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# The Roles of Firm Strategy and Intangible Organizational Elements as Determinants of Performance

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## EXECUTIVE SUMMARY

*This paper examines the roles of firm strategy and intangible organizational elements in determining performance. It does this by developing two orthogonal but additive models. The first is a model that includes two types of firm strategies as well as activities that firms undertake to address their competitive environments, and the impact of these on performance. Strategic activities include organizational responsiveness, product market and defensive strategies, and a cost focus. The second model is the role of intangible organizational elements and their impact on firm performance. Intangible organizational elements consist of organizational culture, competitor and customer orientations, information generation and interpretation, innovativeness, and reputation. Using representative models for each perspective, we find both models are significant determinants of firm performance. Using path analysis, we test the models on a sample of 163 small and medium sized entrepreneurial firms. We also test a third integrated model that combines the two partial models. The integrated model explains .320 of the variance compared to .230 and .288 of the two partial models. However, the bulk of the explained variance on performance, over 90%, in the integrated model is from intangible organizational elements, suggesting that unique, firm-specific resources are the major determinants of performance. The conclusion section discusses the implications of the research findings and directions for future research. The limitations of this research are also highlighted.*

Keywords: Firm strategy, Intangible organizational elements, Determinants of performance

## INTRODUCTION

The focus of this research is entrepreneurship and the activities that entrepreneurs undertake to impact performance. In a broader vein, the field of entrepreneurship has benefited from a significant body of research and there are distinct streams within the area. Research on entrepreneurs and entrepreneurship can be divided into three broad categories (Stevenson & Jarillo, 1990): (1) what happens when entrepreneurs act; (2) why they act; and (3) how they act. In the first category, the result of the actions of entrepreneurs is the focus of economists like Schumpeter (1934), Kirzner (1973, 1979) and Casson (1982). The second, a sociological/psychological approach, has been followed, among others, by McClelland (1961), Collins and Moore (1964), and Haynie and Shepherd, 2009. This approach places emphasis on the “entrepreneur as an individual and on the idea that individual human beings – with their background, environment, goals, values, and motivations – are the real objects of analysis” (Stevenson & Jarillo, 1990, p. 18). The third category, examines how entrepreneurs act and the implication of their actions on performance. The area central to our research is an examination of the third category – to understand how they act in implementing business strategies and the effort they put in to develop intangible organizational resources.

In attempting to assess the determinants of performance, we approach the research from two perspectives. The first is a business strategy perspective that examines how an organization responds to its competitive environment, its strategic intent, its focus on cost and efficiency, and the strategies it implements. The second is a resource-based perspective that studies the role of intangible organizational elements. The principal intangibles are organizational culture and reputation, along with customer and competitor orientations, the ability to generate and interpret information, and the capacity to be innovative.

In studying intangible organizational elements, we examine the resource-based view (RBV) from a requisite variety perspective (Ashby, 1956). In order for a firm not to get overwhelmed by the demands made on it by its competitive environment, it must possess sufficient variety. By developing sufficient intangible organizational elements and in

combination with strategic options that it can exercise, its chances of developing variety are increased, thereby increasing its ability to both survive and prosper. Our attempt here is to use the RBV viewed from a law of requisite variety perspective to examine intangible organizational elements and to assess their impact on strategy.

## **FIRM STRATEGY AND PERFORMANCE**

The first model we develop is one where we study the impact of a firm's strategy on performance. There is generally wide agreement among management scholars about the components of firm strategy; there, however, is still discussion about the instrumentality of these different components. What are the initial variables and what are the variables that follow is the difficulty in modeling accurately. What is clear is that entrepreneurs and managers respond to the demands of the external environment continually, instituting different responses based on their assessment of the environment and on their repertoire of competencies. Researchers have found that responding quickly and the speed of decision making impacts subsequent performance (Baum & Wally, 2003). Organizational responsiveness is a firm's ability to respond quickly to both customers' needs and changes initiated by competitors (Kohli, Jaworski, & Kumar, 1993; Hult, Ketchen, & Slater, 2005).

Responding quickly, however, will be insufficient unless a firm is able to respond effectively. Part of an effective response is to develop and implement new operating procedures relative to competitors, to emphasize efficiency and to be more efficient relative to competitors (Vorhies, Morgan, & Autry, 2009). The ability to respond effectively and efficiently is heightened if this is part of a cost focus. A cost focus creates a platform to have either a proactive intent or to be defensive. A proactive intent is the search for big and bold opportunities, the ability to pursue new projects, the intention to introduce new brands, and to move proactively to take a lead (Lukas, Tan, & Hult, 2001). A proactive intent is the basis for allowing a firm to execute a product market strategy (Vorhies, Morgan, & Autry, 2009) that consists of serving a more diverse set of customers relative to competitors, offering a wider range of services compared to competitors, and developing and serving specialized market niches.

An alternative to a proactive approach is for a firm to pursue a defensive strategy if the competitive environment so demands it. A defensive strategy is one where considerable caution and care is exercised (Lukas, Tan, & Hult, 2001). It would include emphasizing careful analysis, using planning techniques, relying on information systems, focusing on efficiency, and instituting cost control systems. Instead of presenting formal hypotheses, we test the hypothesized paths in the model. Here we test the model to study the impact of the strategy constructs on performance. Our understanding of performance is based on the work of a number of scholars (Lukas, Tan, & Hult, 2001; Morgan, Vorhies, & Mason, 2009; Powell, 1995; Zhou, Brown, Dev, & Agarwal, 2007). These scholars assess performance in terms of various kinds of returns (ROA, ROI, and ROS), sales growth, overall performance, competitive position, performance relative to competitors, and performance based on internal plans and standards.

## **INTANGIBLE ORGANIZATIONAL ELEMENTS AND PERFORMANCE**

The second model we develop in this paper is the role of intangible organizational elements and their impact on performance. Much of successful strategy implementation is predicated upon specialized and unique resources that firms have built over a period of time. This is the essence of the resource-based view (RBV). The RBV has been developed conceptually and theoretically by a number of scholars (Aharoni, 1993; Amit & Schoemaker, 1993; Barney, 1986a, 1986b, 1991; Black & Boal, 1994; Dierickx & Cool, 1989; Mahoney & Pandian, 1992), many of whom have made significant contributions to the concept. The essence of the RBV is for resources to possess certain attributes like being valuable, rare, inimitable and non-substitutable. While these are essential adjectives, they are exceedingly hard to measure. Indeed, the empirical work, with a few exceptions (see the work of Hall, 1992, 1993; Miller & Shamsie, 1996; Wade & Hulland, 2004) has lagged behind theoretical work in the area of RBV. The difficulties in theorizing, operationalizing and measuring different aspect of the RBV are considerable.

Our attempt here is to use the RBV perspective to examine intangible organizational elements and to assess their impact on strategy. Not only are resources required to be unique and rare in order to attain competitive advantage, but they need to possess sufficient variety. Ashby (1956) developed the law of requisite variety that has provided a very useful explanation and has been widely used. "With respect to organizations, the law indicates that a firm must possess variety (i.e., potential actions) equal to or greater than the variety in its environment. If an organization has less than its requisite variety,

environmental ‘disturbances’ and ‘difficulties’ will overwhelm the organization and cause it to go out of control” (Miles, Snow, & Sharfman, 1993, p. 165). In other words, a firm’s ability to successfully strategize is closely dependent on its stock and quality of resources, or its intangible organizational elements. The sum total of its resources and strategic abilities, according to the law of requisite variety, must be equal to or greater than the variety in the firm’s environment.

Tangible and intangible elements have a crucial role in developing a firm’s competitive advantage and creating value (Carmeli & Tishler, 2004). The important difference, however, is that “as the industrial society becomes a services society, where knowledge and information are the mainstays of business growth, the importance of intangible resources will come increasingly to the forefront” (Canals, 2000, p. 118). A key intangible element is organizational culture, which is the starting point of our second model. Organizational culture refers to the “underlying values, beliefs, and principles that serve as a foundation for the organization’s management system as well as the set of management practices and behaviors that both exemplify and reinforce those basic principles (Denison, 1990, p. 2). Barney (1986b) makes the case that organizational culture can be a source of competitive advantage. Others assert that culture can be at the heart of an organization’s endeavors to improve its effectiveness and the quality of its products and services (Klein, Masi, & Weidner, 1995). Organization culture includes high employee involvement, and commitment, plus shared values and symbols, as well as clear and well-articulated goals (Carmeli & Tishler, 2004).

We would argue that organizational culture directly impacts customer orientation, as being aware of customers’ needs and other signals from the market is a deep-rooted culture in successful organizations. Customer orientation is the process of understanding customer needs and wants (Narver & Slater, 1990). Customer orientation is addressed by focusing on customer satisfaction, value, needs, and commitment, and rewarding employees on these metrics (Hult, Ketchen, & Slater, 2005; Zhou, Brown, Dev, & Agarwal, 2007). However, to be customer oriented, information has to be generated on customers’ needs, wants and satisfaction levels, and the generated information needs to be interpreted appropriately. Information generation is to quickly detect changes in customers’ preferences, and information interpretation is for wide dissemination of data, and to develop a shared meaning across the organization (Hult, Ketchen, & Slater, 2005).

An appropriate organizational culture should encourage, create and sustain an environment of innovativeness. Innovativeness is when employees actively seek to create innovative product and service ideas, and are in an organization where innovations are encouraged and readily accepted (Saxton & Dollinger, 2004). Organizational culture should directly and significantly impact a firm’s reputation which we argue is perhaps the most critical driver of performance. While there is considerable literature on reputation, we use the concept suggested by Saxton & Dollinger (2004) which includes the experience, capability and integrity of the top management team, effective use of assets, value created, quality and reliability of the product/service, financial soundness, environmental responsibility, and other similar values. The two intangible organizational elements that significantly and positively impact performance are organizational culture and reputation.

## **METHODOLOGY**

### **Research Setting.**

A total of 163 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.

### **Firm Strategy and Aggregate Performance.**

The first of our two models examined the relationship between the five dimensions of firm strategy and performance. The correlations provide an initial test and support for the hypothesized paths. All variables were analyzed for validity and reliability following Anderson and Gerbing (1988). Each latent construct was 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.

**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 .712 to .877. All of these values were within acceptable values. The factor loading values were above .40, as recommended by Rummell (1967). On running the path analysis we found eight of the eleven hypothesized paths in the model had statistically significant coefficients.

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 good 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 a good fit of the data with the hypothesized model.

The path analysis established the strengths of the relationships among the latent constructs as hypothesized and provided support for a majority of the hypotheses. We evaluated the overall fit of the path model using parameters that were used to assess the fit statistics of the measurement model. Our research model had the following fit statistics. The  $\chi^2_{(4)}$  was 4.555 ( $p=.336$ ). A non-significant  $\chi^2$  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 .0302, .0302, and 0.0294 respectively. The goodness of fit index (GFI) and the adjusted goodness of fit index (AGFI) were .991 and .951 respectively. The fit statistics for the tested model indicate an excellent fit to the data. The purpose of developing and testing this model was to test the impact of firm strategies on performance with actual entrepreneurs. While there is overall support for the model, three of the paths were not significant. These are paths from organizational responsiveness to product market strategy ( $\gamma_{41}$ ), from proactive intent to product market strategy ( $\beta_{42}$ ), proactive intent to aggregate performance ( $\beta_{52}$ ). What we found of interest was the explained variance, especially the explained variance for performance. The firm strategy model explained performance to the extent of 23%, which is significant as there are many other organizational, strategic, and environmental factors that can affect and impact performance. The  $R^2$  of the intervening variables ranged from .122 to .358.

### **Intangible Organizational Elements and Aggregate Performance.**

Our second model examined the impact of intangible organizational variables on aggregate performance. We followed similar procedures in undertaking factor analysis and scale purification as we did for the first model. The correlations provide an initial test and support for the hypotheses. All variables were analyzed for validity and reliability following Anderson and Gerbing (1988).

**Analysis.** Here too path analysis was used to test the causal model to the extent the observed variables were representative of the latent constructs of the proposed 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 ranged from .750 to .931. All of these values were within acceptable values. The factor loading values were above .40, as recommended by Rummell (1967).

On running the path analysis we found 17 of the 19 hypothesized paths in the model had statistically significant coefficients (two of the 17 path coefficients were, it should be noted, significant at  $p < 0.10$  level). The path analysis established the strengths of the relationships among the latent constructs as hypothesized and provided support for a majority of the hypotheses.

We evaluated the overall fit of the path model using parameters that were used to assess the fit statistics of the measurement model. Our research model had the following fit statistics. The  $\chi^2_{(8)}$  was 11.096 ( $p=.196$ ). A non-significant  $\chi^2$ , as mentioned before, 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 .0368, .0371, and .0483 respectively. The GFI and the AGFI were .983 and .925 respectively. The fit statistics for the tested model indicate an excellent fit to the data.

The purpose of developing and testing the second model was to measure and test intangible organizational elements and their impact on performance. While there is overall support for the model, however, two of the paths were not significant. These are paths from organizational culture to information interpretation ( $\gamma_{31}$ ) and from competitor orientation to reputation ( $\gamma_{52}$ ).

### **Interpretation of Results**

First we discuss the results of the model that assesses the impact of firm strategy on aggregate performance. In handling its competitive environment, a firm attempts to respond appropriately. We see a link between organizational responsiveness (Hult, Ketchen, & Slater, 2005) and cost focus (Vorhies, Morgan, & Autry, 2009), and between organizational responsiveness and defensive strategy (Lukas, Tan & Hult, 2001). The expected path between organizational responsiveness and product market strategy (Vorhies, Morgan, & Autry, 2009) is not there, which would suggest that cost focus mediated between organizational responsiveness and product market strategy. A cost focus, with an emphasis on efficiency, developing of new operating procedures, and delivering at low cost, is central to being competitive as cost focus has direct and significant paths to product market strategies, defensive strategies and proactive intent. Both product market strategy and defensive strategy impacted aggregate performance positively and significantly. Proactive intent (Lukas, Tan, & Hult, 2001), as a variable, does not seem to have a role and this could be due to measurement problems or an under-specified model.

Next, we briefly comment on the second model that assesses the impact of intangible organizational elements on aggregate performance. Most of the hypothesized paths in the model are supported. We do see that organizational culture does not impact information interpretation, and that reputation is not impacted by competitor orientation. We also have two paths that are significant at  $p < .10$ , which would suggest relatively weak relationships. These are the paths between customer orientation and innovativeness ( $\beta_{41}$ ) and between information interpretation and reputation ( $\beta_{53}$ ). It is important to treat these two paths cautiously as the significance levels are low.

While the first model (firm strategy and aggregate performance) explained performance to the extent of 23%, the second model (intangible organizational elements and aggregate performance) explained variance of performance to the extent of 28.8%. The  $R^2$  of the intervening variables ranged from .191 to .626.

## **SUMMARY OF RESULTS AND DISCUSSION**

### **Integrated Model.**

The previous section provided information on the two models we tested. Both concepts, firm strategy and performance, and intangible organizational elements and performance, are considered to be integral to the activities and actions of firms. While we have tested them as separate models, they are conceptually part of the more complex entrepreneurial activities and strategic processes. We were interested in examining the impact of firm strategy on aggregate performance and we found that it explained 23% of the variance of performance. We also found that intangible organizational elements explained nearly 29% of the variance of aggregate performance. We then tested a third model that integrated metacognition and entrepreneurial orientation into a single model and found the integrated model to be significant. To test the integrated model, we used multiple regression analysis using the stepwise method. Aggregate performance was regressed on product market strategy, proactive intent, defensive strategy, organizational culture and reputation. The first three variables were from firm strategy model and the last two from the of the intangible organizational elements model. Three of the five independent variables were significant in the multiple regression analysis, and they were product market strategy, organizational culture and reputation. What is of interest is that the integrated model explained a larger portion of firm performance with a unique  $R^2$  of .320. The  $R^2$  of the integrated model, while smaller than the sum of the  $R^2$  of the two earlier partial models (which added up to .518), is still very significant. The 32% of the explained variance was decomposed as follows: of the three independent variables, (1) reputation explained 25% of the variance, (2) organizational culture explained an additional 4.2% of the variance, and (3) product market strategy explained only 2.8% of the variance.

Any model or integrated model that explains about 32% of the variance, one would concede, provides a useful explanation of a phenomenon. We are able to support the idea that the two important concepts of entrepreneurship, firm strategy and intangible organizational elements, appear to independently contribute to aggregate performance. Each of the two sub-

models is significant whether taken alone or together. The results confirm the importance (as well as the independence) of the two different and separate perspective of entrepreneurship. As the  $R^2$  for each model indicates, the two sets of factors, when analyzed separately, contribute about equally in impacting and explaining firm performance. However, the results of the integrated model suggest that intangible organizational elements play a far more significant role and provide the most critical explanation of firm performance, explaining over 90% of the variance. Firm strategies, on the other hand, explains less than 10% of the variance on performance in the integrated model. In other words, if firms focus on the internal organizational elements and emphasize the development of reputation, as the model suggests, the impact on performance will be significant.

## CONCLUSION AND LIMITATIONS

Entrepreneurship research is a complex field which has numerous variables, many of which are difficult to isolate and measure accurately. Nevertheless, it is a crucial human activity that needs to be studied and this research is an attempt to contribute to the growing field. There are questions that researchers and scholars ask about entrepreneurs including, among others, what drives entrepreneurs, what motivates them, how do they generate and process information, how do they assess risk, and in what ways are entrepreneurs different from non-entrepreneurs? How do entrepreneurs develop a culture that is oriented toward both customers and competitors, how do they collect relevant information and develop appropriate techniques to interpret correctly? How do entrepreneurs remain innovative and inculcate a culture of openness, innovativeness and sharing? Finally, how do entrepreneurs create and maintain a reputation which, as we see, has the greatest impact on performance? These are some of the questions we attempt to highlight and examine in this research.

The model that examines the impact of firm strategy on performance, we see, has a smaller role, compared to the role reputation and culture play. Consequently, we see the development of intangible organizational capabilities as a critical necessary condition for a firm to succeed. These internal capabilities give the firm the required variety and the wherewithal to execute desired strategies, including product market and defensive strategies. The ability to formulate and implement strategies is the sufficient condition for successful performance. If the necessary conditions are insufficiently developed, then the sufficient conditions are likely to fail or be sub-optimal. This is in line with the overarching philosophy of the resource-based view (Aharoni, 1993; Amit & Schoemaker, 1993; Barney, 1986a, 1986b, 1991; Black & Boal, 1994; Dierickx & Cool, 1989; Mahoney & Pandian, 1992). We believe that the models, with further refinements and improvements, will help provide more information and useful insights to researchers into the mind of the entrepreneur. We have integrated the two partial or sub-models to provide an additional level of explanation. Although we have presented the two models as independent and orthogonal constructs, in reality, the two are additive and supplementary in nature. In addition, since the firms in our sample were from widely different industries and businesses, it may be useful to partition the data to study entrepreneurs by age, education, technology employed, industry, and region to tease out more details. Finally, it would be imperative to move beyond analyzing variance through decomposing it and to consider various interactions (Hansen & Wernerfelt, 1989), and to undertake longitudinal studies.

There are important implications from an entrepreneurial/managerial point of view. What is evident from these results is that intangible organizational elements are absolutely critical for high levels of performance. The contributions from firm level strategies and other strategic activities are fewer compared to the contributions from developing intangible organizational elements. It is through the sustained development of intangibles that success is achieved. We do see that the largest proportion of explained variance is from intangible internal factors, and strategies play a relatively smaller role. In other words, the ability to cope with changes and demands from the environment emanates principally from a firm's internal resources, buttressing the crucial contribution of the RBV. The two most important determinants of performance are organizational culture and reputation. Entrepreneurs and managers would be well-served by developing these two important constructs. Other important intangible organizational elements are customer and competitor orientations, the ability to generate and interpret information, and an innovative capability. If an organization has sufficiently developed intangibles, especially culture and reputation, its ability to formulate and implement effective strategies is considerably heightened. Intangibles combined with strategic capabilities should give organizations sufficient variety to cope with changes and demands from the competitive environment.

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