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EXPLORING THE RELATIONSHIP BETWEEN INNOVATION STRATEGIES AND ORGANIZATIONAL PERFORMANCE: A FIELD STUDY IN AUTOMOTIVE INDUSTRY

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Abstract

In this study, organizational performance and innovation strategies and three basic dimensions of it- aggressive strategy, defensive strategy and imitation strategy- are handled. A field study based on survey method on the automotive industry in the provinces of Konya was applied in the study. The main aim of the study is to determine the levels of innovation strategies of small and medium enterprise in the automotive industry in the provinces of Konya and to analyze the relationship between innovation strategies and business performance. In accordance with this purpose, it is confirmed that the firms that possess aggressive strategy are different from the firms that possess other innovation strategies and there is a positive and statistically significant relationship between innovation strategies and business performance.

Keywords: Innovation Strategies, Business Performance, Automotive Industry

1. INTRODUCTION

In the globalizing competence environment in which scientific and technological developments occur rapidly, organizations should adapt to changes occurring in their environments. In the process of adaptation, not only external factors such as economic developments, social trends, international trade standardizations but also internal elements such as growth, mergers, decrease in sales, change of management, organizational insufficiency make change. In this point, organizations should react these changes by taking into consideration both internal and external environment dynamics. These experienced changes force organizations to make innovations and develop strategies to manage these innovation activities. In this content, organizational performance that is the most important factor in sustaining of organization's regularity holds a key role. Thus in this study examined the relationship between innovation strategies and organizational performance in footwear sector in Konya.

2. CONCEPTUAL FRAMEWORK

Innovation is a strong competition tool in organizations' having competition superiority, increasing of profits and cash flow and being one step forward from others in the sector. Innovation can be described as a newly accepted idea, application or object by an individual or

another apply unit (Tekin et al., 2003: 139). Innovation is described also as both a process and a result. As a process, innovation refers to a special situation of an organizational change and activities done in order to produce a new product. It refers to new or improved products and services gained as a result of innovation activities (Naktiyok, 2007: 213; Schermerhon, 2007: 333; Narayanan, 2001: 68). Also, innovation is a special tool of entrepreneurship and is an action that offers to create welfare and resources which constituent new capacity (İraz and Eryeşil, 2012: 54).

Innovation strategies consist of financial aims related to a new product or service and growth fields. They are also strategic roles that describe the strategic missions of new products or services and complement of criteria that provide series of filters from which ideas of new products and services should pass (Satı and Işık, 2011: 546). In the literature, innovation strategies are generally dealt with under three dimensions as aggressive, defensive, imitative and dependent strategy.

2.1. Aggressive Strategy

It is the strategy that aims to develop product and process innovations and as a result of this experiencing the benefits of being the first in an existing market (Aygen, 2007: 45). Aggressive innovation strategy is designed in order to take technical and market leadership by developing new products and being one step forward from the competitors. An entrepreneur who uses aggressive strategy wants to be the first that takes the benefit of innovation and get an important competition advantage (Durna, 2002:129-130).

2.2. Defensive Strategy

It is the strategy that generally avoids taking the risk which is a result of being the first in the market and consists of works relying on taking the benefits of opportunities created by organizations that are first in the market (Aygen, 2007: 47). Innovators with defensive strategies do not want to be the first in the world, but they do not want to fall behind in the technical changes either. They do not intend to face the high risk of being first and they hope to benefit from first entrepreneurs' mistakes and the market opened by them (Durna, 2002: 134). Such organizations with aggressive strategies, such organizations also have Research & Development (R&D) activities. However, these activities follow the leader and aim to solve problems and they are related to applications. These R&D activities that intend to examine the products of first organizations in the market and make up their deficiencies or differentiate them have less cost and risks (Aygen, 2007: 47).

2.3. Imitative and Dependent Strategy

Organizations with this strategy are not in the first position in the market; they avoid taking risks and have low costs, materials and labor force. Such organizations, different from organizations with other two strategies, do not allocate resources to R&D. The thing important for them is to apply scientific and technical information of the organizations they imitate and choose the organization that is prior in the current market (Aygen, 2007: 48). Imitative organizations follow innovative ones; they prefer to work with low labor force, materials, and energy and investment costs; not much source is assigned to R&D in such organizations. It is a strategy that relies on benefiting from leader organization's products via license etc. instead of investing to innovation activities. So, organizations with this strategy do not generally have the triumph technology in the market. It is a strategy that accepts to depend on powerful organizations in terms of innovations. The organizations that follow this strategy do not attempt

to make a change or imitate the products they produce. They make technical changes in their products due to demands by customers or dependent organizations (Güleş and Bülbül, 2004: 177).

2.4. Organizational Performance

One of the most important problems faced in organizations today is to determine to what extent missions given to workers are fulfilled or what their service capacity capabilities are. This problem has especially caused the term organizational performance become rapidly important in organizations (Bayram, 2006: 47). There are many definitions in the literature related to performance term. It can be described as evaluating of all efforts for realizing organization aims. Performance, in other words, is quantitative and qualitative expression of what an individual, group or organization that works can provide related to aims of that work (Çalık, 2003: 9). Performance term shows where a working individual, group, unit or organization has reached via that work according to the aim (Argon and Eren, 2004: 224). Organizational performance can be expressed as the determination of all efforts shown for realizing the aims of business. In other words, business performance can be expressed as the definition of the degree to perform the aim or duty of business according to the input or result, obtained at the end of certain period (Eryeşil et al., 2015: 588).

Organizational performance can be expressed as evaluation of all efforts for realizing organization aims. In other words, it can be described as expression of the realization level of the organizations' aim or mission by looking at outcomes or results of a given term. Evaluation of organizational performance is a requirement because of both controlling the organization of its own efforts and creating customer satisfaction in the target market. Besides, performance evaluation creates decision inputs that direct organization managers' decisions (Turunç, 2006: 131; Yıldız, 2010: 180). Performance evaluation prevents the organization standing by against changes in or out of the organization; it provides to take an active role in being able to react those changes, looking for their reasons etc. There are some benefits of measuring organizational performance: it enables to see how the organization operates, provides valuable information to organizations in determining the sources of their problems and main reasons that lie behind their success and/or failure, enables to determine prospective performance deficits, shows to what extent the predetermined use of resources have been realized and it is also effective in determining the performance to be awarded.

As a result, organizations use many performance criteria in order to evaluate previous activities and take strategic decisions. Undoubtedly, all these dimensions of performance have important effects on organizational performance (Erdem et al., 2011: 84-85). In this study, the effect of institutionalization that is one of the mentioned dimensions on innovation strategies and organizational performance has been examined.

3. METHODOLOGY OF STUDY

In this section of the study, information will be given about the aim, hypotheses, method, and findings of the study realized using the survey method. In addition, it will be assessed whether or not the results obtained during study are statistically significant and hypotheses are tested whether or not to be validated.

In forming the dataset of this study, survey method is utilized and is conducted on the small and medium sized enterprises (SMEs) in a automotive industry (since the enterprises does not want to disclose its name, in the study, the expression "SMEs" takes place) being in active in the

province Konya. The data of study was collected via face-to-face interviews with the respondents by means of a standard questionnaire, prepared considering Likert scale. The item in the scales were scored as 1 = “I definitely agree with” and 5 = “I definitely disagree with”. In the study, in the determination of SMEs, who will be included in the sample convenience sampling method, used in the similar studies (Cui et al., 2003; Zhou, 2004), was preferred. Since convenience sampling enable to quickly access to large amount of data, it is a favorable method (Nakip, 2003).

The aim of the study is to determine innovation strategies of small and medium sized enterprises working in automotive industry in Konya and to examine the relations between innovation strategies and organizational performance. The sample of the research includes 95 organizations in this sector. The survey was given to 80 of them. By this aim, developed hypothesis are as follows:

Hypothesis 1: “There is a positive and statistically significant relationship between organizational performance and aggressive strategy.

Hypothesis 2: “There is a positive and statistically significant relationship between organizational performance and defensive strategy.

Hypothesis 3: “There is a positive and statistically significant relationship between organizational performance and imitation and dependent strategy.

In the study, in order to identify the level of innovation strategies of the organizations of automotive industry “Scale of Innovative Strategy”, used by Örucü et al. (2011) and to determine the level of organizational performance “Scale of Organizational Performance” developed by Calantone et al. (2002) in their study. In calculation of sample size, Yazıcıoğlu and Erdoğan (2004: 50) was utilized. The authors calculated the number of survey that is necessary to be done as 217 for confidence value of $\alpha= 0.05$ and sample error of 0,05, and in case that the rate of observing and non- observing is accepted as equal and there is a sample size of 500 people, In this context, the rate of questionnaire that is necessary to be returned is about 44%. In the SMEs in which the study is carried out, 95 SMEs and as a result of application that is made, 80 organizations that are suitable for assessment were obtained. In this context, the return rate obtained is about 84% and it can be said that it has the power to represent the main mass.

4. FINDINGS OF STUDY

The demographic information about the SMEs manager is presented in the following Table 1.

Table 1. Demographical Characteristics of Sample

Characteristics	f	%	Characteristics	f	%
Gender			Position		
Male	70	87,5	General Manager	40	50,0
Female	10	12,5	Manager	15	18,8
			Sub Manager	5	6,2
			Other	20	25,0
Age			Education		
30-35 years	50	62,5	Primary	8	10
36-40 years	20	25,0	Secondary	20	25
46 years and over	10	12,5	Associate degree	20	25
			Bachelor's degree	32	40
Total	80	100	Total	80	100

Note: n=80.

As a result of analysis, it was observed that the majority of the managers surveyed were male (87.5%), 35-40 years old (62,5%), had graduate-level education (40%), were general manager positioned (50%). To measure the internal consistency of the scale used in this study, internal consistency of both scales have been calculated and shown in Table 2.

Table 2. Internal Consistency Analysis Results of The Scale Factors

Scale Factors	Number of Statements	Cronbach's Alpha (α)
Innovation Strategies	6	0,746
Organizational Performance	7	0,709

It was precipitated that the scale of innovation strategies (0,746), scale of organizational performance (0,709) were confident at high degree ($0,60 > \alpha > 0,80$).

In the study, in order to examine the structural validity of the data belonging to the scale of innovation strategies, this scale was subjected to descriptive factor analysis. As a result of analysis carried out to test the compliance of data for factor analysis, it was identified that the result of, Barlett normal distribution test was significant ($p < 0.05$), while KMO (Kaiser-Mayer-Olkin) value was 0,817. In addition, when the results of factor analysis were evaluated, it was seen that the items of scale, whose eigenvalues are more than 1, were collected under a three factor. This structure is compatible with the structure put forward by Örucü et al. (2011). And also, in order to examine the structural validity of the data belonging to the scale of organizational performance, this scale were subjected to descriptive factor analysis. As a result of analysis carried out to test the compliance of data for factor analysis, it was identified that the result of Barlett normal distribution test was significant ($p < 0.05$), while KMO (Kaiser-Mayer-

Olkin) value was 0,877. In addition, when the results of factor analysis were evaluated, it was seen that the items of scale, whose eigenvalues are more than 1, were collected under a single factor. This structure is compatible with the structure put forward by Calantone et al. (2002).

Table 3. Descriptive Statistics of the Sample

Scale Factors	Mean	St. Dev.
Innovation Strategies	4,10	0,37
Organizational Performance	3,87	0,43

Notes: (i) $n=80$, (ii) In the scale 1=I definitely disagree with and 5=I definitely agree with mean. (iii) According to Friedman two ways ANOVA test ($\chi^2=85,333$ $p<0,001$) the results are statistically significant.

When the results of study are assessed, it was identified that the levels of innovation strategies of the participants is at high level (4,10) and the levels of organizational performance is at high level (3,87) too.

Table 4. The Comparison of Organizational Performance in Innovation Strategies

	Aggressive Strategy (n=21)		Defensive Strategy (n=49)		Imitation and Dependent Strategy (n=10)		Kruskal Wallis H Testi	
	Mean	S.D.	Mean	S.D.	Mean	S.D.	χ^2	p
Organizational Performance	4,12	0,42	3,83	0,37	3,49	0,39	16,770	<.00

Note: (i) $n=80$, (ii) In the scale, 1 is in the meaning of "I definitely disagree" and 5, in the meaning of "I definitely agree".

When Table 4 is examined, there was a statistically significant relationship between organizational performance and the levels of innovation strategies. As a result of evaluation of the analysis results, it has been determined that aggressive strategy (4,12) levels of the enterprises' organizational performance are higher than defensive strategy (3,83) levels of the enterprises and imitation and dependent strategy (3,49) levels of the enterprises.

Table 5. Correlation Analysis between Organizational Performance and Innovation Strategies

	1	2	3	4
Aggressive Strategy (1)	1	0,464(**)	0,454(**)	0,594(**)
Defensive Strategy (2)		1	0,418(**)	0,585(**)
Imitation and Dependent Strategy (3)			1	0,454(**)
Organizational Performance (4)				1

Note: * $p < .05$, ** $p < .01$.

According to the results of correlation analysis, it was identified that there was a positive directional and statistically significant relationship between organizational performance and aggressive strategy ($r = 0,594$, $p < 0,01$). In addition, it was identified that there was a positive directional and statistically significant relationship between organizational performance and defensive strategy ($r = 0,585$, $p < 0,01$) and also there was a positive directional and statistically significant relationship between organizational performance and imitation and dependent strategy ($r = 0,454$, $p < 0,01$).

When correlation coefficients were examined, although it was identified that there was positive and negative directional relationships between the independent variables, determining that the coefficients were small than 0.7 and there was no multiple relations, in order to examine the relationships between the variables, regression analysis was conducted.

Table 6. The Relationship between Organizational Performance and Innovation Strategies

Dependent Variable	R ²	Independent Variable	B	Std. Error	t	F	p
Organizational Performance	0,628	Constant		0,098	39,399	$p < 0,05$	16,467**
		Aggressive Strategy	0,454	0,089	4,373	$p < 0,05$	
		Defensive Strategy	0,064	0,094	0,671	$p < 0,05$	
		Imitation and Dependent Strategy	0,110	0,128	6,683	$p < 0,05$	

Note: ** $p < .05$, * $p < .01$.

When the results of regression analysis assessed, it was reached the concluded that sub-dimensions of innovation strategies has an effect on organizational performance and the levels of innovation strategies accounted for the variance on organizational performance in the rate of

62,8%. In addition it was concluded that the model put forward was statistically significant ($p < 0,05$) and that sub-dimensions of innovation strategies positively affected the organizational performance variable ($R^2 = 0,628$), the factor which has the most impact on organizational performance is aggressive strategy ($B = 0.454$). In this context H1, H2 and H3 hypothesis was accepted.

5. CONCLUSION

In this study is to determine the levels of innovation strategies of small and medium enterprise in the automotive industry in the provinces of Konya and to analyze the relationship between innovation strategies and business performance. it has been determined that aggressive strategy levels of the enterprises' organizational performance are higher than defensive strategy levels of the enterprises and imitation and dependent strategy levels of the enterprises. In addition, while it was identified that there was a positive directional and statistically significant relationship between sub-dimensions of innovation strategies and organizational performance. In the scope of study, it was concluded that innovation strategies had an effect on the organizational performance of the enterprises.

Since the sample of this study consists of employees being operating in a certain sector in the province Konya, the generalization power of the results of study remains weak. In terms of the studies carried out in the future, the study can be restudied with a larger sample. It is necessary to take into consideration that the study was evaluated through the data belonging to a certain time slice. Since this study was carried out only in the province Konya, when the questions, whose answers are searched for and the hypotheses are taken into consideration, it can be said that realizing a longitudinal study as method of data collecting is a more appropriate approach.

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