

Entrepreneurial Orientation and Firm Financial Performance: The Importance of Considering Intra-Organization Social Capital

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ABSTRACT

This research examines the relationship between intra-organization social capital, entrepreneurial orientation (EO), and firm performance. Using SmartPLS software, we examine data from a broad cross-section of 241 U.S. small businesses. Our results show EO and social capital are both important influences on firm performance, and the relationship is more complex than had previously been considered. Aside from its direct influence on firm performance, EO also indirectly influences performance through its significant positive relationship with intra-organization social capital. The results also provide evidence of a prescriptive need for firms to adopt an entrepreneurial orientation while carefully monitoring the goodwill created through its relationships with other firms both inside and outside of its industry. Finally, this research further demonstrates the value of partial least squares structural equation modelling (PLS-SEM) when simultaneously considering the relationships between multiple independent and dependent constructs. Confirmatory composite analysis (CCA), an emergent alternative approach to confirm composite measurement models, is applied to establish the reliability and validity of our complex hierarchical and structural models.

Keywords: Social Capital, Entrepreneurial Orientation, Small Business Firm Performance, PLS-SEM, Confirmatory Composite Analysis

JEL Codes: B55, C31, C38, C46, C87, L21, L25, L26, M10, M13, M14

Introduction

One question at the heart of entrepreneurship research is why many small business fail, while others are much more successful. In an effort to explain differences in firm financial performance, scholars have examined a variety of factors, including the diverse traits and characteristics of entrepreneurs (Poon, Ainuddin, & Junit, 2006), marketing activities in which entrepreneurs engage (Webb, Ireland, Hitt, Kistruck, & Tihanyi, 2011), and various strategies through which entrepreneurs attempt to compete (Ireland, Hitt, & Sirmon, 2003). This research extends earlier studies by exploring the influence of two constructs on firm performance: entrepreneurial orientation and intra-organizational social capital.

Entrepreneurial orientation (EO) reflects a firm's strategic preferences in organizing its resources to obtain a competitive advantage (Covin & Lumpkin, 2011). EO is a multi-dimensional construct consisting of innovativeness, proactiveness, competitive aggressiveness, risk taking, and autonomy (Hughes & Morgan, 2007). Firms with higher levels of EO are commonly believed to be more agile and flexible as they seek advantage in emerging, competitive, and turbulent markets. Indeed, EO is most commonly linked to a firm's ability to generate above-average financial returns (Boso, Story, & Cadogan, 2013; De Clercq, Dimov, & Thongpapanl, 2010; Engelen, Gupta, Strenger, & Brettel, 2015; Rauch, Wiklund, Lumpkin, & Frese, 2009; Stam & Elfring, 2008; Wang, 2008).

Social capital is the goodwill a firm generates by managing its reputation as reflected by personal, customer, and corporate relationships, both inside and outside of the industry in which it competes (Adler & Kwon, 2002). Because of the goodwill generated by managing such relationships, firms with high levels of social capital are thought to have a potential advantage that enhances firm financial performance. Research findings are mixed, however, as some scholars believe the costs associated with obtaining higher levels of social capital may outweigh the financial gains (Arlow & Gannon, 1982; Margolis & Walsh, 2003).

Even though both EO and social capital are commonly believed to positively impact firm performance, the nature of the relationships between the constructs is less clear. For example, a firm's competitive aggressiveness likely negatively influences outsiders' perception of the firm, and thus its reputation. Similarly, firms perceived as excessively proactive may be considered a threat by others within an industry. Conversely, firms with a reputation for dealing fairly with customers may be generally less entrepreneurial oriented and advantage seeking. Thus, additional research is needed to clarify the nature of the relationships between EO, social capital, and firm performance.

To further explore these relationships, we organize our manuscript as follows. First, we discuss the influence of entrepreneurial orientation on firm performance, and then examine the link between social capital and firm performance. Next, we consider the complexity of the relationship between a firm's entrepreneurial orientation and its intra-organizational social capital. We test our hypotheses using PLS-SEM and validate the constructs using an emergent alternative process, confirmatory composite analysis. We conclude by discussing the limitations of our research, opportunities for future research, and practical implications of our findings.

Literature Review

Entrepreneurial Orientation and Business Performance

Firms with an entrepreneurial orientation (EO) have a persistent entrepreneurial outlook and a culture promoting that stance (Hughes & Morgan, 2007; Wiklund & Shepherd, 2003, 2005). EO reflects a strategic preference and decision-making style aimed at leveraging opportunities (Chen, Tzeng, Ou, & Chang, 2007; Wiklund & Shepherd, 2003, 2005) and "...is usually seen as the extent to which a firm innovates, takes risks to compete aggressively, and acts autonomously and proactively" (Vij & Bedi, 2012, p.2). EO is not something business leaders can purchase. Management must proactively embed EO within their firm's culture (Lee, Lee, & Pennings, 2001). As a measurable construct, entrepreneurial orientation reflects the attributes of a business that prompt an entrepreneurial posture and culture

(Covin & Slevin, 1989; Lumpkin & Dess, 1996). Therefore, since EO reflects a firm's entrepreneurial character, EO differs from entrepreneurship, which generally represents the pursuit of opportunities, such as entering new markets or providing new goods or services (Burgelman, 1983; Lumpkin & Dess, 1996).

EO is comprised of five distinct dimensions: autonomy, innovativeness, proactiveness, competitive aggressiveness, and risk taking (Lumpkin & Dess, 1996; Hughes & Morgan, 2007), all of which are measured in the present study. *Autonomy* represents the opportunity and freedom individuals in a firm have to make decisions, think creatively, and champion ideas in a firm. Leaders who grant employees autonomy are demonstrating trust in their subordinates to make effective decisions. These leaders have faith in their human capital. *Innovativeness* indicates an inclination to embrace creativity and apply novel ideas, such as seeking new products, services, or processes in a firm. Innovativeness in a firm typically includes looking beyond existing beliefs or methods in the quest of improvement or market opportunities and is also referred to as "creative destruction" (Lee et al., 2001, p. 617). In established companies without EO, middle managers fearing power loss may avoid innovative thinking (Lee et al., 2001). Firms with a progressive, forward-looking, first-mover approach display the *proactiveness* dimension through intentional change, which contrasts with complacency. Proactive firms that act as pioneers (Lee et al., 2001) do not merely react to their environment, they act as first movers in a market, seeking advantages such as commanding an early and prominent position in a new market. Moreover, *competitive aggressiveness* differs from the emphasis of proactiveness on market opportunities, and refers instead to direct and intense actions aimed at outperforming competitors. Competitively aggressive firms "...see competitors as enemies that must be conquered" (Hughes & Morgan, 2007, p. 654). *Risk taking* is willingness in a firm to acknowledge uncertainty and risk and make resource commitments in that context. While all five EO dimensions are key to the overall concept, they

vary independently and in different combinations based on different firms' unique situations (Lumpkin & Dess, 1996).

Given that many businesses compete in dynamic environments, one would think an orientation including creativity, innovation, and proactive behavior as norms would result in competitive advantage (Wiklund & Shepherd, 2003, 2005). After three decades of examination, however, research has not firmly established EO's direct impact on firm performance (Montiel Campos, Parellada, Valenzuela, and Revista, 2015; Covin & Lumpkin, 2011). In studying the relationship between EO and firm performance, some studies utilize a three-dimension EO model, while others apply the five EO elements proposed by Vij and Bedi (2013). The inconsistent findings may result, therefore, from differences in how EO constructs are measured and operationalized.

Others suggest EO's effect on firm performance is dependent on various internal and external organizational factors and resources (Miller, 2011; Montiel Campos et al., 2015). For example, firms with high levels of EO may better leverage their limited resources (Chen et al., 2007). That said, findings from multiple studies indicate a positive EO / firm performance relationship (e.g., Boso et al., 2013; De Clercq et al., 2015; Stam & Elfring, 2008; Wang, 2008). Furthermore, findings from a meta-analysis including 51 studies indicate a strong and positive EO / firm performance relationship (Rauch et al., 2009). Given the rationale supporting a positive relationship between EO and firm performance, with the majority of findings supporting that relationship, we propose the following:

H₁: Entrepreneurial orientation is positively associated with firm performance.

Intra-Organizational Social Capital and Business Performance.

Social capital characterizes goodwill generated by social relations that can yield economic value and competitive advantages (Adler & Kwon, 2002). For instance, a firm may generate social capital through participation in community activities, which enhance reputation and presence in a market, and result in financial gains through heightened customer trust and improved stakeholder relationships

(Arlow & Gannon, 1982; Besser, 1999; Dyer & Whetten, 2006; Mescon & Tilson, 1987). Initiatives likely to produce business social capital include: supporting community environmental efforts to enhance a firm's reputation in the community, developing solid supplier relationships with the aim of reducing monitoring costs, participating in community charities to extend the number of possible investors, and engaging in an industry association to gain knowledge of best practices. Finally, social activities may improve employee recruitment and improve a firm's reputation among government agencies, which also can improve financial performance (Sprinkle & Maines, 2010).

Research findings regarding the relationship between social capital and financial performance are mixed (Arlow & Gannon, 1982; Margolis & Walsh, 2003). Unrecognized costs can hamper financial gains associated with social capital related endeavors. Such costs may include opportunity costs; for example, efforts directed at community activities may reduce the focus on entrepreneurial initiatives; employee time applied to community activities may lower overall productivity; and market costs associated with customers that view a business's chosen community activity negatively, which ultimately can inhibit market gains (Sprinkle & Maines, 2010). In the face of these possible shortcomings, however, a meta-analysis of 65 studies confirmed a positive relationship between social capital and firm performance (Westlund & Adam, 2010).

Following Stam and Elfring (2008), we do not apply social capital as an "umbrella concept" (Adler & Kwon, 2002, p. 18). Instead, we look specifically at intra-organizational social capital, "the goodwill and resources companies gain from their relationships with other companies" (Zahra, 2010, p. 345). Multiple benefits are available to firms that engage in developing intra-organizational social capital. For instance, businesses with strong intra-organizational connections may boost their knowledge of market opportunities, new technology, or external challenges (Chen et al., 2007). In addition, connections with other industry players may provide access to vital assets and resources (Lee et al., 2001). Intra-organizational social capital may also produce cognitive benefits, such as shared

interpretations or analysis of an industry's environment (Nahapiet & Ghoshal, 1998), which enhances intellectual capital (Wu, Chang, & Chen, 2008). Furthermore, strong intra-organizational relationships can enhance trust among organizations, reducing the transaction cost of exchanging resources (Chen et al., 2007; Stam & Elfring, 2008) and signaling a firm is a worthy strategic partner (Lee et al., 2001). Given these findings, we propose the following:

H₂: Intra-organizational social capital is positively associated with firm performance.

EO and Social Capital – The Interactive Effects on Business Performance

Given the exploratory nature implied in EO, one would expect firms with high entrepreneurial orientation to seek industry knowledge from social capital resources (Wu et al., 2008). The “absorptive capacity” of firms with high EO provides the capacity to soak-in knowledge from industry networks and create more value from those opportunities (Lee et al., 2001, p. 623). The uncertainty associated with EO strategies may prompt a desire to rely on social ties to address unknowns (Ibarra & Andrews, 1993; Stam & Elfring, 2008). Indeed, EO can be interpreted as a “push force” seeking knowledge from intra-organizational social capital (Wu et al., 2008, p. 273). But intra-organizational social capital can also be viewed as a “pull force” providing knowledge desired by entrepreneurially oriented firms (Wu et al., 2008, p. 273). Finally, there may be a strategic fit between EO and intra-organizational social capital (Stam & Elfring, 2008). Therefore, we propose the following:

H₃: Entrepreneurial orientation is positively associated with social capital.

As noted above, EO's effect on business performance is dependent on internal organization and external factors (Miller, 2011; Montiel Campos et al., 2015), such as a firm's human capital and issues associated with the industry in which it competes. Applying the resource-based view of a firm (Barney, 1991; Wernerfelt, 1984), a firm with a bundle of valuable and idiosyncratic resources, reflected by the presence of EO, should compete and perform well (Lee et al., 2001). In the pursuit of high performance, however, EO cannot stand alone (Chen et al., 2007; Stam & Elfring, 2008). Indeed, findings indicate

insufficient strategic resources can block EO's path to enhanced performance (Hitt, Ireland, Camp, & Sexton, 2001). To leverage their entrepreneurial orientation, a firm needs resources such as industry knowledge that may be obtained through intra-organizational social capital. Similarly, a firm with an entrepreneurial orientation should synthesize their innovative culture with knowledge acquired from other players in the same industry (Lee et al., 2001). Therefore, we propose the following:

H₄: Social capital mediates the relationship between EO and firm performance.

Methodology

Data Collection

The questionnaire was administered online by Qualtrics® to a sample of U.S. small businesses. After removing straight liners, missing data and speed responders, 241 usable responses were obtained. The minimum recommended sample size based on a power analysis was 70 (Hair, Hult, Ringle, & Sarstedt, 2017), so the number of responses is well above the recommended minimum. Respondents were company owners and senior managers and the firms had an average of 33 employees. About 50% of respondents were home based businesses (n=124), with annual sales averaging \$678,490. Firm age averaged 10.4 years, and respondents represented a broad cross-section of industries, including retailing, personal and professional services, wholesaling, manufacturing, and construction. Thus, the sample was deemed appropriate for small business research.

Measures

Entrepreneurial Orientation

The relationships between entrepreneurial orientation, organizational social capital, and firm performance were examined in this study. Entrepreneurial orientation (EO) is modeled as a higher order construct (HOC) consisting of five lower order constructs (LOCs): risk taking, innovativeness, proactiveness, competitive aggressiveness, and autonomy (Covin & Wales, 2011; Hughes & Morgan,

2007; Lumpkin & Dess, 1996; Ringle, Hair, Cheah & Sarstedt, 2019). Survey items were adapted from Hughes and Morgan (2007). Four of the LOCs were measured with three items and the fifth LOC, autonomy, had six items.

Social Capital

Intra-organizational social capital was measured using survey items adapted from Zahra (2010). There were five items measured using a 7-point Likert scale anchored by strongly disagree and strongly agree. Respondents were asked to assess their firms' overall reputation in the industry, connection to other firms inside and outside of the industry, and reputation for supporting industry causes and for dealing fairly.

Firm Performance

The dependent variable firm performance was adapted from prior research (Eddleston & Kellermanns, 2007). This measure is appropriate when firms are closely held and objective data is unlikely to be provided (Love, Priem, & Lumpkin, 2002), and are generally highly correlated with absolute and objective measures of firm performance, such as sales and employment levels (Shepherd & Wiklund, 2009; Honig & Samuelsson, 2012). Using a 7-point Likert scale, respondents were asked to assess their firms' performance relative to peers in eight areas: sales growth, profitability, market share, number of employees, return on equity, total assets, sales, and the ability to fund growth from profits. Taken together, these measures serve as a proxy for overall firm financial performance.

Control Variables

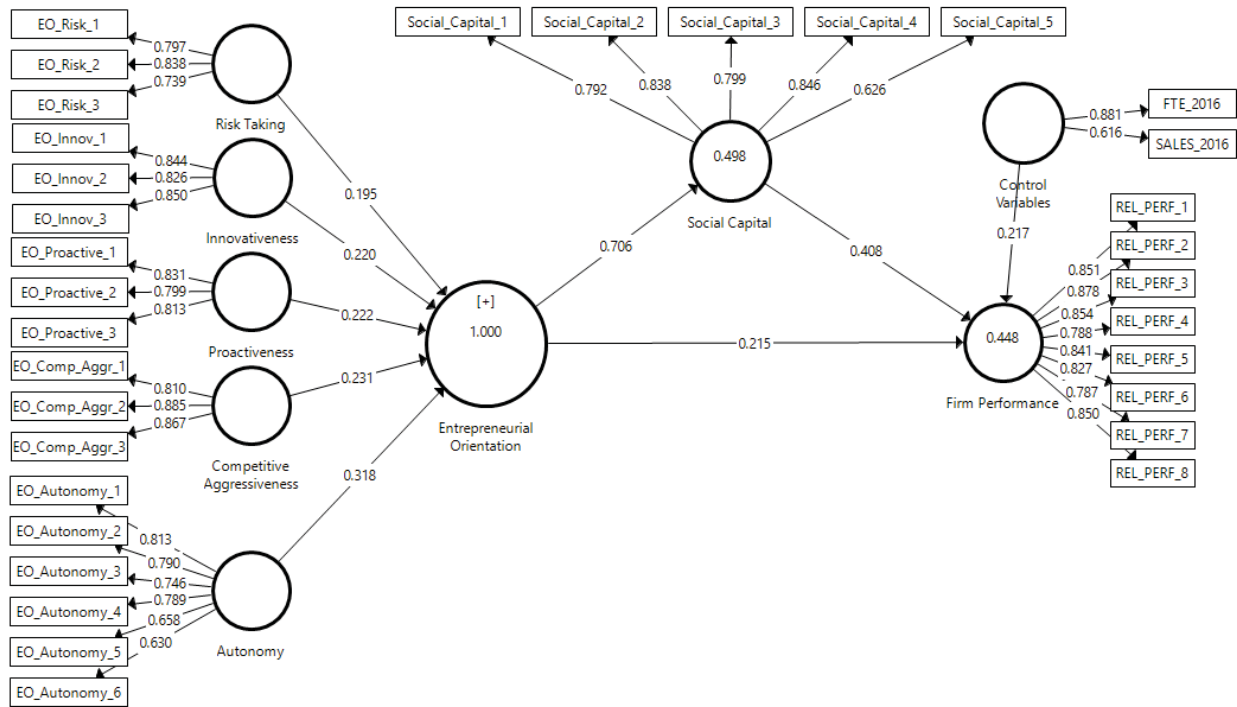
Consistent with prior research (Gibson & Cassar, 2002; Risseuw & Masurel, 1994), we controlled for industry and firm size using sales and full-time employment levels. The path coefficient for sales was 0.116 ($t = 3.160$, $p = 0.002$), for employees the coefficient was 0.170 ($t = 5.254$, $p = 0.000$), and for industry the coefficient was -0.022 ($t = 0.461$, $p = 0.645$). Thus, only the controls for sales and employment levels were significant.

Results

To evaluate our research model and test the relationships between entrepreneurial orientation, social capital, and firm performance, we utilized partial least squares structural equation modeling (PLS-SEM). PLS-SEM simultaneously analyzes the relationships between multiple constructs and is particularly useful in business research involving small, closely-held firms (Binz-Astrachan, Patel, & Wanzenried, 2014; Wilson, Whitmoyer, Pieper, Astrachan, Hair, & Sarstedt, 2014). PLS-SEM is also recommended when conducting exploratory research where prediction is the statistical objective (Hair et al., 2017), and the theoretical framework is not well developed (Hair et al., 2017; Patel, Manley, Hair, Ferrell, & Pieper, 2016). Finally, PLS-SEM is the preferred method when the purpose of the research is theory development or extension, and when higher order constructs (HOCs) are a theoretical component of the measurement models (Hair et al., 2017; Astrachan, Patel, & Wanzenried, 2014; Sarstedt et al., 2019).

The SmartPLS 3.0 software was applied to execute the analysis (Ringle, Wende, & Becker, 2015). Recommended procedures (Hair, Black, Babin & Anderson, 2019; Hair, Howard & Nitzl, 2020) were followed to assess the measurement and structural models. The measurement models included 23 indicators for six constructs (risk taking, innovativeness, proactiveness, competitive aggressiveness, and autonomy for the EO higher order construct, as well as social capital), eight indicators of overall firm performance, and two control variables. The full measurement and structural models, including path coefficients and the R^2 values, are shown in Figure 1.

Figure 1 - PLS-SEM Measurement and Structural Model (path coefficients and R² values are shown)



To assess the results of our reflective measurement model, we follow the confirmatory composite analysis (CCA) procedures specified by Hair, Howard, and Nitzl (2020). CCA is the recommended approach to assess and confirm composite measurement models in PLS-SEM. The first step is to evaluate the indicator loadings and their significance. Next the measurement models are examined for item and construct reliability. A fourth step is assessing convergent validity and the fifth step is examining discriminant validity. Nomological validity of the constructs should be evaluated next before moving to the seventh and final step, assessing the predictive validity of the structural model.

As noted earlier, established measures of entrepreneurial orientation were used (Hughes & Morgan, 2007), social capital (Zahra, 2010), and firm performance (Eddleston & Kellermanns, 2007). Results for the initial measurement model assessment are shown in Table 1. All measurement models exceed the minimum recommended guidelines for composite reliability and convergent validity (AVE)

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(Hair et al., 2019). Composite reliabilities ranged from 0.85 to 0.94, and AVE values for the lower order constructs, which together comprise EO, varied from a low of 0.549 to a high of 0.73. The AVEs for social capital and firm performance were 0.62 and 0.70, respectively. Finally, bootstrapping was executed using 5,000 subsamples to obtain estimates of statistical significance, and all relationships were significant ($p \leq 0.01$). Thus, reliability, convergent validity, and significance were confirmed for all constructs (Hair, Black et al., 2019).

Discriminant validity measures the distinctiveness of constructs. To assess discriminant validity, we used the Heterotrait-Monotrait ratio of correlations (HTMT) (Henseler, Ringle, & Sarstedt, 2015). Overall, HTMT values supported recommended guidelines. After establishing discriminant validity, we assessed nomological validity with other constructs in the nomological net (Hair et al., 2019). All results were consistent with the theoretical direction, expected size, and significance of the correlations, so nomological validity was confirmed.

Table 1 - Construct indicators, loadings, and quality measures

Construct	Item/Question	Outer Loadings
To measure firms' <u>entrepreneurial orientation</u> , participants were asked to indicate their agreement with the statements shown below on a 7-point Likert scale anchored by "Strongly Disagree" and "Strongly Agree." (Scale adapted from Hughes & Morgan, 2007).		
Entrepreneurial Orientation – Composite Reliability = 0.936, Cronbach's Alpha = 0.928		
Risk Taking Composite Reliability = 0.835, AVE=0.628		
EO_Risk_1	The term "risk taker" is considered a positive attribute for people in our business.	0.797
EO_Risk_2	People in our business are encouraged to take calculated risks with new ideas.	0.838
EO_Risk_3	Our business emphasized both exploration and experimentation for opportunities.	0.739
Innovativeness – Composite Reliability = 0.878, AVE=0.706		
EO_Innov_1	We actively introduce improvements and innovations in our business.	0.844
EO_Innov_2	Our business is creative in its methods of operation.	0.826
EO_Innov_3	Our business seeks out new ways to do things.	0.850

Proactiveness – Composite Reliability = 0.855, AVE= 0.664		
EO_Proactive_1	We always try to take the initiative in every situation (e.g., against competitors, in projects, and when working with others).	0.831
EO_Proactive_2	We excel at identifying opportunities.	0.799
EO_Proactive_3	We initiate actions to which other organizations respond.	0.813
Competitive Aggressiveness – Composite Reliability = 0.890, AVE = 0.730		
EO_Comp_Aggr_1	Our business is intensely competitive.	0.810
EO_Comp_Aggr_2	In general, our business takes a bold or aggressive approach when competing.	0.885
EO_Comp_Aggr_3	We try to undo and out-maneuver the competition as best we can.	0.867
Autonomy – Composite Reliability = 0.879, AVE = 0.549		
EO_Autonomy_1	Employees are permitted to act and think without interference.	0.813
EO_Autonomy_2	Employees perform jobs that allow them to make and instigate changes in the way they perform their work tasks.	0.790
EO_Autonomy_3	Employees are given freedom and independence to decide on their own how to go about doing their work.	0.746
EO_Autonomy_4	Employees are given freedom to communicate without interference.	0.789
EO_Autonomy_5	Employees are given authority and responsibility to act alone if they think it to be in the best interests of the business.	0.658
EO_Autonomy_6	Employees have access to all vital information.	0.630
<p>To measure firms' <u>social capital</u>, participants were asked to indicate their agreement with the statements shown below on a 7-point Likert scale anchored by "Strongly Disagree" and "Strongly Agree." (Scale adapted from Zahra, 2010).</p>		
Social Capital – Composite Reliability = 0.888, AVE=0.615		
Social_Capital_1	Our company has a good reputation in its industry.	0.792
Social_Capital_2	Our company is well-connected to other companies in its industry.	0.838
Social_Capital_3	Our company is well-connected to other companies in other industries.	0.799
Social_Capital_4	Our company has a good reputation for supporting industry causes.	0.846
Social_Capital_5	Our company has a good reputation for fair dealings.	0.626
<p>To measure <u>firm performance</u>, participants were asked to rate their firm's performance on eight factors as shown below relative to their competitors' performance. The 7-point Likert scale was anchored by "much worse" and "much better." (Scale adapted from Eddleston & Kellermanns, 2007).</p>		

Firm Performance – Composite Reliability = 0.948, AVE=0.697		
REL_PERF_1	Growth in sales	0.851
REL_PERF_2	Growth in profitability	0.878
REL_PERF_3	Growth in market share	0.854
REL_PERF_4	Growth in number of employees	0.788
REL_PERF_5	Return on equity	0.841
REL_PERF_6	Return on total assets	0.827
REL_PERF_7	Net profit margin	0.787
REL_PERF_8	Ability to fund growth from profit	0.850

We next examined the structural model results. The R^2 value of 0.474 for firm performance indicates indicated the structural model exhibits moderate in-sample prediction (Hair et al., 2017). Moreover, all path coefficients were statistically significant. The results, summarized in Table 2, show the path coefficients and their significance levels, as well as the tests of our hypotheses. All hypotheses were supported.

Table 2 - Hypotheses test results

Hypotheses	H1: EO is an HOC, consisting of:	Path Coefficient	T Statistics	Result
H ₁	EO → Firm Performance	0.494	9.694***	Accepted
H ₂	Social Capital → Firm Performance	0.572	14.585***	Accepted
H ₃	EO → Firm Performance, and Social Capital → Firm Performance (when tested simultaneously)	0.204 0.431	2.646*** 5.823***	Accepted
H ₄	Social Capital Mediates EO → Firm Performance	0.215	2.746***	Accepted

*** = p-value < 0.01

As a further demonstration of in-sample prediction, the f^2 (effect size) and Q^2 (blindfolding) values were examined. The effect sizes for entrepreneurial orientation and social capital of 0.066 and 0.192, respectively, are small (Cohen, 1992), while the Q^2 values of 0.41 for entrepreneurial orientation and 0.29 for social capital are quite meaningful (Hair et al., 2017). Overall, our in-sample predictions based on R^2 , f^2 and Q^2 are meaningful.

To assess the out-of-sample predictive power of the structural model, we applied the PLSpredict method and compared the results on two benchmarks: the Q^2 value, and the linear model (LM) approach. As an initial assessment, the positive Q^2 values indicate the model has good out-of-sample predictive power. We also examined the predictive power using the root mean squared error (RMSE), mean absolute error (MAE), and mean absolute percentage error (MAPE). The model errors were lower than the LM values, thus confirming out-of-sample predictive power (Shmueli, Sarstedt, Hair, J. F., Cheah, Ting, Vaithilingam & Ringle, 2019).

Discussion

Entrepreneurial orientation and social capital have both been considered to enhance small business performance. Our study provides further support for these theoretical relationships. The presence of mediation (social capital mediates the relationship between EO and firm performance) indicates, however, the relationships are more complex than previously thought. In summary, we found support for all four hypotheses: H_1 - Entrepreneurial orientation is positively associated with firm performance; H_2 - Intra-organizational social capital is positively associated with firm performance; H_3 - Entrepreneurial orientation is positively associated with social capital; and H_4 - Social capital mediates the relationship between EO and firm performance.

Limitations

Hughes and Morgan (2007) demonstrated that five dimensions of entrepreneurial orientation – risk taking, innovativeness, proactiveness, competitive aggressiveness, and autonomy – likely vary independently. In this research, we have modeled EO as a higher-order construct to assess its interaction with intra-organizational social capital. Future research should extend this stream of research further by considering the independent relationships between each of the five dimensions of entrepreneurial orientation, social capital, and firm performance.

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Respondents in this research are company owners and managers of U.S. small businesses.

Caution is needed in generalizing the results of this study as the findings are subject to limitations. Most small businesses are independently owned and operated. We assumed a small business has less than 500 employees, and respondents ranged in size from 1 to 450 employees. The average in our study was 33 employees, with a range of 1 to 450. However, there are other measures, such as sales revenue, that can be applied to characterize small businesses. Thus, one small company may employ fewer than 10 people, while another may employ 500. Annual sales in our group averaged \$678,490, but varied considerably. Additionally, approximately half of our responding firms were home-based businesses. The limitations on number of employees, industry, sales volume, geographic location, and sample size constrain the generalizability of this research. We controlled for firm size in both employees and number of employees, but we found that industry was not significant. However, other control variables such as firms' age, stage in the industry life cycle, or international culture may influence both social capital and entrepreneurial orientation. Thus, future research should also consider these and other potentially influential variables.

Finally, the data for this study was cross-sectional. As such, we are limited in our ability to infer causality among the constructs. For example, one could argue that social capital causes firm performance (i.e., the more goodwill or social capital a firm has, the higher their expected financial performance might be). Conversely, one could also argue that better firm performance increases firms' intra-organizational social capital. We assessed out-of-sample predictive validity for our model. But future researchers might collect data longitudinally approach to discern causal relationships among the constructs explored here.

Implications for Researchers

Several research messages emerge from the present study. First, the findings contribute by extending the literature on entrepreneurial orientation, social capital and firm performance. Second, the results shed light on the mediating effect of social capital on the relationship between EO and firm performance. Third, our findings indicate the accepted measurement models used in small business research can benefit by determining the extent of mediation that occurs and the influence that multi-item measures have on these constructs. Finally, and perhaps most importantly, these findings dispel previous attempts to refute the use of subjective data as dependent variables due to the measurement error appearing to correlate with a large set of characteristics and behaviors. Furthermore, our application of confirmatory composite analysis (CCA) as a research tool illustrates the extensive assurances when examining complex theoretical models and relationships.

Recommendations for Future Research

The research indicates that entrepreneurial orientation (EO) and social capital influence firm performance. Moreover, that social capital mediates the relationship between entrepreneurial orientation and firm performance. Our research further demonstrates the usefulness of partial least squares structural equation modeling (PLS-SEM) to simultaneously analyze the relationships between multiple constructs. In addition, application of confirmatory composite analysis (CCA) is recommended for future studies to ensure the reliability and validity of measurement models when examining multi-item measurements and higher order constructs (HOCs). For example, our theoretical model contained 23 indicators for six constructs, eight indicators of overall firm performance, and two control variables. Future researchers of small businesses are encouraged to investigate industry specific small businesses to compare the differences across different industries. Researchers are also encouraged to incorporate confirmatory composite analysis and PLSpredict to assess their measurement and structural models in the future.

Implications for Practitioners

The additional support provided by this study that EO enhances firm performance, further validates the importance of firms' adopting an entrepreneurial orientation. Further, our results also validate the importance of intra-organizational social capital. While it may be easy to observe the connectedness between a firm's innovativeness, proactiveness, and the level of autonomy it affords its employees – the effects of competitive aggressiveness and risk taking on social capital are less clear. As such, small business owners and managers should recognize the benefits of simultaneously adopting an entrepreneurial orientation and carefully managing their social capital. For example, business owners should understand the importance of industry associations, supporting community efforts, developing solid supplier relationships, and participating in charity endeavors. However, owners and managers must also measure, understand, and consider the costs of such involvement as an investment in their firms' social capital.

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