EFFECTS OF HUMAN AND ORGANIZATIONAL RESOURCES ON THE STRATEGIES OF SMALL FIRMS IN NIGERIA.

By

Iyiegbuniwe Peter
Professor
Department of Business Administration
University of Lagos
Nigeria

ABSTRACT

Smaller less glamorous firms are more prevalent in Nigerian economy than high technology companies. These small firms are known for their inability to erect barriers to imitation, making the development of competitive advantage difficult. In this study efforts are to examine the relationship between firm resources and firm strategies. Based on the contention that the quality of a firm's strategy cannot be judged independently of the firm resources upon which it is based the relationship between firm resources and strategies is examined in a cross-section of over 250 small firms. Findings indicate that small less glamorous firms should follow strategies that bring them closer to their customers, rather than innovation strategies that may be more appropriate for their high technology counterparts.

INTRODUCTION

Small and medium scale firms in Nigeria have been facing dramatic shifts in their competitive landscape, occasioned by changes in both local and international competition and new technologies. These changes directly influence a small firm's resource profile, strategic options and future performance. Although significant research attention have been focused on the strategies and performance of fast growth high technology firms, these firms comprise a comparatively small proportion of firms in the Nigeria economy. A dependable record from the Nigerian Bureau of Statistics and the Lagos State Ministry of Commerce show that small businesses accounted for 34% of the construction output, 54°o of the service output, 62% of trade, 31% of finance, insurance, and real estate, 25% of manufacturing and mining, and 47% of transportation and communication output. An Organization for Economic Cooperation and Development OECD (1997) synthesis report estimated that about 65% of small and

medium-sized companies in the developing countries operate in mature conventional industries, another 25% operate in mature, global industries, and only up to 10% operate in emerging niche industries such as the high technology sector (OECD, 1997).

Zahra and Bogner (2006) asserted that these small and medium scale firms compete in business sectors that are notorious for their high failure rates. They have fewer opportunities to erect barriers to imitation, which means that they typically lack the capabilities or firm resources that can lead to competitive advantage. Their continued growth or better performance as suggested by Brush & Chaganti (1998), is to develop unique bundles of resources that can distinguish their base of competition and create strategies that result in customer loyalty.

There is a general understanding arising from series of arguments that the quality of a firm's strategy cannot be judged independently of the firm resources upon which it is based (Barney & Zajac, 1994). This represents a contingency perspective, in that firm strategies are posited to fit with their corresponding internal capabilities or resources (Venkataraman & Camillas, 1994). Although much work in the entrepreneurial domain illustrating that firm strategies are contingent on certain external factors such as the environment or industry have been carried out less work has been done that examines specific internal factors and their link to firm strategy(Covin & Slevin, 1999). This paper is therefore saddled with the responsibility of filling the gap by examining the fit between firm resource profiles and strategies in small firms.

The main purpose is to study the relationship between firm resources and firm strategies. In doing this efforts are made to build on earlier studies that argue for the importance of the owner and founder of resources and organizational resources (Ropo & Hunt, 1998). This focus exclusively on two specific strategy types: quality and/customer service, and innovation, and their relationship to human and organizational resources or capital. A structural equation modelling technique is employed and this permits analysis of the relationship between resource bundles and strategy types using multiple dependent variables. Furthermore hypotheses were

developed suggesting that there are positive and significant relationships between firm resources and firm strategies. Finally, a methodology was put in place leading to analysis, findings and conclusions.

THEORETICAL FRAMEWORK AND HYPOTHESES

By utilizing unique sets of resources firms build competitive advantage. Resources are heterogeneous, and typically include all assets, capabilities, processes and knowledge controlled by a firm that enables it to conceive of and implement strategies to improve effectiveness (Barney, 1999). Small firms competing in highly populated industrial sectors may be unable to differentiate their strategies due to low barriers to entry. Furthermore, small firms may have insufficient or inaccessible resources, which may limit the range of feasible strategic alternatives (Hofer & Sandberg, 1997). In these cases, the human capital resources, such as the personal experience, connections or commitment of the entrepreneur and employees or organizational resources comprised of systems and policies may have a more direct impact on a small firm's strategic options and strategic choice. Moreover, a central premise of Penrose (1987) is that the manager's expectations and judgments will ultimately determine the firm's growth pattern. This premise is supported by Chandler and Hanks (1994), who found that firms with higher and broader levels of resource-based capabilities grew faster than those that did not.

The source of strategy in small firms is more likely to arise from human capital resources, capabilities and competencies (Hitt & Reed, 2000). Critical resources, especially in small firms, are likely to be held by the individual entrepreneur(s) or their organization (Pennings, Lee and Van Witteloostuijn, 1998). While some studies do show equivocal relationships between individual aspects of human resources and performance, overall human resources of the entrepreneur and team have a direct effect on the firm's product/market strategies (Miller and Friesen, 1984). They equally found success factors in high growth small firms including the quality of the product or service, having a good reputation with customers, the ability to respond

to customer's requests, and hard work and devotion to the business. Hence, in small firms, when human capital resources are both strong and related to customers, suppliers and service dimensions, the relationship between human resources and a strategy of quality/customer service is likely (Chandler & Hanks; 1994). Therefore, it can be hypothesized that

Hypothesis l: ***The greater the levels of human capital, the more positive its significant impact on small firm's strategy of quality customer service***

It is also suggested in a variety of studies that there are relationships between human resources and innovation strategies. Companies pursuing an innovation strategy need creative and innovative employees, to maintain contact with customers (Chandler & Hanks, 1994). Given that entrepreneurial strategy is defined by agility, creativity and continuous innovation (Covin & Slevin, 1999), it follows that stronger human resources will be associated with innovation strategies. Literature from innovation technology studies revealed that many market driven innovations result from interactions with customers (Von Hippel, 1981), while Aldrich and Zimmer (1986) found that linkages and relationships of entrepreneurs to customers were associated with the innovation process. Further, it was found that there is a strong relationship among innovation, top-management team education and functional expertise. Zahra and Bogner (2006) in their contribution propose that the decisions regarding technology investment in research and development, and product upgrades are rooted in managerial perceptions and strategies for dealing with the environment. Hence, in small firms, where top managers are responsible for strategy, it follows that human capital will be related to innovation strategies. Therefore, it is hypothesized that

Hypothesis 2: ***The greater the levels of human capital, the more positive and significant its impact on small firm's strategy of innovation.***

Organizational resources are conceived as the structure, processes and systems in organizations, which permit flows of information, training, and which motivate organizational members (Chandler and Hanks, 1994). In a related literature Ropo and Hunt (1998) considered organizational resources in small company to include the employees' expertise, systems, policies and management systems. Brush and Chaganti, (1998) went further to include financial structures, planning and control systems, culture and employee skills of the firm. Presumably management systems, skills of employees and routines are essential in reaching customers or providing superior levels of service. Efficient small firms are more capable of providing quality customer service, while those that develop human capabilities in the form of skilled employees, are better able to respond to customer and market needs (Hitt & Reed, 2000). Furthermore, a positive relationship between resource-based capabilities, measured as employees trained and having expertise in providing superior customer service, was found by Chandler and Hanks (1994). This assertion gives rise to the third hypothesis of this study.

Hypothesis 3: ***The greater the levels of organizational capital, the more positive and significant its impact on small firm's strategy of customer service.***

In conventional literature it has been argued that less structure, ambiguity and open systems encourage innovation (Kanter, 1993), paradoxically, the development of systems, routines and policies would also appear to have a positive impact on a strategy of innovation. For example, it has been suggested that innovation strategies are supported by investment in research and development, obtaining copyrights, product upgrades, and other means of intellectual capital protection (Zahra & Bogner, 2006). Competencies or higher levels of organizational resources such as training of employees and their expertise are also associated with a strategy of innovation (Chandler & Hanks, 1994). Therefore, it is hypothesised in this

study that:

Hypothesis 4:   ***The greater the levels of organizational capital, the more positive and significant its impact on small firm's strategy of innovation.***

Methodology

Data Collection Method

Data used in this study were gathered in two distinct parts. The first involved an eliciting vital information and data from 110 small ventures that were randomly identified from publicly available directories. Structured questionnaire was admitted on top managers of these firms in which 72 responded. giving a response rate of 65.45%. The second survey employed the same sampling criteria. However, in order to improve on the response rate, trade associations were identified and included in the sample. This was requested to obtain their assistance in getting a list of firms. The associations included Farm Equipment and Irrigation Associations; National Association of Poultry Farmers, and three banks involved in advancing loans to farmers.

80 questionnaires were mailed in this second data collection phase. 59 responded to the questionnaires bringing the number surveyed to 131. T-tests were performed to determine the appropriateness of pooling the data from the two phases (n=72 and n=59). No significant differences between the two samples were found on key variables including sales, total number of employees, and age of firm.

MEASURES

A: Resources

In measuring resources, a five point Likert scale ranging from *Highly Unfavorable* to *Highly Favorable* with a defined neutral anchor was used. In all cases *Highly Favorable* was numerically coded at 5.0 while the *Highly Unfavorable* anchor was coded as 1.0 implying that large numbers denote greater favourability. Resource items were identified from previous sources (Chandler & Hanks, 1994) as well as conceptual work in entrepreneurship (Vesper, 1990).

   1. *Human Resources:*

Human resources as conceived by Ropo and Hunt (1998) to comprise a broad range of

aspects of the owner-founder's achieved attributes, background in family characteristics, education, and experience, as well as attitudes, motivations, skills and goals. .A latent variable for human capital was created, this comprised of two distinctive attributes of human resources: interpersonal skills and business skills. Specific variable items for interpersonal skills were: team management, motivational skills and developing personal relationships, business skills: oral presentation skills, writing ability and problem-solving ability. All of these are attributes of the respondents who in the sample were either the owner or the senior executive of the selected firms. The individual measures comprising the latent variable were factor analyzed and checked for reliability. The scale for interpersonal skills demonstrated high internal validity with factor loadings at .73 or higher. Cronbach's alpha was .72. For business skills, factor loadings were at .62 or greater, and Cronbach's alpha was .57. Each of these alpha levels is above the acceptable threshold tor reliability (Nunnally, 1970), indicating good internal validity and reliability of the measures comprising the latent variable.

2. *Organization Resources:*

Organizational resources include systems, policies, culture and the knowledge of the organization members other than founders, as well as organizational routines and structures. Again, a latent variable called organizational capital was created comprised of three distinctive aspects of organizational resources: employee skills, financial access and organization attributes. Specific variable items for employee skills included: ability to form strategic alliances, multilingual staff, and employees with international experience. For financial access, the organization's access to debt finance and its access to equity capital were examined. Finally, for organizational attributes such as high domestic profitability, customer service capabilities, operating efficiencies, cost structures, and product and service offerings of the firm were also examined. A five-point Likert scale was used for each item. Each observed variable was factor and reliability analyzed. For employee skills, factor loadings were .79 or

higher, with a Cronbach's alpha for the variable of .84. For financial access, factor loadings were .98 or higher with a Cronbach's alpha for the variable of .82. For organizational attributes, factor loadings were .63 or higher with a Cronbach's alpha of .91.

B: Strategies

To measure the implementation strategies adopted by the firm, existing strategy measures developed by Chandler and Hanks (1994) were drawn on. While Chandler and Hanks originally examined three distinctive implementation strategies in the analysis, only two strategies, quality/customer service, and innovation showed satisfactory reliability levels. Therefore, the third strategy due to low reliability was eliminated.

3. *Quality/Customer Service Strategy:*

High quality and its commensurate customer service is a popular differentiation implementation strategy (Porter, 1995). This strategy was measured by examining four distinctive components: quality control, satisfaction of customer needs, highest quality, and superior service. The measure was factor and reliability analyzed. Factor loadings were a minimum of .74 and Cronbach's alpha was .84, well above the minimum threshold set for reliability (Nunnally, 1970).

4. *Innovation Strategy:* The firm's innovation strategy was also examined. The firm's product or service development/innovation, innovative marketing, and technological superiority were considered. The measure was factor and reliability analyzed with minimum factor loadings of .72 and a Cronbach's alpha of .64. Table 1 presents the correlation matrix for the observed independent variables and their mean, standard deviation and reliability alphas.

Table 1:Reliability and Correlation Matrix

Scale	Measure	Mean	S.D	1	2	3	4	5
Interpersonal Skills	Scale	3.55	2.19	.72a				
Business Skills	Scale	3.62	2.18	.21**	.57			
Employee Skills	Scale	3.56	4.33	.02	.02	.84		

| Financial Access | Scale | 4.01 | 3.02 | .03 | .09 | .47** | .82 | |
| Organizational Attributes | Scale | 4.19 | 5.20 | .02 | .10 | .64** | .54** | .91 |

*correlation is significant at the 0.05 (2-tailed); ** correlation is significant at the 0.01 (2-tailed); a cronbach's alpha replaces all null values

Data Analysis and Results

The Statistical Package for Social Sciences (SPSS) computer software was employed in this study for data analysis. This was used to capture the theoretical interdependencies between resources and strategies. This procedure allows for simultaneous analysis of more than one dependent variable. A latent variable was developed. These were as follows:

- For human capital, based on the two observed variables, interpersonal skills and business skills and

- For the latent variable organizational capital based on three observed variables, employee skills, financial access and organizational factors.

Latent Variables are hypothetical constructs that combine two or more observed variables. As such, indicators that measure a latent variable should exhibit convergent validity, indicated by their correlation (Nunnally, 1970). For quality/ customer service strategy and innovation strategy, the observed variables were used and to ensure that the model fits the data well, multiple fit criteria were used to rule out measuring biases inherent in the various methods. The chi-square divided by the degrees of freedom was .67, which is under the suggested ratio of 2, for the hypothesized indirect model, the p-value was .63, which is greater than the suggested .05 (Schumacker & Lomax, 1996). The model's adjusted goodness of fit was .97, indicating a good fit with the data.

Table 2
shows the multiple fit statistics for the model.

	Fit Statistics	Model	Recommended Value
	Chi-square / degree of freedom	.67	< 2.0 -
	p-value	.63	> .05 -
	Goodness of fit Index	.97	> .90 -
	Adjusted Goodness of fit index	.98	Low values (0=perfect fit)
	Root Mean Square Residual	.08	> 200 -

Table 3:
Path Coefficients and Critical Ratio: Hypothesized Model

		Path Coefficient	Critical Ratio
	Observed variables to latent variable (Human Capital)		
	Interpersonal Skills to Human Capital	1.00	N/A
	Business Skills	.22	1.31b
	Observed Variables to Latent Variable (Organizational Capital)		
	Employee Skills to Organizational Capital	.73	.8.45***
	Financial Access to Organizational Capital	.35	8.14***
	Organizational Factors to Organizational Capital	1.00	N/A
	Human Capital and Organizational Capital to Firm Strategies		
	Human Capital to Quality/Customer Service Strategy	.47	2.31**
	Human Capital to Innovation Strategy	.71	2.29*

	Organizational Capital to Quality/Customer Service Strategy	.12	3.43***
	Organizational Capital to Innovation Strategy	.01	.60

b z < .10 * z < 0.05 ** z < .01   *** z < .0

From table 3 above the path coefficients and critical ratios about the four predictions are recorded. Predictions about the specific paths in the model were made in hypotheses 1 and 2. To test these hypotheses, the path coefficients and the critical ratios were examined. In hypothesis 1 a positive and significant relationship between human capital and the firm strategy of quality/customer service was predicted. The critical ratio for this path is 2.31 indicating strong support for this hypothesis at the z < .01 level. In hypothesis 2, it was predicted that a positive and significant relationship between human capital and the firm strategy of innovation can exist. Support for this hypothesis was found as well, with the critical ratio at 2.29 and z < .05 level. For hypothesis 3, in which a positive and significant relationship between organizational capital and the firm strategy of quality/customer was predicted, the result of the analysis also found strong support with the critical ratio at 3.43 and a significant z score at the z < .001 level. In hypothesis 4, a positive and significant relationship between organizational resources and the firm strategy of innovation was predicted. This hypothesis was not supported, as the critical ratio was .60, well under the necessary criteria for support.

 DISCUSSION

The objective of this study was to examine the fit between firm resource profiles and strategies in small firms. Tests for the effects of two types of capital (i.e., human and organizational) on two types of strategies (i.e., quality/customer service and innovation) were carried out. Significant effects of both human capital and organizational capital on quality/customer service strategy were found. The effect of human capital on innovation strategy was also found to be significant. However, the relationship between organizational

capital and innovation strategy was not significant. Given the context of the study small, low growth companies, these results suggest that small companies should align their human and organizational capital to a strategy of quality/ customer service.

As is consistent with previous findings, it is expected that the human capital of the entrepreneur be related to quality/customer service strategy (Mosakowski, 1993). The ability of the small firm owner/founder to motivate employees, interact with employees and customers, and solve problems, is central in a small firm. However, the results suggest that with respect to a strategy of quality/customer service, the management team, or organizational capital is also critical. This means that firms choosing to compete using a strategy of quality or customer service should critically examine their resource profiles. Apparently, not only do the characteristics of the owner/founder matter, but the resource sets of the entire management team are important as well.

Conversely, the study found that human capital positively affects innovation strategy, but that organizational capital is not significant. It is somewhat surprised that organizational capital, such as organizational efficiencies, policies, and high level of profits was not associated with a strategy of innovation. It is possible that resources important to an innovation strategy reside in the owner/ founder such as creativity, technological expertise, rather than the organization. In addition, it is possible that for small companies pursuing innovation strategies, other resources are more crucial to strategy than are organizational resources (Zahra & Bogner, 2006).

Findings in this study contribute to the better understanding of the role of the resource base and the importance of resource deployment in the context of the small companies. The findings confirm that small firms are not merely smaller versions of big businesses, the major distinguishing characteristic being their resource poverty as opined by Mosakowoski (1993). Instead, small firms, often operating in mature, fragmented industries, such as service,

consumer products, or retail face different competitive challenges. For example, these sectors are known for their notoriously high failure rates. Small firms face severe limitations in terms of economic and technical resources, which limit their performance. Under conditions of resource constraints, the majority of small firms, operating in what Kirchhoff (1994) referred to as the economic core exhibit little capacity to pursue a high innovation strategy. The findings of this study therefore suggest that even when human resources, are adequate, the pursuit of innovation strategy may be misaligned with the generally low levels of development of organizational capital. In essence, organizational constraints may inhibit small firms in less glamorous industries, from successfully pursuing a strategy of innovation.

CONCLUSIONS

The findings from this study suggest that while small firms in Nigeria face unique challenges in crafting strategies that fit their resource bases, it is critical to match the firm's resources with its desired implementation strategy. Indeed, finding this match, while important for all firms may be more important for small firms in less glamorous industries, in that these firms are often operating in highly competitive arenas and have little ability to erect barriers to imitation and therefore obtain a competitive advantage. In addition, their resource poverty as prevalently observed in Nigeria further constrains them from acquiring the needed resources through arm's length market transactions. Therefore, small firms in Nigeria must pay critical attention to their resource strengths and match them carefully with their desired firm strategy.

The study makes an important empirical contribution by emphasizing the contingent nature of resources and strategies. The relationship between distinctive competencies and strategies is an area that has been identified as in need of further research (Chrisman, Hofer & Bauerschmidt, 1999). The findings highlight the necessity of achieving a fit between firm resources and strategies for small firms.

This study has important ramifications for managers of small firms especially in

Nigeria. Innovation strategies are often touted as the route to competitive advantage for small firms in high technology sectors. However, for small firms in less glamorous industrial sectors, a strategy of innovation does not fit as well with the firm's overall resource profile. Therefore, as tempting as a strategy of innovation may be, firms such as those in the sample are well advised to focus on the human capital of the owner/founder and pursue a strategy of quality and customer service. In other words, small firms should carefully utilize the resource strengths of their owner/founder while focusing on their customers, as this is their real competitive strength.

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