, Albdour and Altarawneh (2014) studied ERNs and found that members that exhibited higher levels of network engagement reported higher levels of business performance. Prior

studies have demonstrated that business performance can be enhanced by engaging in knowledge-based sharing and careful management of knowledge-based resources through effective OL strategies (Fang, Chi, Chen, & Baron, 2015).

Additionally, intense involvement improves the MEB's ability to evaluate opportunities, understand how other firms are managed, and enhance their managerial skills (Fang, Chi, Chen, & Baron, 2015). For MEBs, engaging within an ERN is an essential ingredient for firm survival. Further, firm performance or revenue generation is a primary motivator for an entrepreneur to become engaged within a network (Hoang & Yi, 2015). It was postulated that ERN engagement would positively impact the firm performance of the MEB through revenue generated from interacting with others connected to the network. Hence:

H_{15}: ERN engagement positively impacts MEBs' firm performance.

Methods

The following section provides an overview of the research methods utilized to conduct this study. First, a detailed review of the sample is provided. Second, the research design and method of data collection are examined. Third, the variables utilized in this study are defined. Fourth, the data analysis procedures and scale development are explored. Finally, non-response bias and common method bias are methodically addressed.

Sample

International trade associations provide professional expertise and resources to their members. Through information and education, the trade association mission is to provide their members with essential services at the highest levels of excellence and integrity. A trade association headquartered in the United States was selected as the representative sample because

of the association's diverse membership base, consisting of more than 20,000 individual members representing over 11,000 service firms.

Research Design and Methods of Data Collection

This dissertation study was conducted in two phases. The first phase (pilot phase) took place over five weeks in August and September 2018. The second phase occurred from October 2018 to January 2019. This stage is referred to as the data collection phase.

The pilot phase of this study was conducted with a trade association with 325 members located in in a Midwest city in the United States. The association was selected because of the members' ethnicities, genders, ages, and entrepreneurial experiences.

The purpose of the pilot phase was twofold, namely:

- To develop and select items to measure key variables in the study. Items were generated by combining questions from the literature review, existing scales, and the study hypotheses.

- To pilot the data collection survey instrument to check for reliability and validity concerns. Exploratory factor analysis (EFA) was used to measure the instrument dimensionality. Cronbach's alpha was used to measure reliability.

Key variables were tested in a survey instrument that included 98 original items in the first email wave to participants. The survey instrument was modified in style and reduced to 83 items for the second email wave. The final instrument was modified again and reduced to 68 items for the third email wave. Out of the three waves of 1,449 emails sent, 179 usable surveys were received back from participants. Also, 30 paper surveys were distributed at the association's fall conference, and 28 usable surveys were received back from participants. A total of 207 usable responses were used in the pilot study.

The primary purpose of the data collection phase was to administer the survey instrument that was developed during the pilot phase to a representative sample that included minority entrepreneurs. A research assistant from the national trade association administered the survey electronically to members via the listserv. A total of 7,989 email invitations presenting the study scope and online survey link were sent to members. The sample size fit the criteria as set forth by Guadagnoli and Velicer (1988).

Table 1

Construct Definition

CONSTRUCT	DEFINITION	SOURCES
Organizational Learning	**OL is measured by four processes**	
Information Acquisition	**Five items:** An individual's perception of their firm ability to acquire knowledge from existing information.	Flores et al. (2012)
Information Dissemination	**Five items:** An individual's perception of their firm process to distribute knowledge throughout the organization.	Flores et al. (2012)
Information Interpretation	**Five items:** An individual's perception of how employees seek to understand and interpret organizational issues and concepts.	Flores et al. (2012)
Organizational Memory	**Five items:** An individual's perception of how their firm preserve and retrieve information.	Flores et al. (2012)
Entrepreneurial Orientation	**EO is measured by five dimensions**	
Autonomy	**Four items:** An individual's perception of how their firm encourage employees to make decisions on their own without consulting managers.	Lumpkin et al. (2009)
Innovativeness	**Four items:** An individual's perception of their firms ability to seek out new ways of doing things.	Covin and Slevin (1989); Change et al. (2007); Hughes and Morgan (2007)
Proactiveness	**Four items:** An individual's perception of how their firm monitor trends and identify customer needs.	Covin and Slevin (1989); Change et al. (2007); Hughes and Morgan (2007)
Risk-taking	**Six items:** An individual's perception of their firms ability to adopt bold acts necessary to achieve the firm's objectives.	Covin and Slevin (1989); Change et al. (2007); Hughes and Morgan (2007)
Competitive Aggressiveness	**Five items:** An individual's perception of their firms use of unconventional strategies to challenge competitors.	Lumpkin et al. (2001); Change et al. (2007)

CONSTRUCT	DEFINITION	SOURCES
DEPENDENT VARIABLES		
ERN Engagement	**Seven items:** The extent to which an entrepreneur consumes ERN services, such as meetings, educational programming, web services, or project involvement.	Morgan and Hunt (1994); Garbarino and Johnson, (1999); Bhattacharya et al. (1995); Gruen et al. (2000)
Firm Performance Measured by two Dependent Variables		
Profitability	**Four items:** An individual's perception concerning their firm's performance level when compared to similar firms in their industry.	Chandler and Hanks (1994); Zahra and George (2000)
Growth	**Six items:** An individual's perception concerning their firm's growth in sales, assets, and employees over the last 3 years.	Chandler and Hanks (1994); Zahra and George (2000)
Controls		
Gender	Participant's gender (0=Male; 1-female)	
Age	Participant's age (18-24; 25-34; 35-44; 45-54; 55-64; 65+)	
Education	Participant's highest education level (High school degree/GED or less; Associate/College degree; Master's degree or higher)	

Table 2

Survey Instrument

ENTREPRENEURIAL ORIENTATIOIN

To better serve you, the next set of questions relate to your personal and firm's view on current and new business practices.

INNOVATIVENESS   **(1=Strongly Agree to 5=Strongly Disagree)**
I am quick to introduce new ideas into my business.
I seek out new and novel ways to run my business.
I seek new approaches to problem solving rather than following the norm.
I actively introduce improvements and innovations in my business.

PROACTIVENESS   **(1=Strongly Agree to 5=Strongly Disagree)**
I am often the first to initiate new actions/offerings rather than responding to competitive moves.
I introduce new products/services to the marketplace before my competitors do.
I am someone who tries to take the initiative in every situation.
I am good at identifying opportunities before others do.

INDEPENDENCE   **(1=Strongly Agree to 5=Strongly Disagree)**
I am an autonomous, independent thinker.
I like to act and think without interference from others.
I like to come to my own conclusions.
I am able to make decisions by myself.

RISK MANAGEMENT   **(1=Strongly Agree to 5=Strongly Disagree)**
I consider myself a risk-taker.
I have a tendency to pursue high-risk, high-return projects.
I believe that bold acts are needed to achieve my business objectives.
Bold, aggressive actions are needed to exploit potential opportunities.
I take bold action to venture into the unknown.
I act boldly in situations where risk is involved.

COMPETITIVENESS   **(1=Strongly Agree to 5=Strongly Disagree)**
My business is very competitive in nature.
Competition for clients/family is intense.
I take a bold and aggressive posture when competing.
I try to out-maneuver my competitors.
I challenge competitors with unconventional strategies.

ERN ENGAGEMENT

ENGAGEMENT WITH ERN   **(1=Strongly Agree to 5=Strongly Disagree)**
I attend most ERN conferences.
I consider myself a highly active ERN member.
I regularly attend ERN education and training programs.
I spend a lot of time developing relationships in ERN.
I intend to continue ERN membership.
I would recommend ERN membership to others.
I am an active member of an ERN committee or task force.

FIRM PERFORMANCE

VALUE OF ERN	**(1=Strongly Agree to 5=Strongly Disagree)**

ERN provides a source of business
Belonging to ERN helps my business to be profitable.
Belonging to ERN is important to my business success.
Belonging to ERN is important to my firm's growth.
ERN membership benefits contribute to my firm's growth.
ERN membership helps contribute to my bottom line.

BUSINESS SUCCESS	**(1=Far Above Average to 5= Far Below Average)**

Net Profit
Sales Growth
Growth in Assets
Cash Flow

DEMOGRAPHICS

How long have your been a member of ERN?
Less than 1 year   1 to 3 years   4 to 5 years   6 to 10 years   More than 10 years

How long has your firm been in business?
Less than 1 year   1 to 5 years   6 to 10 years   11 to 20 years   21 to 50 years   More than 50 years

How many people are employed at your firm?
1-5   6-10   11-50   51-100   More than 100

What is your title at your firm?
Owner   President/CEO   Vice President   Manager   Employee   Apprentice/Student   Other (please specify)

What is your gender?
Female   Male

Which of the below best represents your race?
White or Caucasian   Black or African American   Hispanic or Latino   Asian or Asian American   American Indian or Alaska Native
Native Hawaiian or other Pacific Islander   Other

What is your age?
18-24   25-34   35-44   45-54   55-64   65+

What is the highest level of school that your have completed?
High school or less   Some college, but no degree   2-year college or technical school   4-year college degree   Graduate-level degree

What was the annual revenue for your company last year?
0-$74,999 $75,000-$199,000 $200,000-$499,999 $500,000-$1 Million   More than $1 Million

Constructs

      Information acquisition. The information acquisition construct refers to individuals' perceptions of their firms' ability to acquire information from internal and external sources (Huber, 1991). The survey items were adapted from Flores et al. (2012) to measure the first process of organizational learning (Daft & Weick, 1984; Huber, 1991; Walsh & Ungson, 1991). The participants were asked five questions concerning the process their firms use to acquire information (1 = *Strongly agree*, 5 = *Strongly disagree*).

      Information dissemination. This construct refers to the process that individuals in firms use to share information among themselves (Huber, 1991). The survey items were adapted from Flores et al. (2010) to measure the second process of organizational learning. The participants were asked five questions concerning how they distribute information for increasing firm performance (1 = *Strongly agree*, 5 = *Strongly disagree*).

      Information interpretation. This construct assesses the process through which firms make sense of newly acquired information (Daft & Weick, 1984). The survey items were also adapted from Flores et al. (2010) to measure shared understandings that lead to organizational learning (Zahra & George, 2002). The participants were asked five questions related to the information interpretation process (1 = *Strongly agree*, 5 = *Strongly disagree*).

      Organizational memory. The organizational memory construct evaluates how well a firm captures the information that it generates during the information acquisition, distribution, and interpretation processes (Argyris & Schön, 1978). The survey items for this construct were adapted from Flores et al. (2012). The participants were asked five questions (1 = *Strongly agree*, 5 = *Strongly disagree*).

Entrepreneurial orientation index score. A firm's high or low EO posture was determined by using an adapted version of Martins and Rialp's (2013) EO index. The index is composed of 24 questions from the autonomy, innovativeness, proactiveness, risk-taking, and competitive aggressiveness dimensions to determine if a firm score are high or low. A score below 3 indicates a low EO posture. An index that scores greater than or equal to 3 indicates a high EO posture. A higher score indicates that the firm behaves entrepreneurially.

Autonomy. The autonomous orientation refers to independent action by an individual who implements a new business concept through to completion (Lumpkin & Dess, 2005). The current study adapted four items from Lumpkin, Cogliser, and Schneider (2009). The survey asked participants to measure the respondent independence and how their firms encourage employees to make decisions on their own without consulting managers (1 = *Strongly agree*, 5 = *Strongly disagree*).

Innovativeness. This measure gauges a firm's willingness to introduce newness through creativity designed to forge new products, services, or processes (Lumpkin & Dess, 2005). The survey adapted four items from Yeh-Yun and Yi-Ching (2007), Covin and Slevin (1989), and Hughes and Morgan (2007). The survey asked participants to measure their firms' ability to seek out new ways of doing things (1 = *Strongly agree*, 5 = *Strongly disagree*).

Proactiveness. Proactiveness in EO reflects a firm's forward-looking perspective to seize opportunities and anticipate future demand (Lumpkin & Dess, 2005). The survey asked participants to measure their firms' ability to monitor trends and identify customer needs (1 = *Strongly agree*, 5 = *Strongly disagree*). Four items were adapted from Chang et al. (2007), Covin and Slevin (1989), and Hughes and Morgan (2007).

Risk-Taking: This construct assesses a firm's ability to take calculated risks (Lumpkin and Dess, 2005). Survey respondents were asked to measure their firms' ability to adopt bold acts necessary to achieve firm objectives (1 = *Strongly agree*, 5 = *Strongly disagree*). Six items were adapted from Chang et al. (2007), Covin and Slevin (1989), and Hughes and Morgan (2007).

Competitive aggressiveness. The competitive aggressiveness construct evaluates a firm's intense efforts to outperform industry rivals (Lumpkin and Dess, 2005). The survey asked respondents to measure their firms' use of unique strategies to challenge competitors (1 = *Strongly agree*, 5 = *Strongly disagree*). Five items were adapted from Chang et al. (2007), Covin and Slevin (1989), and Hughes and Morgan (2007).

External relational network engagement. The construct of ERN engagement refers to the extent to which an individual consumes ERN services, such as meetings, educational programming, and project involvement (Malewicki, 2005). The participants were asked to measure their firms' network engagement involvement via seven items (1 = *Strongly agree*, 5 = *Strongly disagree*). The measures were adopted from Bhattacharya et al. (1995), Garbarino and Johnson (1999), Gruen et al. (2000), and Morgan and Hunt (1994)**.**

Firm performance. The construct of firm performance measures the perception of financial performance to assess growth in sales, income, profit, and employment (Altinay et al., 2016; Venkatraman and Ramanujan, 1986). This was measured through the use of the dependent variable's profitability and growth.

Profitability. Participants were asked to assess their firms' profitability when compared to similar firms in their industries with four items (1 = *Strongly agree*, 5 = *Strongly disagree*). The measures were adapted from Chandler and Hanks (1994) and Zahra and George (2000).

Growth. Participants were asked to evaluate their firms' growth when compared to similar firms in their industries via six items (1 = *Strongly agree*, 5 = *Strongly disagree*). The items were also adapted from Chandler and Hanks (1994) and Zahra and George (2000).

Control Variables

Small firms like MEBs are heterogeneous, and their behaviors are influenced by several resource constraints (Bewaji et al., 2014; Ram & Smallbone, 2002). Various factors were controlled for to account for the heterogeneity of the MEB operating environment (Lepoutre & Heene, 2006) because these factors may influence OL and EO in MEBs. This study controlled for gender, age, and education.

Data Analysis Procedures

The following paragraphs describe the data analysis methods utilized in this study. Testing for the three hypothesized models required multivariate multiple regression and SEM. The study controlled for common method bias by using a common marker variable in the model. Table 3 shows the summary statistics and outlines specific data analysis procedures used in the three models.

Table 3

Data Analysis Procedures

Scale Development	Data Analysis Method	Key Statistics
	Exploratory Factor Analysis	Cronbach α >.7; KMO > .80; Bartlett's Test of Sphericity < .05
	Confirmatory Factor Analysis	GFI, AGFI, CFI, NFI, >.90; RMSEA <.08; Standardized Regression Weights
	Convergent Validity	Ave > .50
	Discriminant Validity	MSV <AVE and ASV < AVE for each construct
	Descriptive Statistics	Standard Deviation, Means, and Correlations for constructs AVE >.5
Model 1&2 Hypothesis Testing	Multiple Linear Regression	Beta Coefficients; R^2, F-test, P-Value,
	CFA	GFI, AGFI, CFI, NFI, >.90; RMSEA <.08; Standardized Regression Weights
Model 3 Hypothesis Testing	Structural Equation Models (SEM) in AMOS	Measurement Fit: GFI, AGFI, CFI, NFI >.90; RMSEA <.08 Standardized Regression Weights

Model and scale development. Several pre-processing analysis procedures were applied

to the data files to ensure that this study maintained data integrity for the statistical

methodologies. James, Muliak, and Brett (1982) proposed a two-step approach that this study

adopted. The approach includes an evaluation of the measurement models to determine the

degree of model-data fit. The evaluation is followed-up by the statistical analysis of the model.

The measurement model was tested using EFA to validate and measure the constructs'

unidimensionality. Then, AMOS 24 software was used to a conduct confirmatory factor analysis

(CFA; Churchill, 1979). Henson and Roberts (2006) suggested that CFA is appropriate because

it explores the fit between a variable's factor and measurement items in the questionnaire. In

line with Anderson and Gerbing (1988), this study estimated the model by requiring individual

items to load on their specified factors. Each factor was allowed to correlate with additional

factors. Many researchers have encouraged the evaluation and reporting of multiple fit indices

when determining the CFA's model-data fit (Bentler & Bonnett, 1980; Fan, Thompson, & Wang,

1999; Hu & Bentler, 1999). Bentler and Bonnett (1980) advised that the model-data fit should

exceed the .90 cutoffs for the goodness of fit index (GFI), adjusted goodness of fit index (AGFI),

comparative fit index (CFI), and normed fit index (NFI). Following recommendations by Hair,

Black, Babin, Anderson, and Tatham (2006), the root mean square error of approximation

(RMSEA) was less than the .08 cutoff. This study adopted the Mathwick and Rigdon (2004)

process of testing the significance of the individual factor loadings. The coefficient alpha scores

for the dimensions exceeded the Hair et al. (2006) recommended .7 benchmark established for

reliability estimates. For validity assessment, discriminant and convergent validity were

examined. Discriminant validity is the degree to which an individual construct differs from

others in the model (Rua & França, 2018). Discriminant validity was established by verifying

MSV was less than AVE, and ASV was less than AVE for each construct (Fornell & Larcker, 1981). Lastly, convergent validity suggests that there are specific indicators that represent the same construct. All constructs had an AVE of greater than .50, which established convergent validity.

Models 1 and 2: Hypotheses testing. The varimax rotation factor scores using SPSS 25 were generated to examine both Models 1 and 2 by using multiple linear regression. Multiple regression was utilized to examine H_1–H_9 to determine the significance and impact of the nine independent factors and controls presented in both models. Ho (2014) suggested that multivariate regression analysis is a statistical technique that estimates a single regression model with more than one outcome.

Factor scores for each of the nine OL and EO dimension were calculated. To explore the factor structure that exhibited a model fit, EFA was performed. Following recommendations by Henson and Roberts (2006), EFA procedures included (a) the use of various methods to determine the right number of factors to retain, (b) the review of coefficients to determine the item loadings, and (c) the removal of second-order factors when the factors were correlated.

This study utilized factor scores for each of the four processes of OL and the five EO dimensions as independent variables. Both Equation 1 and Equation 2 used multivariate regression, with both ERN engagement and firm performance as the dependent variables. Table 3 identifies the two tested models.

Table 4

Equations

Equation 1 & 2	
E1 **ERN Engagement =** **Firm Performance =**	$\beta_o + \beta_1 InfoAcquistion + \beta_2 InfoDissemination + \beta_3 InfoInterpretation + \beta_4 OrgMemory$
E2 **ERN Engagement =** **Firm Performance =**	$\beta_o + \beta_1 Innovativeness + \beta_2 RiskTaking + \beta_3 Proactiveness + \beta_4 CompetiveAgressiveness + \beta_5 Autonomy$

Model 3 hypotheses testing. Given the need to establish indirect and direct relationships using various constructs, the hypotheses testing for Model 3 was conducted by utilizing SEM path analysis in AMOS 25. Hoyle (2012) advised that SEM consist of two components: (a) the measurement model that reduces the observed variables to a reduced number of latent factors and (b) the SEM that defines the causal relationship between the latent factors. Unlike multivariate regression analysis, SEM allows for the simultaneous testing of measurement models which includes exogenous and endogenous variables (Hoyle (2012). A firm conceptual basis for categorizing relationships from exogenous to endogenous variables is required for SEM. Further, Hoyle (2012) suggested that SEM path analysis requires a multi-step implementation process that involves model specification, estimation, model fit, evaluation, respecification, and data interpretation. This study utilized SEM for Model 3 because of complex mediating interrelationships that included the use of latent constructs with measurement errors.

Other Methodology Concerns

Two significant concerns arose from the data collection methods used to advance this study. First, non-response bias was an issue of concern due to the procedural data collection method. Second, common method bias was another issue because of this study's use of cross-sectional data collection that is designed to protect the respondent's anonymity. The following sections detail procedures taken to address these methodological concerns.

Non-response bias. Several techniques were used to reduce non-response bias and increase the response rate. Pre-notification occurred to members of the ERN via email. Next, the survey was emailed to potential participants. Then, participants who did not respond received an additional reminder email to take the survey. Even though the procedures described were intended to reduce non-response bias, statistical analysis was tested for non-response bias.

This study tested for statistically significant differences by comparing completed surveys recorded early and late (Lambert & Harrington, 1990). As anticipated, the t-test for differences between early and late responders yielded no statistical differences at the two-tailed $p < 0.05$ levels for the dependent or independent variables.

Common method bias. Podsakoff, MacKenzie, Lee, and Podsakoff (2003) advised that common method bias may pose a problem for research that relies on self-reported data, mainly when a singular respondent provides the data (i.e., the same person at the same time). It is prevalent for a singular respondent to provide information on both the independent and dependent variables. The primary concern is that these biases will artificially inflate the observed relationship among focal variables. Several procedural and statistical approaches to minimize the effects of the common method bias were applied to the research design. First, the respondent was guaranteed anonymity to decrease the respondents' tendency to provide socially desirable responses. Next, careful attention to the questionnaire wording via the pretesting stage reduced the survey item ambiguity. Lastly, manager-owners were targeted as responders. By surveying manager-owners, more information on the MEB was able to be attained from that single response.

Results

The following section provides an analysis of the survey instrument, including EFA, CFA, multivariate regression analysis, and SEM path analysis for the study of the three models. Model 1 used EFA and multivariate regression analysis to examine the effects of four OL constructs on ERN engagement and firm performance. Next, Model 2 used EFA and multivariate regression to test the effects of five EO constructs on ERN engagement and firm performance. AMOS 25 was utilized to create the final measurement model. Finally, Model 3

used SEM to examine the significant pathways between OL, EO, ERN engagement, and firm performance measures.

Sample Characteristics and Results

The responses, totaling 1,080 completed, were collected as secondary data from two international trade associations. A total of 246 minorities took the survey, which yielded 209 useable responses. This response rate of 15.9% was considered reasonable, given that business surveys have a low response rate (Bianchi & Mathews, 2016; Frazer & Lawley, 2000). Table 5 contains the respondent personal and business profile. The majority of respondents were African American (72.13%), followed by Latino American (12.39%), Asian American (8.18%), Native American (2.81%), and individuals that identified as other ethnic groups (4.49%). The clear majority of respondents were between 35 and 44 years old (23.69%) and from companies that had been in business more than 50 years (31.58%) and had annual revenues of more than $1 million (35.63%).

Table 5

Respondent Profile

Sample (N-209)			
Ethnicity		**Length of Membership**	
African American	72.13%	Less than 1 Year	10.00%
Latino American	12.39%	1 to 3 Years	24.19%
Asian American	8.18%	4 to 5 Years	12.12%
Native American	2.81%	6 to 10 Years	12.11%
Other Ethnic Group	4.49%	More than 10 Years	41.58%
Gender			
Female	51.58%		
Male	48.42%		
Age		**Years in Business**	
18-24	17.37%	Less than 1 Year	10.00%
25-34	19.47%	1 to 5 Years	6.84%
35-44	23.69%	6 to 10 Years	8.42%
45-54	16.84%	11 to 20 Years	12.63%
55-64	12.63%	21 to 50 Years	30.53%
65+	10.00%	More than 50 Years	31.58%
Education		**Company Title**	
High School or less	0.040%	Owner	30.53%
Some College	12.63%	President/CEO	13.16%
2-year College	30.00%	Vice President	3.16%
4-year College	30.05%	Manager	20.53%
Graduate-level degree	26.28%	Employees	32.62%
Annual Revenue		**Number of Employees**	
0-$74,000	7.50%	1 to 5	33.24%
$75,000-$199,000	10.63%	6 to 10	31.21%
$200,000-$499,999	20.94%	11 to 50	26.88%
$500,000-$1 Million	25.31%	51-100	4.05%
$1 Million +	35.63%	More than 100	4.62%

Model 1

Scale assessment for measurement. An EFA with varimax rotation was used to identify relevant OL dimensions in Model 1 based on eigenvalues greater than 1.0. As hypothesized, the EFA produced four-factor dimensions (information acquisition, information interpretation, information dissemination, and organizational memory) that provided 77.34% of the cumulative variance. The Cronbach's alpha for internal consistency for information interpretation (α = .915), organizational memory (α = .899), information dissemination (α = .916), and information acquisition (α = .888) was established and exceeded the 0.70 benchmarks (Hair et al., 2006; Nunnally, 1978) for an exploratory scale. Model 1 KMO values of .936 achieved sampling adequacy, and the homogeneity of variances was verified by Bartlett's test of sphericity level of significance 0.000 (Hair et al., 1998). Table 6 specifies the rotated component matrix for the four OL constructs and the equivalent coefficient alpha scores. Table 7 provides the correlation and descriptive statistics used for the four OL constructs in Model 1.

Table 6

Model 1: Exploratory Factor Analysis

	Information Interpretation α = .915	Information Dissemination α =.916	Organization Memory α =.899	Information Acquisition α =.888
II2 I use ERN insights to resolve issues and concerns.	0.789			
II3 Employees rethink past decisions when presented with new ERN.	0.780			
II1 I reevaluate past decisions based on new ERN information.	0.711			
II4 I reconsider past decisions when presented with new ERN information.	0.624			
ID2 I share ERN reports and documents.		0.815		
ID3 I share ERN best practices.		0.800		
ID4 I share important ERN insights.		0.744		
ID1 I share what I learn from ERN.		0.722		
OM5 I store ERN information and insights for when our employees need them.			0.826	
OM2 My firm has a mechanism for storing information learned from ERN.			0.739	
OM3 My firm stores ERN reports and documents to help guide decision-making.			0.708	
OM4 I store ERN information and insights for when I need them.			0.696	
OM1 My firm makes an effort to retain information learned from ERN.			0.597	
IA1 ERN helps me learn about my families.				0.805
IA3 ERN provides valuable advice.				0.713
IA2 ERN helps me learn about industry trends.				0.557

Note: Extraction Method: Principal Component Analysis. Rotation Method: Varimax with Kaiser Normalization. Rotation converged in seven iterations.

Table 7

Model 1: Correlations and Descriptive Statistics

Variable	Information Dissemination	Organizational Memory	Information Interpretation	Information Acquisition	ERN Engagement	Firm Performance
Information Dissemination	1					
Organizational Memory	.680**	1				
Information Interpretation	.730**	.778**	1			
Information Acquisition	.777**	.631**	.755**	1		
ERN Engagement	.327**	.440**	.392**	.379**	1	
Firm Performance	.589**	.689**	.676**	.661**	.466**	1
Mean	1.925	2.197	2.239	1.817	2.711	2.190
SD	0.763	0.775	0.761	0.680	1.084	0.875

*Correlation is significant at the 0.05 level (2-tailed).

** Correlation is significant at the 0.01 level (2-tailed).

Test of the direct effects of external relational network engagement and firm performance. Model 1 hypotheses H_{1a}, H_{2a}, H_{3a}, and H_{4a}, established the direct and main effects of ERN engagement by testing four OL processes as factors. Multiple linear regression was calculated to predict ERN engagement based upon the four hypothesized OL processes of information acquisition, information dissemination, information interpretation, and organizational memory. By utilizing factor scores (maximum VIF = 1.000), multicollinearity issues were eliminated (Peltier et al., 2009). The overall model fit was significant (14.989; $p <$ .000) and explained 22.7% of the variance in ERN engagement. A significant regression equation was found (F (4, 204) = 14.989, $p <$ .000), with an R^2 of .227. The respondents predicted ERN engagement was equal to 2.711 (constant = $p <$ 000) plus information acquisition (β = .267; $p <$ 001) plus information dissemination (β = .156; $p <$ 001) plus information interpretation (β = .148; $p <$ 000) plus organizational memory (β = .386; $p <$ 000). As shown in Table 8, the four hypothesized OL relationships with ERN engagement were significant (H_{1a}–H_{4a}). Lastly, the control variable length of membership was a significant predictor of ERN engagement. However, the control variables for the number of employees, gender, and age were not significant predictors of ERN engagement.

Test of the direct effects of firm performance. Next, H_{1b}, H_{2b}, H_{3b}, and H_{4b} in Model 1 established the direct and main effects of firm performance by testing the four OL processes. Multiple linear regression was calculated to predict firm performance based upon information acquisition, information dissemination, information interpretation, and organizational memory OL processes. The use of factor scores (maximum VIF = 1.000) allowed multicollinearity issues to be eliminated (Peltier et al., 2009). The overall model fit was significant (60.597, $p <$ .000) and explained 54.3% of the variance in firm performance. A significant regression equation was

found ($F(4, 204) = 60.597$, $p < .000$), with an R^2 of .543. The predicted firm performance was equal to 2.190 (constant = $p < 000$.) plus information acquisition ($\beta1 = .294$; $p < 000$) plus information dissemination ($\beta2 = .243$; $p < 000$) plus information interpretation ($\beta3 = .342$; $p < 000$) plus organizational memory ($\beta4 = .391$; $p < 000$). As reported in Table 8, the four hypothesized OL relationships with firm performance were significant (H_{1b}–H_{4b}). The control variables of the length of membership, number of employees, gender, and age were not significant predictors of firm performance.

Multivariate test. The multivariate test showed that the four OL dimensions significantly contributed to the joint explanation of both dependent variables. Information acquisition (Wilks $\lambda = .848$; $p = .000$), information dissemination (Wilks $\lambda = .866$; $p = .000$), information interpretation (Wilks $\lambda = .740$; $p = .000$), and organizational memory (Wilks $\lambda = .659$; $p = .000$) were hypothesized in the right direction. The multivariate control variables provided insight on ERN engagement and firm performance. Length of membership had a stronger, positive association with ERN engagement (Wilks $\lambda = .874$; $p = .011$). As shown in Table 8, the other control variables (number of employees, gender, and age) did not have a common and significant effect on ERN engagement and firm performance.

Table 8

Model 1 Multivariate Regression: External Relational Network Engagement and Firm

Performance

Variables	Multivariate Test Wilk's λ	ERN Engagement			Firm Performance		
		Std. β	t-Value	Significance	Std. β	t-Value	Significance
Intercept	.325 (*P*=0.000)	2.711	40.737	.000	2.190	53.032	.000
Information Acquisition	.848 (*P*=0.000)	0.267	4.006	.000	.294	7.099	.000
Information Dissemination	.866 (*P*=0.000)	0.156	2.337	.010	.243	5.871	.000
Information Interpretation	.740 (*P*=0.000)	0.148	2.213	.014	.342	8.273	.000
Organizational Memory	.659 (*P*=0.000)	0.386	5.792	.000	.391	9.439	.000
Length of Membership	.874 (*P*=0.011)	-.324	-4.533	.006	-.040	-.688	NS
Number of Employees	.958 (*P*=0.502)	-.002	-.034	NS	-.095	-1.853	NS
Gender	.945 (*P*=0.463)	.014	.218	NS	.038	.708	NS
Age	.935 (*P*=0.323)	.041	.557	NS	.052	.872	NS
		F-value (sig) 14.989; R² =.227				F-value (sig) 60.597; R² =.543	

Note. Std. = standardized.

*p < 050. **p <010. ***p <001. (one-tailed)

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Table 9

Model 1: Summary of Hypothesis Testing

	Hypothesized Relationship	Supported
H1a	Information Acquisition (β1a+) $\rightarrow$ ERN Engagement	Yes
H1b	Information Acquisition (β1b+) $\rightarrow$ Firm Performance	Yes
H2a	Information Dissemination (β2a+) $\rightarrow$ ERN Engagement	Yes
H2b	Information Dissemination (β2b+) $\rightarrow$ Firm Performance	Yes
H3a	Information Interpretation (β3a+) $\rightarrow$ ERN Engagement	Yes
H3b	Information Interpretation (β3b+) $\rightarrow$ Firm Performance	Yes
H4a	Organizational Memory (β4a+) $\rightarrow$ ERN Engagement	Yes
H4b	Organizational Memory (β4b+) $\rightarrow$ Firm Performance	Yes

Lastly, Soper's post-hoc statistical power calculator (.0 probability level; $n = 209$) was used to test for statistical power of significance. First, as shown in Table 10, the observed power for predicting ERN engagement was 0.9999 (number of predictors = 4; R^2 = .227). Additionally, the observed power to predict firm performance was also 1.000 (number of predictors = 4; R^2 = .543). The results indicated that the multiple linear regression model was able to detect a significant R^2 at the .05 probability level, as suggested by Cohen (2013). Hence, statistical power was achieved for Model 1.

Table 10

Model 1: Soper's Post-hoc Statistical Power

ze Effects	Predictors	Observed R²	Observed Statistical Power
ERN Engagement	4	0.227	0.999
Firm Performance	4	0.543	1.000

Note: 95% confidence. N=209

Model fit. Figure 4 denotes the final measurement model used for Model 1. AMOS 25 was used for the CFA to estimate the reliability of factors, individual items, and overall measurement instrument. The indices were above the Bentler and Bonnet (1980) suggested fit of .90 and above including the GFI (.967), AGFI (.938), the NFI (.977), and the CFI (.997). The CFI met Hu and Bentler's (1999) benchmark and suggested cutoff of .95. The RMSEA was .025, less than the Hair et al. (2006) suggested cutoff .09. The model fit statistics indicated a good model fit. The chi-square for the measurement was significant. The chi-square minimum discrepancy (CMIN) equaled 39.5 and degrees of freedom (*df)* equaled 35. Table 11 reports that all the items' individual loadings were significant ($p < .001$; Mathwick & Rigdon, 2004). Table 11 identifies the complete standardized solutions for all loadings that ranged from .604 to .907. All 11 loadings met the minimum guidelines of .5, with 10 that exceeded the preferred .7 guideline (Cortina, 1993). Convergent and discriminant validity was established. All the average variance extracted (AVE) estimates exceeded Fornell, and Larcker's (1981) recommended convergent validity criterion of .5. As shown by Table 12, discriminate validity was assessed by comparing the construct values for maximum shared variance (MSV) and the average shared variance (ASV) for each individual construct. Finally, Figure 4 shows the final measurement model.

Table 11

Model 1: Standardized Factor Loadings

Standardized Factor Loadings of Measurement Model

	Standardized Loadings	*p*-value
Information Interpretation		
I reevaluate past decisions based on new ERN information.	.859	.001
I use ERN insights to resolve issues and concerns.	.830	.001
Employees rethink past decisions when presented with new ERN information.	.849	.001
Organizational Memory		
My firm has a mechanism for storing information learned from ERN.	.884	.001
My firm stores ERN reports and documents to help guide decision-making.	.874	.001
I store ERN information and insights for when I need them.	.604	.001
Information Dissemination		
I share ERN reports and documents.	.856	.001
I share ERN best practices.	.881	.001
I share important ERN insights.	.907	.001
Information Acquisition		
ERN helps me learn about industry trends.	.845	.001
ERN provides valuable advice.	.855	.001

Table 12

Model 1: Scale Reliability and Validity Statistics

	CR	AVE	MSV	ASV	ID	II	OM	IA
Information Interpretation	0.883	0.716	0.634	0.581	0.846			
Information Dissemination	0.913	0.777	0.645	0.533	0.714	0.882		
Organizational Memory	0.837	0.637	0.599	0.478	0.774	0.667	0.798	
Information Acquisition	0.839	0.723	0.645	0.556	0.796	0.803	0.624	0.850

Note: II = Information Interpretation; ID = Information Dissemination; OM = Organizational Memory; IA= Information Acquisition

CR = composite reliability; AVE = average variance extracted; MSV = maximum shared variance; ASV = average shared variance
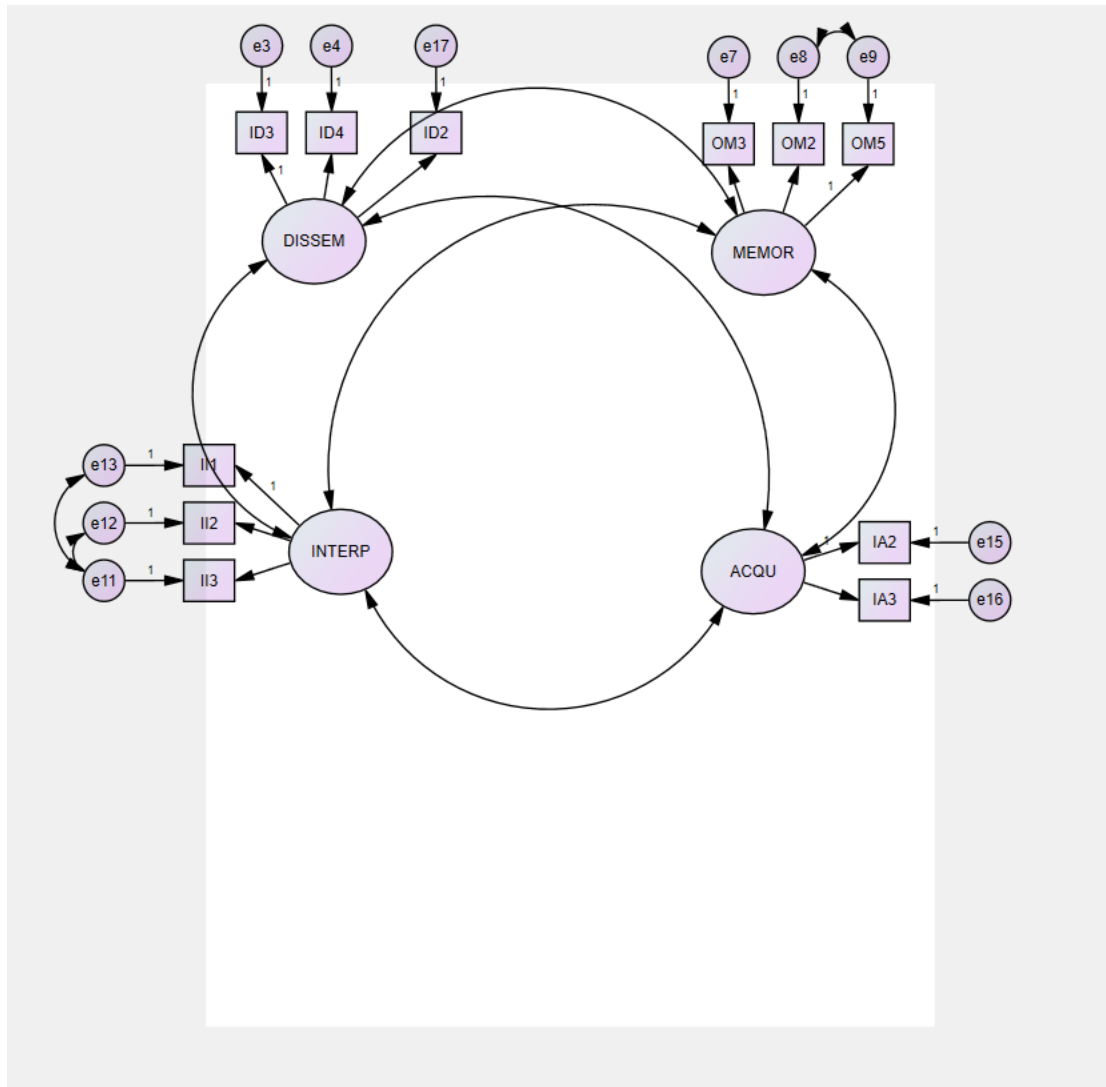
Figure 4. Model 1: Confirmatory factor analysis.

Common method bias. This research design adopted Podsakoff et al. (2003) proactive approaches to reduce common method variance (CMV). Two post-measurement procedures were performed to distinguish if CMV significantly impacted the data. First, Harmon's single-factor method diagnostic test was conducted to detect if the single factor accounted for more than 50% of the variance. Using EFA with no varimax rotation, and the number of factors was constrained to one. The single factor only accounted for 36.827 of the variances, which suggested that common method variance was not an issue of concern. Next, a common latent variable was created in the CFA. Dual methods were used to evaluate the CFA results with Gaskin's (2012) recommendations for testing CLF. Each path was constrained to calculate the common variance. Then, the deltas of the standardized estimated were calculated by subtracting the betas from the CFA model without the CLF (see Table 13). As suggested by Gaskin (2012), no deltas exceed the .2 cutoff (absolute values of the deltas ranged from -.037 to .046). Based on the statistical analysis techniques used in this research design, common method bias does not appear to be of concern.

Table 13

Common Method Variance Effects on Measurement Model

Construct and Measurement Item	Standard Estimates (No CLF)	Standard Estimates (With CLF)	Delta
Information Interpretation			
I reevaluate past decisions based on new ERN information.	.859	.826	.033
I use ERN insights to resolve issues and concerns.	.830	.797	.033
Employees rethink past decisions when presented with new ERN information.	.849	.819	.030
Organizational Memory			
My firm has a mechanism for storing information learned from ERN.	.884	.861	.023
My firm stores ERN reports and documents to help guide decision-making.	.874	.856	.018
I store ERN information and insights for when I need them.	.604	.567	.037
Information Dissemination			
I share ERN reports and documents.	.856	.893	-.037
I share ERN best practices.	.881	.851	.030
I share important ERN insights.	.907	.872	.035
Information Acquisition			
ERN helps me learn about industry trends.	.845	.799	.046
ERN provides valuable advice.	.855	.813	.042

Note. CLF = common latent factor.

Model 2

      Scale assessment for measurement. An EFA with varimax rotation was used to

identify EO dimensions in Model 2 based on eigenvalues greater than 1.0. As theorized, the

EFA produced five-factor dimensions (risk-taking, proactiveness, competitive aggressiveness,

innovativeness, and autonomy) that provided 74.219% of the cumulative variance. The

Cronbach's alpha for internal consistency for risk-taking ($\alpha = .907$), proactiveness ($\alpha = .715$),

competitive aggressiveness ($\alpha = .824$), innovativeness ($\alpha = .867$), and autonomy ($\alpha = .730$) was

established and exceeded the 0.70 benchmarks recommended for an exploratory scale (Hair et

al., 2006; Nunnally, 1978). The KMO values of .873 achieved sampling adequacy, and the

homogeneity of variances was verified by Bartlett's test of significant sphericity level of 0.000

(Hair et al., 1998). Table 14 shows the rotated component matrix for the five EO constructs and

the equivalent coefficient alpha scores. Table 15 provides the correlation and descriptive

statistics used for the five EO constructs that were used in Model 2.

Table 14

Model 2: Exploratory Factor Analysis

	Risk-Taking α = .907	Proactiveness α =.715	Competitive Aggressiveness α =.824	Innovativeness α =.867	Autonomy α =.730
EOR5 I take bold action to venture into the unknown.	0.806				
EOR2 I have a tendency to pursue high-risk, high-return projects.	0.814				
EOR4 Bold, aggressive actions are needed to exploit potential opportunities.	0.846				
EOR6 I act boldly in situations where risk is involved.	0.725				
EOR3 I believe that bold acts are needed to achieve my business objectives.	0.804				
EOP2 I introduce new products/services to the marketplace before my competitors do.		0.759			
EOP1 I am often the first to initiate new actions/offerings rather than responding		0.693			
EOC1 My business is very competitive in nature.			0.842		
EOC2 Competition for clients/families is intense.			0.687		
EOC4 I try to out-maneuver my competitors.			0.591		
EOC3 I take a bold and aggressive posture when competing.			0.619		
EOI2 I seek out new and novel ways to run my business.				0.796	
EOI3 I seek new approaches to problem solving rather than following the norm.				0.870	
EOI1 I am quick to introduce new ideas into my business.				0.815	
EOA3 I like to come to my own conclusions.					0.805
EOA2 I like to act and think without interference from others.					0.685

Note: Extraction Method: Principal Component Analysis. Rotation Method: Varimax with Kaiser Normalization. Rotation converged in five iterations.

Table 15

Model 2: Correlations and Descriptive Statistics

Variable	Innovativeness	Proactiveness	Autonomy	Competitive Aggressiveness	Risk-Taking	ERN Engagement	Firm Performance
Innovativeness	1						
Proactiveness	.652**	1					
Autonomy	.311**	.479**	1				
Competitive Aggressiveness	.491**	.592**	.408**	1			
Risk-Taking	.396**	.533**	.415**	.672**	1		
ERN Engagement	.242**	.278**	.311**	.232**	.270**	1	
Firm Performance	.322**	.319**	.209**	.346**	.315**	.466**	1
Mean	1.813	1.967	2.013	2.371	2.450	2.711	2.190
SD	.644	.683	.614	.764	.784	1.084	.875

** Correlation is significant at the 0.01 level (2-tailed).

Test of the direct effects of external relational network engagement. Model 2 established the direct and main effects of ERN engagement by testing five EO dimensions for H_{5a}, H_{6a}, H_{7a}, H_{8a}, and H_{9a}. Multiple linear regression was used to predict ERN engagement based upon the five hypothesized EO dimensions: innovativeness, risk-taking, proactiveness, competitive aggressiveness, and autonomy. Factor scores were utilized to eliminate multicollinearity issues (maximum VIF = 1.000; Peltier et al., 2009). The overall model fit was significant (6.865; $p < .000$) and explained 14.5% of the variance in ERN engagement. A significant regression equation was found (F (5, 184) = 5.140, $p < .001$), with an R^2 of .145. The predicted ERN engagement was equal to 2.711 (constant = $p < .001$) plus risk-taking ($\beta = .189$; $p < .010$) plus proactiveness ($\beta = .218$; $p < .001$) plus innovativeness ($\beta = .125$; $p < .050$) plus autonomy ($\beta = .214$; $p < .001$). Competitiveness aggressiveness ($\beta = .013$) was not a significant predictor of ERN engagement. The control variable length of membership was a significant predictor of ERN engagement. However, the control variables for the number of employees, gender, and age were not significant predictors of ERN engagement.

Test of the direct effects of firm performance. Model 2 established the direct and main effects of firm performance by testing all five EO dimensions for H_{5b}, H_{6b}, H_{7b}, H_{8b}, and H_{9b}. Multiple linear regression analysis was used to calculate and predict firm performance based upon the five EO dimensions. The use of factor scores (maximum VIF = 1.000) allowed for multicollinear issues to be eliminated (Peltier et al., 2009). The overall model fit was significant (7.693; $p < .000$) and explained 15.9% of the variance in firm performance. A significant linear regression equation was found (F (5, 208) = 7.693, $p < .001$), with an R^2 of .159. The predicted firm performance was equal to 2.190 (constant = $p < 001$.) plus innovativeness ($\beta = .249$; $p < .001$) plus risk-taking ($\beta = .238$; $p < .001$) plus proactiveness ($\beta =$

.122; $p < .050$) plus competitive aggressiveness ($\beta = .159$; $p < .010$). Autonomy ($\beta = .256$) was not a significant predictor of firm performance. The control variables for the length of membership, gender, and age were not significant predictors of firm performance. However, the control variable number of employees was a significant predictor of firm performance. The hypothesized results for firm performance are reported in Table 16.

Multivariate test. The multivariate test showed that the five EO dimensions significantly contributed to the joint explanation of both dependent variables. Innovativeness (Wilks $\lambda = .931$; $p = .000$), risk-taking (Wilks $\lambda = .927$; $p = .000$), proactiveness (Wilks $\lambda = .946$; $p = .000$), competitive aggressiveness (Wilks $\lambda = .967$; $p = .017$), and autonomy (Wilks $\lambda = .942$; $p = .001$) were hypothesized in the right direction. The control variables provided insight on ERN engagement and firm performance. Length of membership had a stronger, positive association with ERN engagement (Wilks $\lambda = .888$; $p = .012$). As shown in Table 16, the other control variables (number of employees, gender, and age) did not have a common and significant effect on ERN engagement and firm performance.

Table 16

Model 2: Test of the Multivariate Regression Hypotheses

Variables	Multivariate Test Wilk's λ	ERN Engagement			Firm Performance		
		Std. β	t-Value	Significance	Std. β	t-Value	
Intercept	.087 (P=0.000)	2.711	38.833	.000	2.190	39.004	.000
Innovativeness	.931 (P=0.000)	.125	1.921	.028	.249	3.871	.000
Risk-Taking	.927 (P=0.000)	.189	2.907	.002	.238	3.702	.000
Proactiveness	.946 (P=0.002)	.218	3.352	.000	.122	1.894	.030
Competitive Aggressiveness	.967 (P=0.017)	.013	0.207	NS	.159	2.474	.007
Autonomy	.942 (P=0.001)	.214	3.302	.000	.016	0.256	NS
Length of Membership	.888 (P=0.012)	-.261	3.207	.001	.046	.565	NS
Number of Employees	.943 (P=0.122)	-.051	.470	NS	-.188	-2.609	.005
Gender	.918 (P=0.067)	.040	.583	NS	-.096	1.307	NS
Age	.942 (P=0.204)	-.023	-.271	NS	-.067	-.792	NS
		F-value (sig) 6.865; R² =.145			F-value (sig) 7.693; R² =.159		

Note. Std. = standardized.

p < 050. **p <010. ***p <001. (one-tailed)

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Table 17

Model 2: Summary of Hypotheses Testing

	Hypothesized Relationship	Supported
H5a	Innovativeness (β5a+) $\rightarrow$ ERN Engagement	Yes
H5b	Innovativeness (β5b+) $\rightarrow$ Firm Performance	Yes
H6a	Risk-Taking (β6a+) $\rightarrow$ ERN Engagement	Yes
H6b	Risk-Taking (β6b+) $\rightarrow$ Firm Performance	Yes
H7a	Proactiveness (β7a+) $\rightarrow$ ERN Engagement	Yes
H7b	Proactiveness (β7b+) $\rightarrow$ Firm Performance	Yes
H8a	Autonomy (β8a+) $\rightarrow$ ERN Engagement	Yes
H8b	Autonomy (β8b+) $\rightarrow$ Firm Performance	No
H9a	Competitive Aggressiveness (β9a+) $\rightarrow$ ERN Engagement	No
H9b	Competitive Aggressiveness (β9b+) $\rightarrow$ Firm Performance	Yes

Lastly, Soper's post-hoc statistical power calculator (.0 probability level*; N* = 209) was used to test for statistical power of significance. First, as shown in Table 18, the observed power for predicting ERN engagement was 0.998 (number of predictors = 5; R^2 = .145). Additionally, the observed power to predict firm performance was 0.999 (number of predictors = 4; R^2 = .159). The results indicated that the multiple linear regression model was able to detect a significant R^2 at the .05 probability level, as suggested by Cohen (2013). Hence, statistical power was achieved for Model 2.

Table 18

Model 2: Soper's Post-Hoc Statistical Power

ze Effects	Predictors	Observed R²	Observed Statistical Power
ERN Engagement	5	0.145	0.998
Firm Performance	5	0.159	0.999

Note: 95% confidence. N=209

Model fit. Figure 5 denotes the final measurement model used for Model 2. AMOS 25 was used for the CFA to estimate the reliability of factors, individual items, and overall measurement instrument. The indices were above the Bentler, and Bonnet (1980) suggested fit of .90 and above the recommended GFI (.955), AGFI (.926), NFI (.961), and CFI (.987). The CFI met Hu and Bentler's (1999) benchmark and suggested cutoff of .95. The RMSEA of .039 was less than the Hair et al. (2006) suggested cutoff of .09. The model fit statistics indicated a good model fit. The chi-square for the measurement was significant. The CMIN equaled 107.74, and the *df* equaled 74. Table 19 reports that all the items' individual loadings were significant ($p < .001$; Mathwick & Rigdon, 2004). Table 19 identifies the complete standardized solutions for all loadings that ranged from .663 to .955. All the 15 loadings met the minimum guidelines of .5, with 12 that exceeded the preferred .7 guideline (Cortina, 1993). Convergent and discriminant validity was established. All the AVE estimates exceeded Fornell and Larcker's (1981) recommended convergent validity criterion of .5. As shown by Table 20, discriminate validity was assessed by comparing the construct values for the MSV and the ASV for each individual construct. Finally, Figure 5 shows the final measurement model.

Table 19

Model 2: Standardized Factor Loadings of Measurement

	Standardized Loadings	*p*-value
I consider myself a risk-taker.	.779	.001
I have a tendency to pursue high-risk, high-return projects.	.783	.001
I believe that bold acts are needed to achieve my business objectives.	.786	.001
I take bold action to venture into the unknown.	.902	.001
I challenge competitors with unconventional strategies.	.961	.001
I try to out-maneuver my competitors.	.760	.001
I take a bold and aggressive posture when competing.	.932	.001
Competition for clients/families is intense.	.689	.001
I seek out new and novel ways to run my business.	.805	.001
I actively introduce improvements and innovations in my business.	.878	.001
I like to act and think without interference from others.	.955	.001
I like to come to my own conclusions.	.663	.001
I introduce new product/services to the marketplace before my competitors do.	.908	.001
I am often the first to initiate new actions/offerings rather than responding.	.939	.001
I am someone who tries to take the initiative in every situation.	.691	.001

Table 20

Model 2: Scale Reliability and Validity Statistics

	CR	AVE	MSV	ASV	IN	RT	PR	CA	AU
Innovativeness	0.830	0.709	0.560	0.271	0.842				
Risk-Taking	0.887	0.663	0.312	0.216	0.541	0.814			
Proactiveness	0.888	0.728	0.560	0.240	0.748	0.467	0.853		
Competitive Aggressiveness	0.906	0.711	0.312	0.181	0.452	0.559	0.392	0.843	
Autonomy	0.801	0.676	0.055	0.038	0.160	0.202	0.172	0.235	0.822

Note : IN = Innovativeness; RT = Risk-taking; PR = Proactiveness; CA = Competitive Aggressiveness; AU = Autonomy

CR = Composite Reliability; AVE = Average Variance Extracted; Maximum Shared Variance; ASV = Average Shared Variance
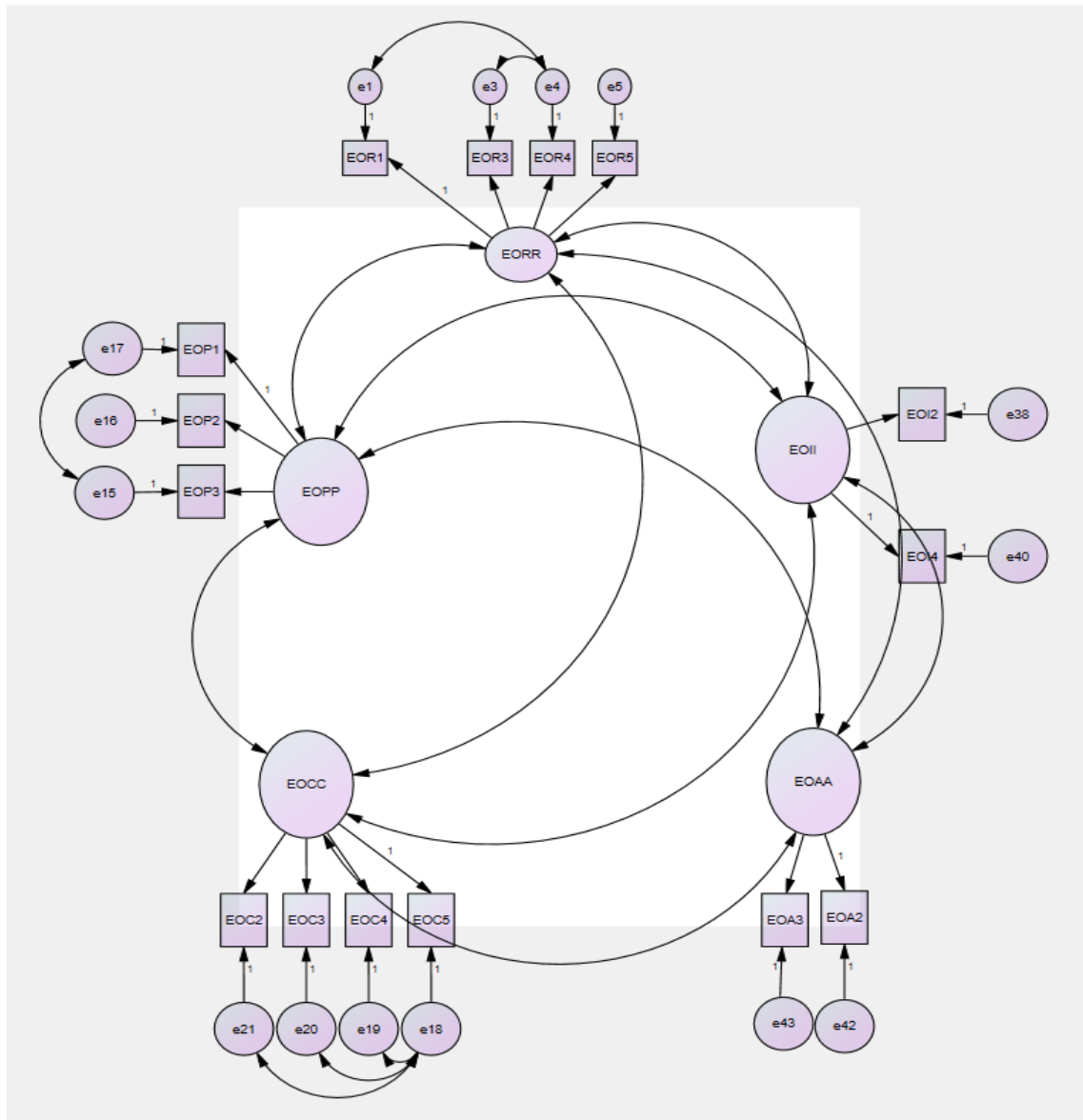
Figure 5. Model 2: Confirmatory factor analysis.

Model 3

    Structural equation modeling direct paths of entrepreneurial orientation index, external relational network engagement, and firm performance. Model 3 extended Model 1 and Model 2 by using AMOS 25 to conduct a full SEM path analysis. An index which is a composite measure of variables was established to examine the EO empirical relationship with the OL processes, ERN engagement, and firm performance. The EO index was created by accumulating the summated scores and averaging 16 items from each of the five EO dimensions—innovativeness, risk-taking, proactiveness, autonomy, and competitive aggressiveness.

    Additionally, for Model 3, constructs from the OL process were loaded as individual items based upon parsimony and theoretical implications. Scale reliability was estimated by testing the coefficient alpha. The reliability tests for information acquisition (.837), information dissemination (.913), information interpretation (.898), organizational memory (.833), ERN engagement (.880), firm performance (.920), and EO (.937) resulted in measures above .70, indicating above-average reliability levels.

    The overall goodness of fit for the measurement model was examined. The indices were above the Bentler, and Bonnet (1980) suggested fit of .90 and above the recommended GFI (.950), AGFI (.914), NFI (.958), and CFI (.993). The CFI met Hu and Bentler's (1999) benchmark and suggested cutoff of .95. The RMSEA of .029 was less than the Hair et al. (2006) suggested cutoff of .08. The model fit statistics indicated a good model fit. The chi-square for the measurement was not significant. The CMIN was 106.20, and the *df* was 90. The analysis of the SEM results provided evidence that the model was adequate to test the study proposed hypotheses.

As shown in Table 21, the EO index influenced the four OL processes. The four relationships were significant and in the hypothesized direction using the one-tailed test. The EO index had a positive and direct relationship with the OL processes of information acquisition ($H_{10:}$ $\beta = .294$; $p < .004$), information dissemination ($H_{11:}$ $\beta = .243$; $p < .018$), information interpretation ($H_{12:}$ $\beta = .342$; $p < .000$), and organizational memory ($H_{13:}$ $\beta = .391$; $p < .000$). Information acquisition ($H_{14a:}$ $\beta = .294$; $p < .000$) had a positive and direct relationship with information dissemination. Information interpretation ($H_{14c:}$ $\beta = .342$; $p < .000$) had a positive and direct relationship with organizational memory. Engagement with an ERN ($H_{15:}$ $\beta = .466$; $p < .041$) had a positive and direct relationship with firm performance. However, the direct path from information dissemination ($H_{14b:}$ $\beta = .243$) to information interpretation was not supported.

Lastly, six new hypotheses extended the general assumption of Model 3 that a logical link exists between EO inputs, OL process, and firm performance relative to ERN engagement and firm performance. The six hypothesized relationships were significant, and five were in the proposed direction using the one-tailed test. Information acquisition ($H_{16:}$ $\beta = .294$; $p < .000$) had a positive and significant impact on the information interpretation OL process. Information dissemination ($H_{17:}$ $\beta = .243$; $p < .007$) had a positive and significant impact on the organizational memory OL process. Organizational memory ($H_{18:}$ $\beta = .391$; $p < .000$) had a positive and significant impact on ERN engagement. Organizational memory ($H_{19:}$ $\beta = .391$; $p < .000$) had a positive and significant impact on firm performance. Information acquisition ($H_{20:}$ $\beta = .294$; $p < .000$) had a positive and significant impact on firm performance. Unexpectedly, information dissemination ($H_{21:}$ $\beta = .243$; $p < .047$) had a negative but direct relationship with firm performance.

Table 21

Test of the Hypotheses

Hypotheses and Direct Paths				Standardized Coefficient	*t*-value	*p*-value
H_{10}	EO Index	→	Information Acquisition	.218	2.919	.004
H_{11}	EO Index	→	Information Dissemination	.122	2.368	.018
H_{12}	EO Index	→	Information Interpretation	.260	4.889	.000
H_{13}	EO Index	→	Organizational Memory	.295	5.147	.000
H_{14a}	Information Acquisition	→	Information Dissemination	.801	12.053	.000
H_{14b}	Information Dissemination	→	Information Interpretation	NS	NS	NS
H_{14c}	Information Interpretation	→	Organizational Memory	.507	5.431	.000
H_{15}	ERN Engagement	→	Firm Performance	.133	2.042	.041
H_{16}	Information Acquisition	→	Information Interpretation	.756	11.612	.000
H_{17}	Information Dissemination	→	Organizational Memory	.226	2.705	.007
H_{18}	Organizational Memory	→	ERN Engagement	.549	6.198	.000
H_{19}	Organization Memory	→	Firm Performance	.527	4.889	.000
H_{20}	Information Acquisition	→	Firm Performance	.459	3.497	.000
H_{21}	Information Dissemination	→	Firm Performance	-.251	-0.199	.047

Notes. Chi-Square= 106.2; DF = 90; GFI = .950; AGFI = .914; NFI = .958; CFI = .993; RMSEA = .029. DF = degrees of freedom; GFI = goodness of fit index; AGFI = adjusted goodness of fit index; CFI = comparative fit index; NFI = normed fit index; RMSEA = root mean square error of approximation.

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Finally,, Soper's post-hoc statistical power calculator (.0 probability level; $N = 209$) was used to test for statistical power of significance. First, as shown in Table 22, the observed power for predicting information acquisition was 1.000 (number of predictors = 1; $R^2 = .340$). Following, the observed power to predict information dissemination was 0.999 (number of predictors = 2; $R^2 = .190$). Next, the observed power to predict information interpretation was 0.999 (number of predictors = 2; $R^2 = .150$). Then, the observed power to predict ERN engagement was 1.000 (number of predictors = 1; $R^2 = .610$). Lastly, the observed power to predict firm performance was 1.000 (number of predictors = 4; $R^2 = .970$). The results indicated that the multiple linear regression model was able to detect a significant R^2 at the .05 probability level, as suggested by Cohen (2013). Hence, statistical power was achieved for Model 3.

Table 22

Model 3: Soper's Post-Hoc Statistical Power

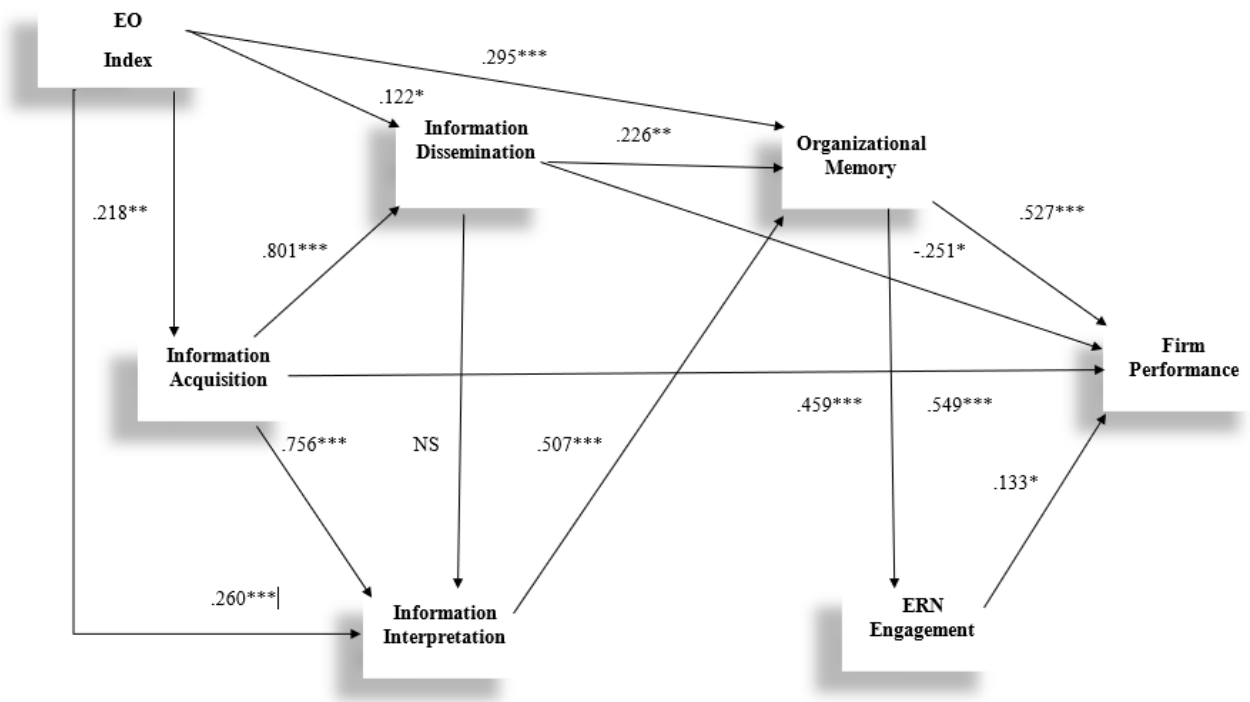| ze Effects	Predictors	Observed R²	Observed Statistical Power
Information Acquisition	1	0.340	1.000
Information Dissemination	2	0.190	0.999
Information Interpretation	2	0.150	0.999
Organizational Memory	4	0.180	0.999
ERN Engagement	1	0.610	1.000
Firm Performance	4	0.970	1.000

Note: 95% confidence. N=209

Figure 6. Model 3: Structural equation modeling direct paths of entrepreneurial orientation

index, external relational network engagement, and firm performance.

<center>**Discussion**</center>

The purpose of this study was to empirically examine the OL and EO relationship to identify mechanisms through which ERN engagement and firm performance are promotable in MEB firms. This section includes the discussion of findings as related to Model 1, Model 2, and Model 3. The section concludes with a discussion of limitations, theoretical and practitioner implications, and recommendations for future research. This section includes discussion possibilities to help answer the following research questions:

1. What effect do the OL processes of (a) information acquisition, (b) information dissemination, (c) information interpretation, and (d) organizational memory have on ERN engagement and firm performance in the context of an MEB firm?

2. How do EO (a) innovativeness, (b) risk-taking, (c) proactiveness, (d) competitive aggressiveness, and (e) autonomy impact ERN engagement and firm performance in MEB firms?

3. How does the EO index influence the OL process such that ERN engagement and firm performance are impacted?

Summary Discussion of Model 1 Results

Model 1 found that a firm should adopt a learning culture, supporting literature that has implied that OL is a primary contributor to network engagement and a good predictor of firm performance (Rua and França, 2018; Soetanto, 2017). This study contributes to the literature by developing a broader model of OL in the context of MEBs, identifying the impact of OL on ERN engagement and firm performance. The results of the multivariate regression analysis suggested that the OL processes can explain a considerable portion of the variance between ERN engagement and firm performance. As previously stated, the four OL processes are (a)

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information acquisition, (b) information interpretation, (c) information dissemination, and (d) organizational memory (Dada & Fogg, 2016).

The first conclusion of Model 1 supported the literature regarding the importance of acquiring information externally to increase firm performance. Jorado and Novas (2017) suggested that the active process of searching for information intensifies the need for firms to engage with ERNs. The study results suggested that the information acquisition process positively impacts ERN engagement and firm performance. This finding may be indicative of MEBs' direct access to professional meetings, consultants, and other network resources. Next, this study focused on the link between the information dissemination process, ERN engagement, and firm performance. The literature has emphasized that the information dissemination process improves a firm's ability to execute decisions more effectively when coupled with external resources (Mena & Chabowski, 2015). The results of this study suggested that the information dissemination process positively impacts ERN engagement and firm performance. An explanation for this may be that training from ERNs calls for information to be transferred then interpreted so employees can increase performance.

The following findings of this study aligned with the OL literature regarding the strategic importance of the information interpretation process. The results showed that the information interpretation OL process positively impacts both ERN engagement and firm performance. Soetanto (2017) identified how ERN providers help firms to develop sense-making blueprints from information resources to increase firm performance. These findings emphasize that when a firm uses OL processes to interpret and store information, they can perform better. Previous studies have implied that a firm's decisions are based on learned information from a firm's organizational memory (Walsh & Ungson, 1991).

The study conclusions support literature that has suggested the management of organizational memory is essential so that a firm does not forget about acquired, interpreted, and disseminated information. Owing to the substantial impact of network support, ERNs play a significant role in designing internal storage systems for firms to retrieve information from their organizational memory (Rua & França, 2018). Balestrin et al. (2014) concluded that it is possible to achieve performance with ERN support to manage internal information-based assets. This study found considerable evidence that organizational memory was a strong predictor of ERN engagement and firm performance. The next section will discuss the Model 2 results.

Summary Discussion of Model 2 Results

Model 2 addressed the relationship between EO, ERN engagement, and firm performance. The EO construct is characterized by five independent dimensions: (a) innovativeness, (b) proactiveness, (c) risk-taking, (d) autonomy, and (e) competitive aggressiveness. A central message from the findings was that entrepreneurial MEBs could perform well in turbulent environments. The results of the multivariate regression implied that EO is multi-dimensional because the constructs acted independently and did not co-vary (Lumpkin & Dess, 1996). Surprisingly, the findings confirmed that although EO formed a collective catchall (Miller, 2011), the dimensions were not universal in strength when tested individually.

This study conclusion aligns with the EO literature that has suggested that engagement in new ideas and creative processes reflects a firm's innovativeness (Huggins & Thompson, 2015). Huggins & Thompson, (2015) concluded that ERN engagement is related to small business growth, particularly when ERN resources lead to the innovativeness of products, services, and ideas. These findings implied that the first EO dimension, innovativeness, positively impacts

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ERN engagement and firm performance. This finding may be indicative of ERN advice to MEBs to engage in new ideas and creative processes.

Emphasis on a firm to increase proactive behaviors to improve performance is consistent with the EO–performance literature. Engel et al. (2017) concluded that proactiveness is a vital component of EO because proactive firms anticipate future problems, needs, and changes. Next, the findings from this study implied that second EO dimension, proactiveness, is a positive predictor of ERN engagement and firm performance. An explanation for this finding may be that MEBs that are proactive are more likely to have placed the firm in information-rich situations like ERNs to perform better. This study also showed that risk-taking positively impacts ERN engagement and firm performance. The results align with the literature that has suggested risk-taking is a vital EO behavior, describing a firm's willingness to make strategic decisions when outcomes are uncertain (Stoian et al., 2017). Engel at al. (2017) concluded that ERNs provide resources that can help a firm translate risk-taking behaviors into increased performance. The findings may be indicative of an ERN's ability to provide resources that can help MEBs to adopt risk-taking behaviors to increase performance.

Autonomy was this study's fourth EO dimension. Based on the literature review, it was hypothesized that autonomous behaviors are a positive predictor of both ERN engagement and firm performance. The study findings implied that autonomous behaviors are a positive impact on ERN engagement. Lumpkin and Dess (1996) referred to autonomy as the independent action that an individual or team brings forth as an idea or vision carried through to completion. Huggins and Thompson (2015) emphasized that the challenge of resource deficiencies forces firms to inhibit aspects of autonomous behaviors via ERN engagement. An explanation of the

findings may be that MEBs that have a predisposition to facilitate network learning will probably seek resources from ERNs.

However, further analysis of the results showed that a positive relationship between autonomy and firm performance was not present. Stam et al.'s (2014) meta-analysis of SMEs concluded that social capital is embedded in ERNs and therefore affects a firm's performance. This unexpected finding may be indicative of the autonomy role as an underlying component of other EO dimensions. The results may suggest that the influence of the autonomy EO dimension exclusively, without considering other EO dimensions, may not influence firm performance.

Finally, competitive aggressiveness was the fifth EO dimension. The literature has established that competitive aggressiveness influences a firm's ability to outperform rivals (Lumpkin & Dess, 2005). The results suggested that competitive, aggressive behaviors are positive predictors of firm performance. The MEBs in the study indicated that they took a bold and aggressive posture when competing. The same MEBs also reported that they challenged competitors with unique strategies. One explanation for this finding is that aggressive MEBs may pursue and exploit marketplace opportunities. Unexpectedly, competitive, aggressive behaviors were not found to be a positive predictor of ERN engagement. Stam et al. (2014) maintained that for some firms, as they strive to carry out a new series of aggressive actions, the time required for development and implementation accelerates, which in turn generates time compression diseconomies. In this vein, this result of this study may suggest that the rising cost of new competitive actions are associated with limited learning potential due to limited engagement with ERNs. This finding could benefit from future research that explores limited learning potential associated with competitive aggressiveness. The next section will discuss the Model 3 results.

Summary Discussion Model 3 Results

Model 3 was comprehensive of the first two models and sought to explain the direct

relationship between EO and the elements of OL, ERN engagement, and firm performance in the

context of MEBs. This study sought to illustrate that a logical link exists between a firm's

overall EO input, OL processes, and outputs relative to ERN engagement and firm performance.

The first portion of this model measured EO impact on the four OL processes. A summated EO

index was created to avoid an overspecified model. Hoyle (2012) suggested that an

overspecified model may include too many variables. This study adopted the recommendation

of Wales (2015) to embrace the best of both worlds by empirically examining insights into EO as

a unidimensional construct, as well as identifying the independent effects of EO multidimensions

(Miller, 2011). Despite the theoretical rationale for including all five dimensions in the overall

EO construct, Model 2 results revealed that the multidimensions were not universal in strength

when tested individually. The findings are broadly in line with the literature that has proposed

that EO is more likely to capture a family of constructs (George & Marino, 2011).

Dada and Fogg (2014) effectively linked the EO construct with information-based

resources. Kreiser (2011) developed several theoretical prepositions concerning the EO–OL

relationship and called for future studies to empirically examine the arguments in the paper.

Kreiser (2011) denoted that the higher the level of EO, the more willing a firm is to adopt the

individual OL processes. This study provided empirical evidence in the context of MEBs that

confirms Kreiser's (2011) propositions. The results of SEM established that higher EO levels

provide firms with expanded opportunities to acquire, disseminate, interpret, and store

information in the organizational memory. These findings are consistent with prior research that

has recognized that EO generates information-related resources for firms through the search for

unexploited knowledge (Wang, 2008). In the study, MEBs self-reported that they were more open to acquiring innovative and diverse information as a result of the firm's open-minded posture. The findings further revealed that MEBs with higher EO were more likely to disseminate information-based resources throughout the firm due to their risk-taking propensity and commitment to learning. The findings implied that EO enhances the motivational aspect of the MEBs' intentions to interpret the acquired information adequately. The MEBs' motivation to interpret acquired information is most likely indicative of the proactive propensity to share the firm's vision. This finding is consistent with the conclusions of Nahapiet and Ghoshal (1998), who found that when confronted with useful information, proactive firms are quick to acquire, interpret, and store the information in hopes of developing a competitive advantage. Findings revealed that MEBs with higher EO are more willing to immerse themselves in process-related actions that improve the firm's organizational memory by storing information-based resources. The findings may be indicative of autonomous and proactive EO behaviors that influence a firm's intentions to store information to make future decisions.

The SEM results indicated that the overall EO behavior construct could explain a significant portion of the variance among MEB self-reported OL. This finding runs counter to Friedlander's (1983) view that learning results in new insights, awareness, and processes but does not dictate any behavioral changes. These findings are at odds with Friedlander's (1983) view because empirical results from Model 2 implied overall that EO creates a fertile environment for learning to occur. The results of this study are broadly in line with Ameh et al.'s (2016) study, which found that SMEs that adopted an EO were more innovative due to higher OL levels.

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The second element in Model 3 examined the relatedness of the OL processes. Huber (1991) advised that a firm may acquire information, then distribute the information, next assign meaning to the information, and finally retrieve the information. The sequential relatedness of the OL process is as follows:

1. Information acquisition relates to information dissemination;

2. Information dissemination relates to information interpretation; and

3. Information interpretation relates to organizational memory.

As hypothesized, information acquisition positively impacted information dissemination and information interpretation positively impacted organizational memory, though information dissemination was not a positive predictor of information interpretation. The results may be indicative of the complexity of the OL process. Daft & Weick (1984) contended that although OL processes can occur sequentially, such interpretation oversimplifies how learning occurs in a firm. Dixon (1992) submitted that OL is not sequential but continuous, and the processes have an interaction effect upon each other. The continuous nature of the OL involves the distribution of information that occurs during different time frames (O'Connor et al., 2017; Rua et al., 2018). Hence, the findings implied that it is more accurate to view the OL process as ongoing and interactive rather than sequential. As such, this is an area that could benefit from future research.

The most unpredictable finding in the SEM path analysis was that information dissemination was significant but had a negative impact on firm performance. The data implied that the sharing of information without the know-how to turn it into action adversely affects the firm's performance. Vaghely and Julien (2010) examined the sharing and transformation of information in SMEs and found that information sharing builds knowledge, which can trigger action. The reverse highlights the importance of MEBs to recognize that an OL strategy is

necessary to increase firm performance. When a firm does not establish an OL strategy, the firm risk is implementing information-based resources wrongly when the information is not shared and interpreted, which can lead to lower firm performance (Rua et al., 2018).

Another conclusion of the study emphasized the critical role of organizational memory in OL. Huber (1991) submitted that to utilize or demonstrate OL, that which has been learned must be stored and then brought forth from the organization's memory. Huber (1991) suggested that the acquisition of information depends mainly on learning from retained information stored in the firm's memory. Then, distributed information is affected by a firm's decisions made by using the information contained in organizational memory. Next, the interpretation of information is affected by cognitive maps contained in the memory. This study viewpoint aligns with Huber's (1991) view that the other three OL processes that contribute to the depth of OL seem to be significantly influenced by the firm's organizational memory. The findings supported this theory as organizational memory was the strongest predictor of ERN engagement and firm performance in Model 1. More, in the SEM for Model 3, organizational memory was identified as the most reliable predictor in the path analysis.

The last element of Model 3 analyzed the independent relationship between ERN engagement and firm performance. Not surprisingly, the findings aligned with the literature that has suggested entrepreneurs who have higher levels of ERN participation are more likely to obtain benefits that impact their firm performance (Albdour et al., 2014; Fang et al., 2015). Most MEBs, due to resource deficiencies, need to access bundles of resources, including information-based resources (Hoang & Yi, 2015). From the resource viewpoint, such firms can use ERN resources to overcome extraordinary barriers that minority entrepreneurs face.

Discussion of Limitations

As with all studies, this study had several limitations and must be viewed considering its limitations. This study developed a theoretical model and articulated the EO–OL relationship in a way to capture the characteristics of MEBs, focusing on firm-level network and performance outcomes. First, a limitation existed because EO and OL traditionally occur over time; this study did not incorporate a time-series or examine longitudinal data to observe outcomes relative to performance. A study that examines the EO–OL relationship with time-series or longitudinal data may give a more detailed account of the influence of the EO–OL relationship on performance. More credibility could be established within this study if coupled with qualitative research. For instance, a survey designed for qualitative research, such as interviews may offer more evidence to strengthen the data discovered using quantitative research tools.

Next, the study sample embodied ethnic minority populations that included the Asian, Black, Hispanic, and Native American communities. The population was a limitation that does not take into count that entrepreneurial behavior and learning orientation may be influenced by the cultural norms of each ethnic group. Ram et al. (2003) suggested that cultural issues specific to the individual ethnic group may affect MEBs' EO and OL. Third, methodologically, this study relied on data self-reported from individual participants. However, Harman's one-factor test indicated that common method bias was not a concern. Despite the study efforts to use subjective evaluations through adopted and adapted multi-item scales, differences between actual perceptions and objective measures may exist within the data.

Implications for Theory and Research

This study contributes to the literature in several ways. First, this study is one of the first to examine a comprehensive framework that empirically analyzes MEB firms. A notable

deficiency in the minority ethnic literature is the longstanding concern that entrepreneurial drives, participation, and fortunes are not evenly distributed across ethnic groups (Ram et al., 2015). Ram (2015) recommended that comprehensive frameworks should be established as a springboard for researching MEBs, perhaps integrating the conceptual underpinnings to reduce the extraordinary barriers these firms face. As business-owning groups, MEBs have not been researched extensively, and this is surprising given that as the number of MEBs in the United States continues to grow, a broader and more profound reality emerges. The NMSDC (2018) posited that by the year 2050, the United States would become a minority-majority nation, as MEBs currently generate over \$1.2 trillion in combined receipts.

Second, this study made a distinct theoretical contribution to the OL, EO, and network literature. This multi-theoretical contribution examined how OL and EO impact ERN engagement and firm performance. The contributions of this study established that the positive effects between the relationship among OL, EO, and ERN engagement can be observed in smaller firms. This clearly shows that a strategic orientation that incorporates variations of OL, EO, and network orientation does enable a firm to compete competently. The results also confirmed that this conceptual study framework is viable.

Third, this study provided empirical evidence by responding to calls for future research to embrace the best of both worlds by examining the unidimensionality and multi-dimensionality of the EO construct in a single study. It was essential to establish more credibility to the findings of this study by taking the differences between the components of EO seriously by adopting Miller's (2011) recommendation to present results from the EO construct and each of its components.

Fourth, this study is one of the first to examine a broader model of OL in the context of MEBs. Examination of the related OL literature suggested that while much has been learned about the individual OL processes, cumulative work, and synthesis on different groups are absent (Huber, 1991). Huber (1991) also noted the lack of substantiated theory. This study contributes to the literature by providing empirical evidence that the OL processes are related but may build upon each other in both sequential order and non-sequential order. This finding establishes that firms need to tether between different OL strategies to adjust to turbulent environments and to compete competently. Finally, the respondent population indicated that participants were from multiple firm levels which strengthened the credibility of the result as the respondent profile included owners, managers, and employees from the same firm. Based on the recommendation of Podsakoff (1986), future studies should obtain data from various respondents in each firm to reduce the possibility of common method variance.

Implications for Practice

Given this study's findings, important managerial implications are drawn. First, the study suggested that the preservation of an entrepreneurial spirit, or EO, is critical for an MEB to increase firm performance. However, possessing EO alone is not enough to achieve increased performance. Kreiser (2011) suggested that EO fosters an organizational culture where learning can occur. Small firms like MEBs must ensure that the EO strategy is transformed into actual entrepreneurial activities that encourage OL. Second, firms that foster a learning culture are better able to anticipate and exploit opportunities in turbulent environments (Slater et al., 1995). Embracing OL enables firms to compete competently by continuously improving marketplace activities faster than competitive rivals.

Moreover, OL through the creation of organizational routines that encourage processes to acquire knowledge-based resources allows a firm to improve its competitive position. These conclusions should encourage MEBs to operate their firms with a shared-vision for organizational strategies, an open-minded approach to solve problems, and an organizational culture that fosters a commitment to learning. Third, the implications of this study for practitioners is also manifested in the form of ERN engagement. The findings of this study suggested that MEB owner-operators should proactively engage with external networks to acquire knowledge-based resources and foster innovative behaviors to attain improved firm performance. Hence, MEB owner-operators should nurture and cultivate their business relationship skillset. This skillset will then increase the MEB proactive and innovative propensity, which may lead to new ideas for innovative product and services.

Recommendations for Future Research

First, the understanding of organizational learning would be increased through continued research on the individual OL processes, subprocesses, and the relatedness of the processes. The findings of this study implied that it is more accurate to view the OL process as ongoing and interactive rather than sequential. As such, this is a concept that could benefit from future research. Another essential concept is the dynamic capabilities of an organization's memory that relate to the OL processes (Argote et al., 2011). It is appropriate again to highlight the critical role of organizational memory to the OL process. For instance, Huber (1991) implied that organizational memory enhances a firm's dynamic capabilities because the firm can store knowledge of who knows what. Stated differently, the three other OL processes that contribute to the occurrence and depth of OL are dependent upon the organizational memory (Huber, 1991). The organizational memory OL process is essential to the idea of OL but has received little

theoretical or empirical study. Greater knowledge of understanding how a firm's organizational memory develops through OL is needed.

Second, Gupta and Wales (2017) found that limited attention has been devoted to robust theorizing in EO research. Also, the EO meta-analysis of Wales (2015) identified learning theory, RBV dynamic capabilities perspective, and network theory as promising general areas for future research. Taken together, a greater emphasis on incorporating these three literature domains into the EO conversation will advance the understanding of how EO affects firm outcomes. In this vein, this study established a theoretical framework by examining the individual and joint effects of OL, EO, and network theory to provide a roadmap to understand better how MEBs can enhance firm performance. However, future EO inquiry should shift its focus towards non-minority SME firms and conduct comparative studies between minorities and non-minority groups.

Third, due to the research design, this study was limited in the extent to which it could ascertain whether OL in MEBs is sustained over the long term due to the roles of EO. Although the research design utilized in this study was consistent with previous studies (Stoian et al., 2016), future studies should examine the long-term effect of this study's hypotheses via a longitudinal empirical analysis. Wiklund and Shepherd (2011) suggested that longitudinal methods will capture time, causality, and reciprocity. Wales et al. (2011) discussed how EO might manifest in one context, while in another context, it may cycle between high or low EO levels. Reinforcing this direction for future research, Zahra et al. (2014) observed that methods that address longitudinal questions, such as event histories, have been unfortunately rare in the EO literature. As such, this is an area that could benefit from future research.

Finally, prior research has indicated that business practices differ between micro and small firms (Sok, 2016). Although this study controlled for the size of a firm, future research should empirically examine how variations in firm performance differ across both sub-categorizations and how firms can maintain growth. This is mainly in the case for smaller businesses as they are defined as micro-firms with one to four employees or small firms with five to 19 employees.

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