Environmental Uncertainty and Positive Performance of Small Firms: The Roles of Key Mediators[1]

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This paper examines the positive impact of environmental uncertainty on performance through the mediating effects of strategic business activities, decision making style, relationships and strategic orientation. This research tests the various hypothesized relationships using a path model. A sample of 152 small firms is used to test the research model. Different variables affect a firm's financial performance and explain about 31% of the variance. Strategic orientation is impacted by strategic business activities, relationships, and decision making style and these three variables explain over 45% of the variance. The results of the empirical analysis indicate overall support for the research model.

INTRODUCTION

This research examines in some detail the consequences of environmental uncertainty that small and entrepreneurial businesses face. We believe that a certain level of uncertainty may create conditions for entrepreneurs and business owners to become proactive and search for solutions that enhance their potential to survive and thrive. All business firms, including small businesses, are faced with a changing environment and considerable uncertainties in predicting their futures. Faced with these difficulties, one of the options firms may consider seriously is to pursue innovations, both internally with their employees and externally with their partners, in order to solve their problems (Eisenhardt & Schoonhobven, 1996; Ritter & Gemunder, 2004; Wu, 2007). Some researchers suggest that firms in the face of turbulent and changing environments pursue learning and innovate by internalizing external sources of knowledge (Weerawardena, O'Cass, & Julian, 2006). The main idea is that environmental dynamics or market turbulence is a precursor or a precondition to market opportunity (Drechsler & Natter, 2012). The consequences of increased market dynamism (indicated by turbulence and environmental uncertainty) are increased market opportunities (Dean, Meyer, & DeCastro, 1993). In support of the innovative capabilities of new small firms, it is reported that small businesses produce 13 times more patents than larger firms (Forbes/Entrepreneurs). A quick glance at the United States Small Business Administration website (https://www.sba.gov/sites/ default/files/advocacy/US_0_0.pdf) will inform the reader about the size and scope of small and entrepreneurial businesses in the country. The numbers are quite striking as there were, as of 2014, more than 28 million small businesses that employed in excess of 56 million people. Publicly available information does suggest that small businesses, usually defined as businesses

employing fewer than 500 persons, contribute nearly half of the nation's nonfarm GDP, and play a significant role in employment generation. Entrepreneurs have an important role in creating wealth, both personal and societal, and have been the subject of a great deal of study (Baron, 1998). "It is widely recognized that entrepreneurs -- people who formulate new ideas, recognize opportunities, and translate these into added value to society by assuming the risk of starting a business—are a major source of economic growth for many economies" (Baron, 1998, 276).

Research has shown that the ability to combine internal with external information in innovation contributes significantly to competitive advantage (Rigby & Zook, 2002). In developing its relationships, not only is it important for a firm to find the right partners, but also have the ability to recognize, value, assimilate, and apply new external information to its internal R&D processes (Kostopoulos, Papalexandris, Papachroni, & Ioannou, 2011). The opportunity to apply and integrate external information towards innovation can help a firm reduce a product's time-to-market (Chesbrough, 2007). It is not difficult to understand that competition and competitive pressures encourage innovation (Fuentelsaz, Gomez & Polo, 2003) as environmental uncertainty forces managers to look for superior alternatives to their current products and ways of doing things (Vincent, Bharadwaj, & Challagalla, 2004). As Drechsler and Natter rightly state, "companies interact with external partners to increase the efficiency and effectiveness of their innovation processes. Consequently, firms that are willing to learn and share their knowledge must strategically decide the extent to which they should collaborate" (2012, p. 439). In order to develop relationships meaningfully with external constituents, firms will need to have very close relationships across a variety of dimensions with their suppliers and customers (Bridges & Freytag, 2009).

While facing environmental uncertainty is common to nearly all businesses, some firms may consider uncertainty to be a possible source of new opportunities that can be leveraged. In developing our research framework, we look at some of the positive consequences of environmental uncertainty. What uncertainty does is to trigger activities like scanning and analysis of signals emanating from the external environment. One option firms may pursue in the face of uncertainty is to centralize decisions to increase coherence, consistency, and coordination of strategy. The analysis of environmental signals can influence firms' decisions "regarding marketing mix activities and relationship building" (Bridges & Freytag, 2009, 745). To understand why key decisions may be centralized it is important to note that "ambivalent understandings of strategic issues are particularly central for top executives who play a key role in shaping collective interpretations and strategic responses" (Plambeck & Weber, 2010, 689). A firm's strategic orientation is a result of its analysis of the environment, its decision making style, and the result of relationships. Strategic orientation is the proactive and dynamic manner in which the firm chooses to respond to its environment to enhance performance.

RESEARCH MODEL AND HYPOTHESES

We theorize that with increases in environmental uncertainty, firms undertake a number of strategic business activities. One of the key outcomes of these activities is to develop, strengthen, and reinforce the firm's relationships, both internal and external. A combination of strategic business activities and relationships helps to develop a firm's strategic orientation. Finally, the drivers of a firm's financial performance are environmental uncertainty, strategic business activities, and strategic orientation. The next section will expand on the various constructs and explain the proposed relationships in a little more detail. The six components of our research model are: (1) Environmental Uncertainty; (2) Strategic Business Activities; (3) Decision Making Style; (4) Relationships; (5) Strategic Orientation; and (6) Financial Performance. These are briefly discussed in this section.

Environmental Uncertainty

It is widely accepted that the business environment is characterized by fluidity and change, and increased competitive pressures. Environmental uncertainty, consequently, is the starting point of our research. In order to address changing environmental conditions that include increasing costs of research

and development, shorter product life cycles and quicker levels of obsolescence, companies need to be increasingly innovative (Carrilo & Franza, 2006; Chesbrough, 2007). Some of the main underlying factors that drive environmental turbulence include shorter innovation and product life cycles, increasing costs of development, and constraints on resources (Chesbrough, 2007; Lichtenthaler, 2009). The challenges faced by small firms are deciding how to go about meeting the demands of the changing environment and responding appropriately. While it is true that entrepreneurs may choose to undertake numerous proactive measures, we focus on a few that we believe are crucial to their short- and long-term well-being. One important approach is for entrepreneurs and small business owners to critically analyze signals from their environment. These include assessing the state of the competition and key competitors, understanding customer requirements, studying available information, and making appropriate plans.

While facing environmental uncertainty, common to most businesses, we argue that business firms may consider uncertainty and change to be sources of new opportunities, and many would like to take advantage of these potential opportunities. Our assumption is that firms, specifically interested in superior performance, would have taken time and effort to create a set of effective mechanisms or strategic business activities. Small businesses in attempting to address turbulence in their environments try to stay proactive. This they do by analyzing their external environments and making decisions on what specific plans to formulate and how to execute them effectively. Environmental uncertainty and environmental scanning lead to undertaking certain strategic business activities.

Environmental uncertainty and competitive pressures are felt most acutely when businesses perceive a great deal of pressure due to the activities of competing firms (Jawroski & Kohli, 1993). Environmental uncertainty, according to Drechsler & Natter (2012), is salient when demand and competitor actions are difficult to predict, and obsolescence rates are high. This unpredictability, coupled with a market position that is endangered due to new competitors and product substitution, makes the environmental uncertainty exceedingly acute. Firms are compelled to address these pressures as effectively as possible.

Strategic Business Activities

In order to obtain relevant and useful signals from the environment so that the operating environment can be assessed accurately, firms put into place mechanisms to obtain and analyze information. Typically, research systems are put in place to analyze the competitive environment, undertake appropriate market research, measure satisfaction levels, assess competitors, customers, products, and trends, and develop marketing planning (Freytag & Bridges, 2009). The results of such analyses are used to determine the extent to which the environment is stable or dynamic (Andersen, 2005), benign or hostile (Covin, Slevin & Schultz, 1997). The degree of environmental uncertainty then determines the speed with which decisions are taken and the urgency with which they are implemented.

Strategic business activities represent a proactive approach to operating a business. We would also expect strategic business activities to impact a firm's decision making style and the importance it places on relationships. We also expect strategic business activities along with relationships and its decision making style to impact a firm's strategic orientation. Finally, we would expect a firm's financial performance to be jointly impacted by environmental uncertainty, strategic business activities, and strategic orientation.

In many cases, firms engage in strategies that focus on "increased investment in the marketing mix with the intention of drawing new customers" and/or "on reinforcing relationships with the goal of retaining, and possibly growing the business of, current customers. Thus, activities leading to greater engagement of employees and customers. …" (Bridges & Freytag, 2009, p. 745). It is important for firms to constantly scan their operating environment, strategize, and respond accordingly. In order to do this effectively, firms need to have both informal and formal systems to obtain relevant information, so appropriate information systems architecture are designed and put into place. According to Bridges and Freytag (2009), firms do a number of things to remain competitive: (1) they develop a detailed and comprehensive marketing planning system that is highly supported by the firm; (2) this system is used to regularly assess customers and to measure levels of customer satisfaction; (3) they attempt to analyze their competitors in detail and attempt to learn from them.

Decision Making Style

There is a fair deal of literature on dynamic environments associated with quicker or speedier decision making (Bourgeois & Eisenhardt, 1988; Eisenhardt, 1989). Researchers have also mentioned that once decisions have been made, there is considerable tendency to largely adhere to implementing the strategic decisions (Covin, Slevin & Schultz, 1997). This is because hostile and fast changing environments, unlike benign ones, do not provide the luxury of deviations and putting in place alternate plans when environmental opportunities can be either limited or severely challenging.

Decision making speed is now a strategic issue as the hostility of the external environment creates an urgency in which time too is at a premium. A hostile environment is usually unforgiving and reacting quickly is a matter of survival. Organizations operating in hostile environments have little leeway and should leave little to chance (Covin, Slevin & Schultz, 1997). Speed and adherence to plans is to avoid being caught off guard and to share with employees a general consciousness of how the firm has chosen to deal with a hostile and difficult environment (Greiner & Bhambri, 1989; Potter, 1994). Given that decisions are made under conditions of environmental uncertainty and that decisions have to be made quickly, there is greater likelihood of decisions making being more centralized than decentralized.

Relationships

A critical action area for firms under conditions of environmental uncertainty is to develop relationships, both external and internal. Research suggests that serious relationship building, including engaging customers, employees and other constituents, is undertaken when firms believe that they are in a position of considerable disadvantage due to an intensely competitive marketplace (Sudhir, 2001). Axiomatically, as "marketplace intensity increases, whether due to increasing pressure from either the buyer or supplier side, firms must determine how best to respond. Responses are observed to include both increased marketing investment and increased efforts to engage constituents" (Bridges & Freytag, 2009, p. 748).

In order to strengthen their competitive positions, small businesses attempt to leverage strengths both within and outside their businesses. Building improved relationships with their own employees, a source of potential strength and possible competitive advantage, are activities that firms are likely to pursue very seriously. Similarly, small business owners are aware that linkages with certain external constituents could prove to be highly beneficial. These benefits include heightened levels of trust and cooperation, and ideas that lead to innovation in product, service and/or delivery. Firms are shifting toward creating value through relationship marketing that include supplier alliances and customer partnering, and improved relationships with customers and suppliers are viewed as a key source of competitive advantage (Bridges & Freytag, 2009; Narayandas & Rangan, 2004; Sharma & Sheth, 1997). Consequently, firms in many cases actively search for solutions to overcome these concerns (Cyert & March, 1963).

Businesses, including small businesses, are aware of the many benefits of collaboration which include the joint development of knowledge through relationships with external constituents including competitors, suppliers and customers (Hagedoorn, 1993; Von Hippel, 1988). Similarly, firms increasingly focus on developing and strengthening internal relationships. As mentioned earlier, relationships have both an internal and an external dimension. We also hypothesize that internal relationships strengthens and positively impacts external relationships. A combination of strategic business activities and the two dimensions of relationships directly impact strategic orientation. Finally, environmental uncertainty, strategic business activities, and strategic orientation are expected to positively impact a firm's financial performance.

Strategic Orientation

We next look at strategic orientation which is an outcome of strategic business activities and relationship building. Strategic orientation is the belief managers have about "how the firm should generally position itself and respond to developments in its environment" (Plambeck & Weber, 2010, p. 693) and is an important filter of information that is essentially embedded in the firm's culture, structure and routines (Daft & Weick, 1984; Thomas & McDaniel, 1990). According to Prahalad and Bettis

(1986), a single-minded focus on one strategic orientation primes managers with programmatic ideologies, paradigms, and traditions. A firm's strategic orientation can be either offensive with a concentration toward opportunity related issues (Thomas & McDaniel, 1990), as opposed to a defensive strategic orientation that is focused on threat-related issues (Plambeck & Weber, 2010). We argue that strategic orientation, whether "offensive" or "defensive", along with well-developed relationships, is an important driver of firm performance.

Financial Performance

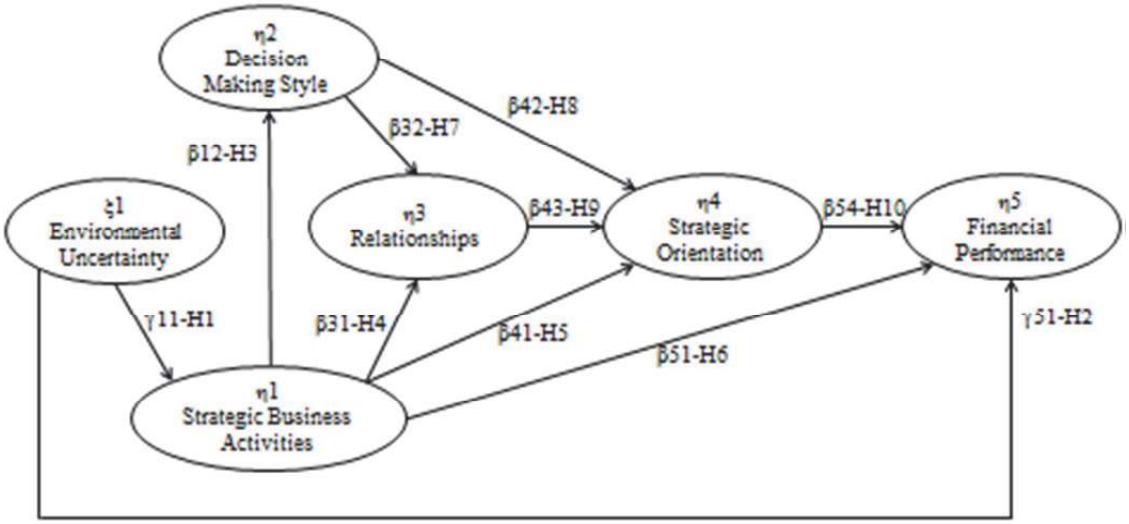
Our final construct in the research model is a firm's financial performance. Performance is a measure widely understood by firm owners, managers, and by researchers, and it is popular and well-accepted measure of a firm's well-being. Scholars assert that superior performance takes place when firms are able to achieve sustained competitive advantage by producing a superior product or by commanding a premium price (Day, 1994; Porter, 1991). Performance is, as Porter (1991) states, the ability to consistently configure and combine activities in a superior way relative to competitors. As we were surveying small businesses, mostly privately held, we did not have access to archived performance measures. We, therefore, had to rely exclusively on perceptual measures. Numerous pieces of published prior research suggest that perceptual measures of performance tend to typically correlate strongly with archival measures (Venkatraman & Ramanujam, 1987). Financial performance is our criterion variable and we expect, based on our central thesis, that environmental uncertainty, for the reasons stated earlier, would impact performance both indirectly as well as directly. Similarly, we would expect strategic business activities, for the very reason that they are undertaken, to impact financial performance both directly and indirectly. Finally, a firm's strategic orientation should directly impact performance because strategic orientation is carefully crafted in order to have a sustained competitive advantage and tp ensure superior performance.

An important question is what constitutes an appropriate measure of performance? Performance parameters generally considered important by managers and owners of businesses have usually been accepted by strategy researchers. These parameters include sales growth and after-tax profits on various criteria (Cavusgil & Zou, 1994; Davis, 1988; Dess & Davis, 1984; Morrison & Roth, 1993). In this research we have examine a firm's performance in terms of its profits (return on assets, return on total investments, and return on sales) relative to their main competitors. The first two performance measures have been used by Ramanujam and Varadarajan (1987) and the third by Covin, Slevin, and Schultz (1997).

THE HYPOTHESIZED MODEL

Based on the preceding discussion, we present the hypothesized research model as detailed in Figure 1. The principal antecedent is environmental uncertainty. As environmental uncertainty increases, it creates conditions for firms to undertake strategic business activities where signals from the environment are received, processed, and analyzed. Environmental signals activate strategic business activities, which in turn drive decision making style. We argue that as environmental uncertainty increases, there is pressure to arrive at decisions keeping speed in mind. As a consequence, under hostile conditions top management prefers to centralize decisions and to make them quickly (Bourgeois & Eisenhardt, 1988; Eisenhardt, 1989). In order to increase cooperation and to look for innovative solutions, there is increased focus on enhancing relationships internally and externally. While the key variables of our research model have been discussed in the earlier part of this section, we present below hypothesized relationships.

FIGURE 1
RESEARCH MODEL WITH HYPOTHESIZED PATHS



Our hypotheses address the variables that impact strategic business activities (H1), decision making style (H3), relationships (H4 and H7), strategic orientation (H6, H8, and H9), and financial performance (H2, H6, and H10). Below, we state in formal terms the 10 hypotheses that we test in our research:

H1: There is a positive relationship between environmental uncertainty and strategic business activities.

H2: There is a positive relationship between environmental uncertainty and financial performance

H3: There is a positive relationship between strategic business activities and decision making style.

H4: There is a positive relationship between strategic business activities and relationships.

H5: There is a positive relationship between strategic business activities and strategic orientation.

H6: There is a negative relationship between strategic business activities and financial performance.

H7: There is a positive relationship between decision making style and relationships.

H8: There is a positive relationship decision making style and strategic orientation.

H9: There is a positive relationship between relationships and strategic orientation.

H10: There is a positive relationship between supplier strategic orientation and financial performance.

It should be noted that in this research, the paths between environmental uncertainty and decision making style, between environmental uncertainty and relationships, between environmental uncertainty and strategic orientation, between decision making style and financial performance, and the paths between relationships and financial performance are neither theorized nor hypothesized nor tested in this research.

METHODOLOGY

Research Setting

To empirically test the concepts presented in our research model and the various hypothesized paths, we examined a sample of entrepreneurs that operated in the southern region of a major US state. We believe that many of the characteristics and relationships that we were looking for and were planning to evaluate in order to test our model would be available in this particular setting. There is considerable uncertainty in the border region as it is affected by politics and regulations from a neighboring country, the security situation, currency exchange rates and devaluation, logistics, transportation, technology, customs rules and regulations, and so forth.

We constructed our questionnaire from different streams of research to include environmental uncertainty (Drechsler & Natter, 2012), strategic business activities and relationships (Bridges & Freytag, 2009), decision making style (Andersen, 2005), strategic orientation (Plambeck & Weber, 2010), and performance (Covin, Slevin, & Schultz, 1997). In developing the research instrument use was made of existing measures, scales, and items wherever possible. Most questions were asked on a 5-point Likert scale and were generally anchored on “not very much like me” to “very much like me”, or "strongly agree" to "strongly disagree", or “not at all” to “to a great extent”, or “much better than our competitors” to “much worse than our competitors”.

Field investigators, who were undergraduate business students, undertook personal interviews with owners and entrepreneurs. Respondents, who were randomly chosen, were informed that a summarized report aggregating the results would be made available if they wanted to be informed about the survey results. A total of 152 firms participated in the research. The firms chosen represented a wide range of business activities including manufacturing, service, distribution, warehousing, transportation, retail, wholesale, and service. Great care was taken to ensure that a firm participated only once in the survey and that anonymity was maintained.

Measures

Our model consisted of six latent constructs. In all, a total of ten paths were studied in the research model. First it examined the impact of environmental uncertainty on strategic business activities ($\gamma 11$) and the impact of the latter on decision making style ($\beta 12$). It then looked at the impact of strategic business activities and decision making style on relationships ($\beta 31$ and $\beta 32$), and the impact of strategic business activities, decision making style, and relationships on strategic orientation ($\beta 41$, $\beta 42$, and $\beta 43$). Finally, the model examined the roles of environmental uncertainty, strategic business activities, and strategic orientation on a firm’s financial performance ($\gamma 51$, $\beta 51$, and $\beta 54$).

Details of the various measurement items, constructs used, and their operationalization are summarized in Table 1. The correlation matrix along with the means and standard deviations of the six constructs are given in Table 2. The correlations provide an initial test and support for a majority of the hypothesized paths. All variables were analyzed for validity and reliability following Anderson and Gerbing (1988). The six latent constructs were measured using multiple indicators. For scales that had shown prior evidence of reliability and validity, exploratory factor analysis is not strictly required (Jöreskog & Sörbom 1992, 1993). However, we proceeded to test the validity and reliability of all the scales that were used.

TABLE 1
MEASUREMENT MODEL DETAILS

	Cronbach's Alpha	Factor Loading
ξ1 – *Environmental Uncertainty*		
1. Competitor actions are difficult to predict		.857
2. Demand for innovative goods and services is quite uncertain		.856
3. Market position is endangered due to high threat of market entries from new competitors		.839
4. Demand is very difficult to predict		.775
5. Our products are easily substitutable by competitor products		.732
6. Products and services are quickly getting obsolete	.883	.673
η1 – *Decision Making Style*		
1. Managers do not start important market activities unless top management has approved the decision		.849
2. Managers cannot introduce new practices or develop new internal capabilities without approval from top management		.823
3. Top management must approve new product and service developments before they can be initiated	.812	.786
η2 – *Strategic Business Activities*		
1. We measure and evaluate customer satisfaction regularly		.805
2. Market research system is highly supported in our firm		.756
3. We have a detailed marketing planning system in place		.734
4. We analyze our competitors in detail and learn from them	.853	.695
η3 – *Strategic Plan Adherence*		
1. Unit very ineffective/effective at implementing its chosen business plans/ strategies		.908
2. Never able to implement/always able to implement business plans/strategies		.866
3. Almost never/almost always adheres closely to its intended business plans/strategies		.821
4. Modifications to plans/strategies are typically extensive/typically minimal	.823	.632
η4 – *Relationships*		.803
1. We strongly encourage employees to generate ideas		.769
2. Most employees are engaged in employee networking		.741
3. We reward employees generating for ideas		.661
4. Employees are usually well-informed about customers' wants and needs		
5. We have a very close relationship with our customers		.797
6. We have a very close relationship with our suppliers	.789	.714
η5 – *Strategic Orientation*		
1. We are usually the first to offer customers new products/services		.837
2. We have a product portfolio that is constantly growing		.777
3. We always endeavor to develop new products and respond rapidly to early signs of market opportunities		.734
4. We always try to be the first in the industry to offer new solutions	.874	.734

η6 – *Comparative Financial Performance*		
1. Your after-tax return on total assets (ROA) relative to your main competitors		.875
2. Your after-tax return on total investments (ROI) relative to your main competitors		.845
3. Your after-tax return on total sales (ROS) relative to your main competitors	.945	.796

TABLE 2
MEANS, STANDARD DEVIATIONS, AND CORRELATION MATRIX (N=152)

	Mean	S.D.	(1)	(2)	(3)	(4)	(5)	(6)
(1) Environmental Uncertainty	3.073	.990	1					
(2) Strategic Business Activities	3.710	.934	0.266**	1				
(3) Decision Making Style	3.833	.924	0.181*	0.295**	1			
(4) Relationships	4.163	.634	0.062	0.549**	0.263**	1		
(5) Strategic Orientation	3.643	.955	0.186*	0.583**	0.364**	0.567**	1	
(6) Financial Performance	3.447	.847	0.310**	0.504**	0.244**	0.274**	0.428**	1

[S.D. - Standard Deviation]
** - Correlation is significant at the 0.01 level (2-tailed)
* - Correlation is significant at the 0.05 level (2-tailed)

Analysis

Path analysis was used to test the causal model to the extent the observed variables were representative of the latent constructs of the hypothesized model. In path analysis, the measurement model can be ignored and the measurement error for items can be assumed to be without error (Kelloway, 1998) if the alpha reliabilities of all variables are in excess of .70 (Pedhazur, 1982). The Cronbach alphas for all the scales in our case ranged from .789 to .945. All of the scale reliabilities were essentially within acceptable values. The factor loading values were all above .40, as recommended by Rummell (1967).

On running the path analysis, the details of which are presented in Table 3, we found nine hypothesized paths in the model had statistically significant coefficients and one was not statistically significant. The path model results depicting the standardized path coefficients among the latent variables are presented in Table 3.

To evaluate the overall fit of both models, we used the Root Mean Square Residual (RMR), the Standardized RMR (SRMR), and Root Mean Square Error of Approximation (RMSEA). We chose to use the RMR, SRMR, and RMSEA for a number of reasons. The RMR is the simplest fit index provided by LISREL and values of less than .05 indicate a goof fit of the data (Kelloway, 1998). The SRMR is an analysis of the residuals between the hypothetical covariance matrix and the fitted matrix (Kelloway, 1998; McCarty & Shrum, 2001). According to Hu and Bentler (1998), the SRMR is most sensitive to misspecified factor covariances, while the RMSEA is an indication of a lack of fit of the model to the population covariance matrix. Hu and Bentler (1998) suggest a cutoff of .08 for the SRMR and .06 for the RMSEA to assess whether there is an adequate fit of a hypothesized model. Steiger (1990), who developed the RMSEA, suggested that values below .05 indicates a very good fit to the data, while RMSEA values below .01 indicate an outstanding fit to the data. Both the measurement model and the causal model are within Steiger's (1990) SRMR and RMSEA cutoff limits, and thus indicate that there is an excellent fit of the data with the hypothesized model.

TABLE 3
PATH MODEL RESULTS AMONG LATENT VARIABLES AND EXPLAINED VARIANCE

Path	Variables	Hyp.	Std. Coeff	t-value
γ11	Environmental Uncertainty – Strategic Business Activities	H1	.266[a]	3.380
γ51	Environmental Uncertainty – Financial Performance	H2	.183[b]	2.603
β12	Strategic Business Activities – Decision Making Style	H3	.295[a]	3.781
β31	Strategic Business Activities – Relationships	H4	.516[a]	7.288
β41	Strategic Business Activities – Strategic Orientation	H5	.351[a]	4.785
β51	Strategic Business Activities – Financial Performance	H6	.342[a]	4.003
β32	Decision Making Style – Relationships	H7	n.s.	--
β42	Decision Making Style – Strategic Orientation	H8	.352[a]	4.606
β43	Relationships – Strategic Orientation	H9	.328[a]	4.513
β54	Strategic Orientation – Financial Performance	H10	.195[c]	2.336
	Endogenous Variables and Explained Variances			
$R^2\eta 1$	Strategic Business Activities	7.1%		
$R^2\eta 2$	Decision Making Style	8.7%		
$R^2\eta 4$	Relationships	31.3%		
$R^2\eta 6$	Strategic Orientation	45.4%		
$R^2\eta 7$	Financial Performance	31.1%		

a = p < .001; b = p < .01; c = p < .05

The path analysis established the strengths of the relationships among the latent constructs as hypothesized and provided support for all the hypothesized paths of the research model. We evaluated the overall fit of the path model using parameters that were used to assess the fit statistics of the measurement model (see Table 4). Our research model had the following fit statistics. The $\chi^2_{(5)}$ was 5.495 (p=.359). A non-significant χ^2 indicates that the model fits the data and that the model can reproduce the population covariance matrix (Kelloway, 1998). The RMR, SRMR, and RMSEA were, .0342, .0342, and .023 respectively. The goodness of fit index (GFI) and the adjusted goodness of fit index (AGFI) were .988 and .951 respectively. The fit statistics for the tested full model indicate an excellent fit to the data.

The purpose of developing and testing this model was to examine the impact of environmental uncertainty on strategic business activities, the impact of strategic business activities on relationship building and strategic orientation, and the impact of environmental uncertainty, strategic business activities, and strategic orientation on firm performance. Nine of the ten hypotheses are supported; six at the p<.001, two at the p<.01, and one at the p<.05 levels.

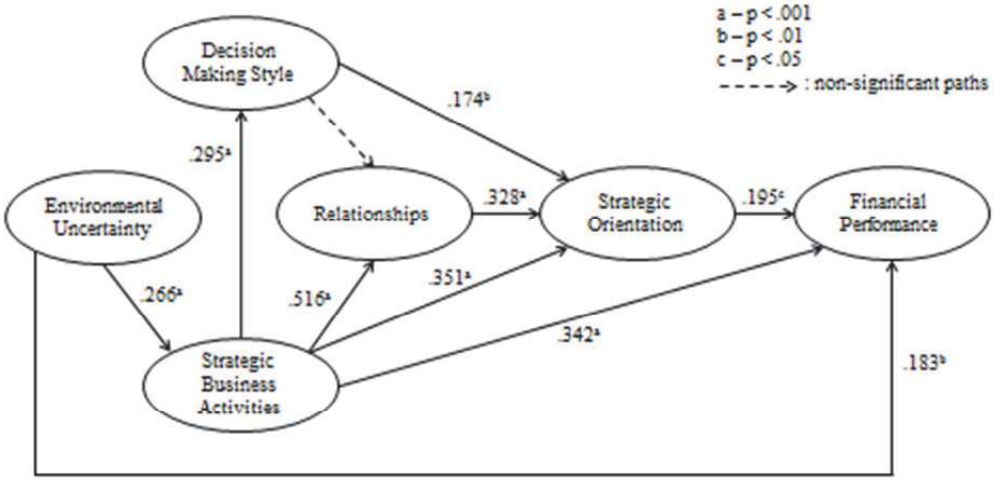
TABLE 4
MODEL FIT SUMMARY

MODEL	χ^2	df	RMR	SRMR	RMSEA	GFI	AGFI
Full Model (10 paths)	5.495 (p=0.359)	5	.0342	.0342	0.023	.988	.951
Trimmed Model (9 paths)	7.932 (p=0.243)	6	.0418	.0419	.0365	.984	.945

χ^2	Chi Square
df	Degrees of Freedom
RMSEA	Root mean square error of approximation
RMR	Root mean square residual
SRMR	Standardized mean square residual
GFI	Goodness of Fit Index
AGFI	Adjusted Goodness of Fit Index

As work in entrepreneurship is still in the process of theory development and continued empirical research, we felt justified in evaluating reasonable alternative models by testing the model in a hierarchical or nested manner (Kelloway, 1998). Consequently, we ran path analysis one more time after dropping the one non-significant path (β32) to observe changes in chi square. The path coefficients of the trimmed model are also presented in Table 4. The greatest change in chi square between the full model and the trimmed model was 2.437 which was less than the critical value of 3.84 for 1 one degree of freedom, so we had to conclude that there is no significant difference between the full model and the trimmed model. The fit statistics indicate a slightly poorer fit to the data by the trimmed model (see Table 4).

FIGURE 2
RESEARCH MODEL WITH STANDARDIZED PATH COEFFICIENTS



What we found of interest was the extent of the variance explained by the model, and in the case of performance it was 31.1%. The model also explained 45.4% of the variance for strategic orientation, and 31.3% of relationships. The model also explained 7.1% if the variance for strategic business activities and 8.7% for decision making style (see Table 3). The path model with standardized path coefficients is presented in Figure 2.

H7, the path between decision making style and relationships finds no statistical support. One possible explanation is that relationships are largely the result of an organization's culture, a construct we neither model nor theorize in this research. As we reflect upon it, we conclude that decision making, especially when it is centralized, is unlikely to foster closer relationships either with internal or external constituents. Relationships are essentially socially constructed and culture very likely plays a significant role in its development.

Interpretation of Results

The statistical results indicate essentially strong support for the research model. In other words, this model with modifications, extensions, and refinements does provide a better understanding of how entrepreneurial firms operate and some of the key antecedents and drivers of performance. As hypothesized, and widely accepted in the literature, environmental uncertainty is an important variable that triggers a number of activities that make a significant difference to the functioning of the firm. The contribution we make in this research is to show that firms that react positively to change positively impact financial performance. We link environmental uncertainty to strategic business activities, which in turn impact decision making style as well as relationships. Relationships are critical to obtain coordination, cooperation, and collaboration, and are fundamental to being innovative, and the results of our study show relationships to be an important link between strategic responses and strategic outcomes. Finally, environmental uncertainty, strategic business activities, and strategic orientation and are the key drivers of a firm's financial performance.

We notice that the path coefficient between strategic orientation and performance is significant at the $p<.05$ level. We expected a stronger relationship and our assessment is that the model is somewhat underspecified. While strategic orientation is an important component of strategy, the missing variable is strategic implementation which we did not include, and should have. We believe that some items that measure actual strategic implementation would have shown a far stronger link with performance.

Limitations

Being a cross-sectional study and relying on single respondents creates its own set of challenges because the study makes the unlikely assumption that constructs in the model are stable and unchanging. In addition, in cross-sectional studies it is difficult to accurately assess cause-effect relationships. The firms that participated in this survey were both from the manufacturing and service sectors. As the sample had considerable variety, there is always the possibility that it may create confounding effects and impact results in unpredictable ways. While single industry studies have their benefits, it is usually very difficult to get a large enough sample of small business owners and entrepreneurs operating in the same industry. Moreover, our interest in conducting research is to generate findings that can be generalized. For generalization of findings, we have to theorize about entrepreneurs who necessarily operate in a wide variety of settings and different operating conditions.

All firms in the survey did not reveal performance details, and to that extent created a bias in the results as missing data were averaged. It is difficult to assess the accuracy and reliability of self-reported performance data, especially perceptual data, although there is evidence of strong correlation between self-reported and archival data in the area of performance. While this is not surprising in these types of surveys, there is always the risk of some unreliable data when it is self-reported and the consequent systematic bias, and the possible lack of participation by firms that may have poorer performance (Wiklund, 1999).

CONCLUSION

We do conclude, based on the results of this research, that environmental uncertainty is a key antecedent that firms face and have to address. We see that uncertainty can be a positive factor and frequently acts as a trigger for strategic business activities which in turn impacts decision making style and relationships. Relationships are with internal constituents and are also associated with close relationships with customers and suppliers. The combination of strategic business activities, decision making style, and close relationships helps to create a strategic orientation that is essentially proactive, customer-oriented, and responsive. Finally, a firm's financial performance is positively impacted by environmental uncertainty, strategic business activities, and strategic orientation. While uncertainty may have been traditionally associated with a negative effect on performance, we show in this research that environmental uncertainty can have significant positive results. Small firms focus more on being innovative through cooperative relationships, and the innovativeness is clear when the data suggests that small businesses produce 13 times more patents than larger firms (Forbes/Entrepreneurs).

It is well known to researchers and mentioned several times in this paper, that organizations are complex entities. Organizations have complex and interrelated constructs that affect them. To be able to model the various components of business operations and to make accurate assessments of the determinants of performance are always a challenge. There are two important areas for researchers to consider when researching small firms. One is longitudinal studies so that causality as well as the impact of changes in certain predictor variables can be appropriately measured. Certain complex constructs like environmental uncertainty, strategic business activities, relationships, and strategic orientation, and their impact on performance can be better understood longitudinally. Two is to develop more complex ecological models that include a larger set and subset of variables. For example, in this research the influence of culture, reputation, and a host of other important variable have been excluded making the model more parsimonious and somewhat incomplete.

A number of variables directly and indirectly affect performance. The challenge in researching entrepreneurial businesses is to create a series of sub-models and then attempt to integrate them into larger more complex ecological models. The sub-models will need to look into entrepreneurial cognition (including metacognition), the effects of environmental dynamism and munificence, entry barriers and rivalry, innovativeness, organizational flexibility, marketing effectiveness, product-market scope, differentiation, cost focus, resource availability and a host of other variables. The scope and scale of research in understanding small firms is considerable and the future of research in this area is indeed very exciting. What our research suggests is that business owners should accept environmental uncertainty as not only inevitable, but as a force for good forcing firms to acknowledge change and adapt their firms accordingly. A consequence of uncertainty is the fact that it requires firms to undertake strategic business activities in order to be responsive to its customers and competitors. It also requires firms to develop and sustain relationships that are critical to its survival and well-being. Business activities and relationships are essential to creating competitive advantage and a strategic orientation on how to compete. The way strategic orientation has been conceptualized in this research is an orientation that is proactive, innovative, customer-oriented, and solution-driven. This research points out to the fact that competing is a complex and dynamic process and this research is attempting to understand that process a little better.

ENDNOTES

****1. A version of this paper was presented at the 2016 Academy of Management Meeting**

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