

Available online at [www.sciencedirect.com](http://www.sciencedirect.com)**ScienceDirect**

Procedia - Social and Behavioral Sciences 150 (2014) 222 – 229

**Procedia**  
Social and Behavioral Sciences

10th International Strategic Management Conference

## The Relationship between Structural Characteristics of Organization and Followed Business Strategy: An application in Denizli

Özlem Çetinkaya Bozkurt<sup>a\*</sup>, Adnan Kalkan<sup>b</sup>, Mutlu Arman<sup>c</sup><sup>a,b</sup> Mehmet Akif Ersoy University, Burdur, 15300, Turkey<sup>c</sup> Pamukkale University, Denizli, 20070, Turkey

### Abstract

Over the years, strategy and structure have represented two important constructs that captured the interest of researchers in the business field. This research explores the relationship between organizational structure and business strategy. We hypothesized that several dimensions of organizational structure (centralization, formalization, size, and complexity) would influence perceptions of prospector, defender, analyzer and reactor strategy. We retrieved the data used in this study from the Denizli Chamber of Commerce and Industry. We collected data through a survey and tested the hypotheses using some analyses.

© 2014 The Authors. Published by Elsevier Ltd. This is an open access article under the CC BY-NC-ND license (<http://creativecommons.org/licenses/by-nc-nd/3.0/>).

Peer-review under responsibility of the International Strategic Management Conference.

*Keywords:* Business Structure, Organization Size, Formalization, Centralization, Business Strategy

### 1. Introduction

Uncertainty is a major concern in the business world in which organizations are continuously striving to maximize their profit and minimize their losses. In attempting to do so, they face significant risks that necessitate sound and cautious decision making. In light of this dynamic and complex environment, strategy becomes essential in providing guidelines for business organizations, allowing them to match the level of risks that they face with the available opportunities presented (Ketinger et al., 1994). Organizational structure plays a major role in determining the locus of authority for each position within an organization, and hence is critical in the configuration of the organizational resources (Hall and Saias, 1980).

Over the years, strategy and structure have represented two important constructs that captured the interest of researchers in the business field, and have been investigated in relation to other constructs such as organizational performance. Studying strategy and structure of an organization is necessary in order to better understand these constructs at the organizational level. Chandler (1962) investigated the relationship between changes in strategies that these organizations adopted and the resulting organizational structure. Ansoff (1965), who agreed with Chandler

\* Corresponding author: Assist. Prof. Dr. Özlem Çetinkaya Bozkurt Tel. + 90-248-325-6534 fax. +90-248-325-8509

E-mail address: [ozlemcetinkaya@mehmetakif.edu.tr](mailto:ozlemcetinkaya@mehmetakif.edu.tr).

(1962), indicated that the administrative structure is responsible for satisfying the needs that organizational strategy necessitates. For many years authors have suggested that the relationship between organizational strategy and structure is reciprocal. In summary, previous researchers have provided varying views on the relationship between strategy and structure. The organizational structure has been found to impact a great number of organizational behaviors and activities. The design of organizational structure frequently determines whether an organization is adaptive to its internal and external environments, thereby influencing its competitiveness. Miller and Friesen (1978) claimed that organizations are required to adjust their structures in conjunction with other organizational strategies. Business structure influenced perceived environmental uncertainty (Leifer and Huber, 1977). A large portion of literatures (Child, 1972; Miles, Snow, Meyer and Coleman, 1978; Covin and Slevin, 1989; Miller, 1987; Miller et al, 1988; Miller, 1988; Miller, 1986; Parthasarthy and Sethi, 1992) examined the relationship between organizational structure and business strategy.

With this study the relationships between structural characteristics of business (i.e. formalization, centralization, complexity, size) and business strategy have been researched.

## **2. Literature Review And Hypotheses**

### *2.1. Organization Structure*

Researchers defined organizational structure in many different ways or perspectives. For example, Lawrence and Lorsch (1967) defined structure as some aspects of behavior that are influenced by preexisting programs and controls in organizations. An organizational structure exists for management and control purposes. It defines the work roles and how activities are grouped together (Lasher, 2005). Stroh, Northcraft, and Neale (2002) emphasized that organizational structure represents the relationships among different roles played by units within an organization. These diverse points of views of definitions indicate that the term organizational structure is not necessarily concentrated on any univocal characteristic, but rather, more likely to contain various dimensions. Bryan and Joyce (2007) argue that most organizations are designed for a past industrial age where vertical integrated structures were designed for efficient operations. These vertically integrated structures exhibit high levels of hierarchical authority and control and are more suited to a stable environment. A virtual organization structure is an emerging organizational form where employees interact with each other almost completely using telecommunication systems. A virtual organization structure allows for high levels of connectivity both among the individuals members of the organization and with the environment. From an examination of the literature on organizations, six primary dimensions of organization structure were defined: (1) specialization, (2) standardization, (3) formalization, (4) centralization, (5) configuration, (6) flexibility (Pugh et al, 1968). Damanpour (1991) offered a longer list of structural characteristics including specialization, functional differentiation, professionalism, formalization, centralization, managerial attitude toward change, managerial tenure, technological knowledge resources, administrative intensity, external communication, internal communication, and vertical differentiation, in their probe into organizational determinants. Similarly, Daft (2003) provided a list that includes formalization, specialization, standardization, hierarchy of authority, complexity, centralization, professionalism, and personnel ratios. The three dimensions of organizational structure have major implications for decision making (Fredrickson, 1986). Therefore, each of these dimensions centralization, formalization, and complexity is discussed in terms of its likely impact on the strategic process characteristics.

### *2.2. Organization Size*

Organization size is an interesting factor in that it is not only a determinant factor but also a characteristic of organizational structure. Organizational size can be defined as the scale of operations of a social system. In an organization, the scale of operations can be measured by the number of people, the value of the assets or the level of expenditure (Price, 1972). The organizational literature generally defines size in terms of number of people, either members or employees. The number of people is not always indicative of organizational size, since large organizations can have a high degree of automation and relatively few employees (Price, 1972).

### 2.3. Formalization

Structural formalization is characterized by the presence of rules and procedures that influence decision-making behavior. Formalization describes the extent to which rules, procedures, instructions, and communications are written down. The organization theory literatures primarily identify two levels of formalization: high and low. A high level of formalization is related to a mechanistic structure, whereas a low level of formalization is related to an organic structure (Nahm, Vonderembse and Koufteros, 2003). Strategic planning systems are a clear attempt to formalize decision making at even the highest levels (Fredrickson, 1986).

### 2.4. Centralization

Centralization emphasizes the locus of decision making (Pugh et al., 1968). It determines the authority which makes legitimate decisions that affect the organization. The process of decision making characterized by a top-down mechanism and a wide discussion based on networking results in a mechanistic and organic structure of organization, respectively (Daft, 2003; Walton, 1981). Centralization refers to the hierarchical level that has authority to make a decision (Ferrell and Skinner, 1988). Centralization may cause a reduction in the production of creative solutions and hinder interdepartmental communication as well as the frequent circulation and sharing of ideas (Souitaris, 2001) due to the existence of time-consuming formal communication channels (Pertusa-Ortega et al., 2010).

### 2.5. Complexity

Structural complexity also has an impact on the role that goals play in the strategic decision process (Fredrickson, 1986). For example, Lawrence and Lorsch (1967) reported that a high level of complexity resulted in different goal orientations across departments. According to Robbins (1990) and Fredrickson (1986), complexity refers to the degree of differentiation that exists within an organization.

### 2.6. Business Strategy

Strategy is the outcome of decisions made to guide an organization with respect to environment, structure and processes that influence its organizational performance. Abundant literature has examined strategy in the organizational context, and significant contributions to the understanding of business strategy have been done over the last decades (e.g., Miles and Snow, 1978; Porter, 1985; Venkatraman, 1989), which shaped the research in this area. There are several typologies. According to Zahra and Pearce (1990) and Smith et al. (1989), the most popular typology is Miles and Snow's. Miles and Snow's typology consists of four types of business strategy defined as *prospector*, *defender*, *analyzer* and *reactor* (Croteau and Bergeron, 2001: 78-79). If management does not select one of these strategies, then the organization will be slow to respond to opportunities and probably show an ineffective performance in its sector (Hambrick, 1983: 8).

Organizations supporting the prospector strategy wish to have access to the largest possible market. They are characterized by their repeated efforts to innovate and bring changes in their industry. Organizations favoring the defender strategy have a restricted market and stress production efficiency. They emphasize the excellence of their products, the quality of their services and their lower prices. Organizations implementing the analyzer strategy share both prospector and defender characteristics, but in moderation. They seek to be first to introduce some new products, but are satisfied to remain in second place with certain products that offer a good quality/price ratio. Finally, organizations supporting the reactor strategy ignore new opportunities, and cannot maintain markets already acquired or take true risks (Croteau and Bergeron, 2001: 78-79).

## 3. Methodology

### 3.1. Research Goal

In this survey we aim to identify the relationships between structural characteristics of organization (formalization, centralization, complexity and size) and business strategy. To test the hypotheses, a field survey using questionnaires will be conducted. In this study, respondents were asked to rate on five-point Likert scales (1: certainly disagree, .....,

5: certainly agree). A field survey using questionnaires will be conducted for analysis. In the preparation of the questionnaire, the scale of which validity and reliability was tested before was used. The survey of this study will be conducted on middle and senior managers of firms operating in textile industry in Denizli, Turkey. Firms will be contacted via face to face meeting and asked to participate in survey. Data obtained from questionnaires will be analyzed through the SPSS statistical packet program and tested. In the light of the literature, we argue that the relationships between structural characteristics of organization and business strategy and propose the hypotheses following:

- Hypothesis 1: There is a negative relationship between structural complexity and prospector strategy.*
- Hypothesis 2: There is a negative relationship between structural complexity and reactor strategy.*
- Hypothesis 3: There is a positive relationship between structural complexity and defender strategy.*
- Hypothesis 4: There is a negative relationship between centralization and prospector strategy.*
- Hypothesis 5: There is a positive relationship between centralization and reactor strategy.*
- Hypothesis 6: There is a positive relationship between centralization and defender strategy.*

### 3.2. Sample and Data Collection

In this study, a field survey using questionnaires were conducted for analysis. Firms operating in textile companies sectors in Denizli were chosen as the research population. Randomly selected 70 textile companies were taken as the sample of the research. The number of textile companies registered to Denizli Chamber of Commerce and Industry is 400 (population) in Denizli 2014. 300 firms were contacted via email or phone and informed about the research. However 70 firms accepted to participate in and fill out the research questionnaire. Analysis has been carried out using data which were obtained from the textile firms in Denizli by using a questionnaire form. Questionnaires were subjected to respondents by interviewing face to face. Data obtained from those 70 questionnaires were analyzed through the SPSS 20.0 statistical program and tested.

The question items were developed after a thorough review of literature related on organization size, organization formalization, organization centralization and organization complexity such as Tung (1979), Pertusa-Ortega, Zaragoza-Saez and Claver-Cortes (2010), Matías-Reche, García-Morales and Rueda-Manzanares (2008). We used an adaptation of a scale to measure the degree of centralization developed by Pugh, Hickson, Hinings and Turner (1968) and Morrison and Roth (1993). Based on the scales for organization complexity proposed by Pugh et al. (1968) and Dewar and Hage (1978), Schminke et al. 2002. We used a scale to measure of organization size developed by Child (1973) and Kimberly (1976). In this study the scales for business strategies (Croteau ve Bergeron, 2001) were used.

### 3.3. Analyses and Results

First the *Descriptive Statistics* test was applied in order to obtain descriptive information about textile companies. The values obtained from the test are given in Table 1.

Table 1. Descriptive Statistics for Textile Companies

Number of Employees	1-10 20%	11-50 31.4%	51-100 10%	101-150 14.3%	151-200 2.9%	201-250 4.3%	>250 17.1%
Sector of Firms	Manufacturing 78.6%	Trade 15.7%	Service 5.7%				
Education Level	Primary School 5.7%	Secondary School 12.9%	High School 27.1%	Undergraduate 11.4%	Graduate 40%	Post Graduate 2.9%	
Working Time in Sector for Firms	1-5 years 17.1%	6-10 years 8.6%	11-15 years 15.7%	16-20 years 31.4%	>20 years 27.1%		
Status for Manager	General Man. 21.4%	Establisher 35.7%	Finance Man. 10%	Marketing Man. 7.1%	Personnel Man. 14.3%		

Cronbach’s alpha is 0.897 and Cronbach’s alpha based on standardized items is 0.923 for reliability statistics. Alpha coefficients obtained were accepted because they were higher than 0.50, as defined by Bagozzi and Yi (1988), and 0.70 as defined by Nunnally (1978), respectively.

Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy is 0.762 and Sig. is 0.000. KMO value is greater than 0.50. Therefore data set is suitable for factor analysis. The cumulative percent in rotation sums of squared loadings is 72.607. This result shows that four factors resulted in factor analysis explained 72.607 % of the total variance.

Table 2. Rotated Component Matrix

Factors	1	2	3	4	5	Cronbach Alpha
Prospector Strategy	0.895					0.933
	0.856					
	0.847					
	0.840					
	0.827					
Structural Complexity	0.749					0.923
		0.897				
		0.880				
		0.828				
		0.815				
Reactor Strategy		0.792				0.683
		0.716				
			0.826			
Defender Strategy			0.666			0.673
			0.613			
				0.860		
Centralization				0.611		0.723
				0.605		
					0.775	
					0.668	
					0.510	

Extraction Method: Principal Component Analysis.  
 Rotation Method: Varimax with Kaiser Normalization.  
 a. Rotation converged in 5 iterations.

The Pearson correlation was used to examine the relations between the variables. The results show that all the variables correlate with the firm performance (Table 3 ).

Table 3. Pearson Correlation Results for Structural Characteristics of Organization and Business Strategies Followed by Organizations

Variables	PS	RS	DS	SC	CN
Prospector Strategy (PS)	1	0.180	-0.162	-0.434*	-0.158*
Reactor Strategy (RS)	0.180	1	0.172	-0.133*	0.151*
	0.000		0.002	0.000	0.002
Defender Strategy (DS)	0.162	0.172	1	0.121*	0.131**
	0.000	0.002		0.002	0.002
Structural Complexity (SC)	-0.434*	-0.133*	0.121*	1	-0.093**
	0.000	0.000	0.002		0.002
Centralization (CN)	-0.158*	0.151*	0.131**	-0.093**	1
	0.002	0.002	0.002	0.002	

Pearson Correlation and Significance  
 \*\* Correlation is significant at the 0.01 level (2-tailed)  
 \*Correlation is significant at the 0.05 level (2-tailed)

The results of correlation analyses belonging to complexity, centralization, prospector strategy, reactor strategy and defender strategy were shown schematically in a collective manner in Figure 1 below. The relationships accepted were shown by arrows with thick lines.

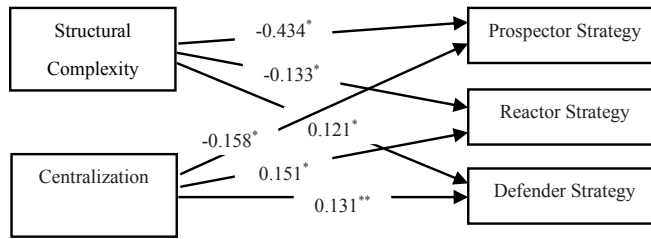


Figure 1. Conceptual Model Linking Human Capital, Social Capital, Financial Capital and Performance

*Hypothesis 1: There is a negative relationship between structural complexity and prospector strategy.*

*Hypothesis 2: There is a negative relationship between structural complexity and reactor strategy.*

*Hypothesis 3: There is a positive relationship between structural complexity and defender strategy.*

*Hypothesis 4: There is a negative relationship between centralization and prospector strategy.*

*Hypothesis 5: There is a positive relationship between centralization and reactor strategy.*

*Hypothesis 6: There is a positive relationship between centralization and defender strategy.*

#### 4. Conclusion

This paper reports the results of a study that examined the relationships between structural characteristics of organization and business strategy among a sample of 70 in textile firms in Denizli. Very few studies have examined the relationships between structural characteristics of organization and business strategy among Turkish firms. Specifically, the study examined the relationships between structural characteristics of organization i.e. formalization, centralization, complexity, size and business strategy. According to the literature review it was determined that there is a relationship between the structural characteristics of organization and business strategies followed by organizations. Two structural characteristics of organization called complexity and centralization are related with the three business strategies called prospector, reactor and defender.

According to Fredrickson (1986) propositions emerge that describe how the characteristics of an organization’s strategic decision process are affected by its structure. Also discussed are the patterns of strategic process characteristics that are likely to be associated with different types of structures.

Olson, Slater and Hult (2005) adopting a contingency perspective, the authors present and test a fit-as-moderation model that posits that overall firm performance is influenced by how well the marketing organization's structural characteristics (i.e., formalization, centralization, and specialization) and strategic behavioral emphases (i.e., customer, competitor, innovation, and cost control) complement alternative business strategies (i.e., prospector, analyzer, low-cost defender, and differentiated defender).

Claver-Cortés et al. (2012) examines the characteristics of organizational structure that relate to hybrid competitive strategies. They find reveal that hybrid competitive strategy influences firm performance positively. Similarly, organizational complexity and the existence of formalization positively influence hybrid competitive

strategy, whereas centralization has a negative influence. Organizational structure an indirect one, through hybrid competitive strategy.

The contribution of this paper should be discussed with respect to the progress made in methodological and empirical knowledge concerning organization formalization, centralization, complexity, size and business strategies textile firms in Denizli.

## References

- Ansoff, H.I. (1965), *Corporate Strategy*, McGraw-Hill, New York.
- Bagozzi, R. P. and Yi, Y. (1988), on the evaluation of structural equation models, *Journal of the Academy of Marketing Science*, Spring-16, pp.74-94.
- Bryan, L. L. and Joyce, C. I. (2007), Better strategy through organizational design, *McKinsey Quarterly*, 2 (07), pp. 21–29.
- Chandler, A. D. (1962), *Strategy and Structure : Chapters in the History of American Industrial Enterprise*, The MIT Press, Cambridge, London.
- Child, J. (1972), Organizational structure, environment and performance: the role of strategic choice, *Sociology*, 6(1), pp.1-22.
- Child, J. (1973), "Predicting and Understanding Organization Structure," *Administrative Science Quarterly*, Vol. 18, pp. 168–185.
- Claver-Cortés, E., Pertusa-Ortega, E. M. and Molina-Azorin, J. F. (2012), Characteristics of organizational structure relating to hybrid competitive strategy: Implications for performance, *Journal of Business Research*, 65(7), pp. 993-1002.
- Covin, J. G. and Slevin, D. P. (1989), Strategic management of small firms in hostile and benign environments, *Strategic Management Journal*, 10(1), pp.75-87.
- Croteau, A. M. and Bergeron, F. (2001). An information technology trilogy: business strategy, technological deployment and organizational performance, *The journal of strategic information systems*, 10(2), 77-99.
- Daft, R. L. (2003), *Organization, Theory and Design*, USA, South-Western.
- Damanpour, F. (1991), Organizational innovation: A meta-analysis of effects of determinants and moderators, *Academy of Management Journal*, 34(3), pp. 555–590.
- Dewar, R., and Hage, J. (1978), Size, Technology, Complexity, and Structural Differentiation: Toward a Theoretical Synthesis, *Administrative Science Quarterly*, 3(1), pp. 111–136.
- Ferrell, O. C. and Skinner, S. J. (1988), Ethical Behavior and Bureaucratic Structure in Marketing Research Organizations, *Journal of Marketing Research*, 25 (1), pp. 103-109.
- Fouraker, L. E. and Stopford, J. M. (1968), Organizational Structure and the Multinational Strategy, *Administrative Science Quarterly*, 13(1), pp.47-64.
- Fredrickson, J. W. (1986), The strategic decision process and organizational structure, *Academy of Management Review*, 11(2), pp.280-297.
- Galbraith, J. R. (1995), *Designing Organizations: An Executive Briefing on Strategy, Structure, and Process*, Jossey-Bass.
- Gosselin, M. (1997), The effect of strategy and organizational structure on the adoption and implementation of activity-based costing, *Accounting, Organizations and Society*, 22(2), pp.105-122.
- Hall, D.J. and Saias, M. A. (1980), Strategy Follows Structure, *Strategic Management Journal*, 1(2), pp.149-163.
- Hambrick, D. C. (1983), Some tests of the effectiveness and functional attributes of Miles and Snow's strategic types, *Academy of Management Journal*, 26(1), pp. 5–26.
- Kettinger, W.J., Grover, V., Guha, S. and Segars, A.H. (1994), Strategic Information Systems Revisited: A Study in Sustainability and Performance, *MIS Quarterly*, 18(1), pp.31- 59.
- Kimberly, J. (1976), Organization Size and the Structuralist Perspective: A Review, Critique and Proposal, *Administrative Science Quarterly*, 21(4), pp.571–597.
- Lasher, W. R. (2005), *Process to Profits: Strategic Planning For a Growing Business*, South-Western Educational Pub.
- Lawrence, P. R. and Lorsch, J. W. (1967), Differentiation and integration in complex organizations, *Administrative Science Quarterly*, 12(1), pp. 1-47.
- Leifer, R. and Huber, G. P. (1977), Relations among perceived environmental uncertainty organization structure and boundary-spanning behavior, *Administrative Science Quarterly*, 22(2), pp. 235-247.
- Matias-Reche, F., Garcia-Morales, V. J. and Rueda-Manzanares, A. (2008), Entrepreneurial size complexity and decentralization of decision-making in the use of temporary help workers in Spain, *The International Journal of Human Resource Management*, 19(1), 169-187.
- Miles, R. E. and Snow, C. C. (2003), *Organizational Strategy Structure and Process*, Stanford University Press, Stanford, California.
- Miles, R. E., Snow, C. C., Meyer, A. D. and Coleman, H. J. (1978), Organizational strategy structure and process, *Academy of Management Review*, 3(3), pp.546-562.
- Miller, D. (1986), Configurations of strategy and structure: Towards a synthesis, *Strategic Management Journal*, 7(3), pp. 233-249.

- Miller, D. (1987), The structural and environmental correlates of business strategy, *Strategic Management Journal*, 8(1), pp. 55-76.
- Miller, D. (1988), Relating Porter's business strategies to environment and structure: Analysis and performance implications, *Academy of Management Journal*, 31(2), pp.280-308.
- Miller, D. and Friesen, P. H. (1978), Archetypes of strategy formulation, *Management science*, 24(9), pp. 921-933.
- Miller, D., Dröge, C. and Toulouse, J. M. (1988), Strategic process and content as mediators between organizational context and structure, *Academy of Management Journal*, 31(3), pp. 544-569.
- Morrison, A. and Roth, K. (1993), Relating Porter's Configuration/Coordination Framework to Competitive Strategy and Structural Mechanisms: Analysis and Implications, *Journal of Management*, 19(4), pp.797-818.
- Nahm, A.Y., Vonderembse, M.A. and Koufteros, X.A. (2003), The impact of organizational structure on time-based manufacturing and plant performance, *Journal of Operations Management*, 21 (3), pp. 281-306.
- Nelson, K. (1973), Structure and Strategy in Learning to Talk, *Monographs of the Society for Research in Child Development*, 38 (1/2), pp.1-135.
- Nunnally, J. C. (1978), *Psychometric theory*, 2nd Edition, McGraw-Hill, NewYork.
- Olson, E. M., Slater, S. F. and Hult, G. T. M. (2005), The performance implications of fit among business strategy marketing organization structure and strategic behavior, *Journal of marketing*, 69(3), pp.49-65.
- Parthasarthy, R. and Sethi, S. P. (1992), The Impact of Flexible Automation on Business Strategy and Organizational Structure, *Academy of Management Review*, 17(1), pp.86-111.
- Pertusa-Ortega, E. M., Zaragoza-Sáez, P. and Claver-Cortés, E. (2010), Can formalization complexity and centralization influence knowledge performance, *Journal of Business Research*, 63(3), pp.310-320.
- Porter, M.E. (1985), *Competitive Advantage Creating and Sustaining Superior Performance*, NY, Free Press, New York.
- Price, J.L. (1972), *Handbook of Organizational Measurement*, Heath and Company, Lexington, MA: D.C.
- Pugh, D. S., Hickson, D. J. Hinings, C. R. and Turner, C. (1968), Dimensions of Organization Structure, *Administrative Science Quarterly*, 13(1), pp. 65-105
- Smith, K. G., Guthrie, J. P. and Chen, M. J. (1989), Strategy size and performance, *Organizational Studies*, 10(1), pp. 63-81.
- Souitaris V. (2001), Strategic influences of technological innovation in Greece, *British Journal of Management*, 12(2), pp.131-147.
- Stroh, L. K., Northcraft, G. B. and Neale, M. A. (2002), *Organizational behavior: A management challenge*, Lawrence Erlbaum, Mahwah, N.J.
- Tung, R. L. (1979), Dimensions of organizational environments: An exploratory study of their impact on organization structure, *Academy of Management Journal*, 22(4), pp. 672-693.
- Venkatraman, N. (1989), Strategic Orientation of Business Enterprises, *Management Science*, 35(8), pp. 942-962.
- Walton, E. J. (1981), The comparison of measures of organization structure, *Academy of Management Review*, 6(1), pp.155-160.
- Zahra, S. A. and Pearce II, J. A. (1990), Research evidence on the Miles and Snow typology, *Journal of Management*, 16 (4), pp. 751-768.
- Zheng, W., Yang, B. and McLean, G. N. (2010), Linking Organizational Culture Structure Strategy and Organizational Effectiveness: Mediating Role of Knowledge Management, *Journal of Business Research*, 63(7), pp.763-771.