The Macrotheme Review
A multidisciplinary journal of global macro trends

A RESEARCH TO DETERMINE THE EFFECTS OF INNOVATION STRATEGIES AND INNOVATIVE PERFORMANCE ON FIRM PERFORMANCE

Emel GELMEZ, Derya ÖZİLHAN ÖZBEY and Mehtap ÖZTÜRK
Selçuk University, Turkey

Abstract

While information and technological developments have changed business, many new standards have emerged in products and production processes under the influence of globalization. In this vein, it is possible to said that the small national markets are expanding and changing towards global markets and it is not as easy as operating business proceses in these markets. In particular, the role of innovation activities is indisputable in the process. In this context, in this study is to determine the effects of innovation strategies and innovation performance on firm performance. The survey of this study is conducted on 120 firms operating of small and medium enterprise (SMEs) in the footwear industry in Konya, Turkey. The data utilized in the study was obtained via questionnaire method. The obtained data from the questionnaires are analyzed through the SPSS statistical package program. Analysis results revealed that, there is a statistically significant and positive relationship between innovation strategies, innovative performance and firm performance.

Keywords: Innovation Strategies, Innovative Performance, Firm Performance

1. INTRODUCTION

As a result of globalization, businesses that can not compete with a new product or a novelty that emerges elsewhere in the world may face the danger of extinction. At the same time, an organization that has never been recognized can also become an industry giant. In this vein, it can be said that an enterprise that can not reach the success of the competition will be able to lose whatever it may have in its product creativity (Güzelcik, 1999: 43). Generally, businesses provide income to the consumer by providing the goods or service. In order for this field to remain competitive under competitive conditions and increasing competitiveness, the resources of the operators' hands must be provided with the highest efficiency, highest quality and lowest cost. Many businesses are looking for ways to organize and manage their functions in new ways to survive in such a competitive and innovative environment (Bolat and Sağlam, 2004: 503). Many businesses are looking for ways to organize and manage their functions in new ways in order to survive in such a competitive and innovative environment. Innovation activities play an important role for this aim. In this context, the main purpose of this study is to determine the impact of innovation strategies and innovation performance on business performance.

2. CONCEPTUAL FRAMEWORK

2.1. Innovation and Innovation Strategies

Innovation is studied in many disciplines and has been defined from different perspectives. Whilst there is some overlap between the various definitions of innovation, overall the number and diversity of definitions leads to a situation in which there is no clear definition of innovation. As general, innovation can be defined the generation, acceptance and implementation of new ideas, processes products or services (Baregheh et.al., 2009: 1324). 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 defined as the "implementation of a new or significantly improved product (goods or service), process, a new marketing technique or a new organizational method in business practices, workplace organization or external relations" (OECD & Eurostat, 2005). According to Myers and Marguis (1969), innovation is a complex activity that produces social or economic value, involving the orientation of a new idea, a solution to a conceptual step-by-step problem. According to Kanter (1984: 20) innovation is the process of bringing any new problem solving ideas into use. According to Drucker (1998: 30-31), innovation is a special tool of entrepreneurship, and it is an action that provides a new capacity to build prosperity. Schumpeter (1934) requires the concept of innovation to establish a new production function. This definition requires five distinct situations leading to a new production function. These are (İraz, 2005: 78-79):

- Creation of new products or qualitative improvements in existing products,
- Use of a new industrial process,
- New market openings,
- Development of new raw-material sources or other new inputs
- To introduce new forms of industrial organizations.

The most important features of the dynamism of the competitive period are that the enterprises have an innovative identity (Altundağ, 2007: 23; Göbenez et al., 2008: 293). Innovation is often referred as the specific set of activities that offer competitive advantages to a company. As such, an increased interested has been placed on understanding which practices affect more substantially the innovation capability of the company (Adler et al., 1992). Moreover, the ability to innovate has been widely considered one key success factor of business survival and performance. Firms gain competitive advantage through innovational actions. Firms approach broadly to innovations in terms of both technologies and new business methods (Porter, 1990). Innovation involves all the activities ranging from scientific research to invention, improvement and commercialisation for creating a new product or production process (Kamien and Schwartz, 1982). 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.

2.1.1. Aggressive Strategy

The aggressive strategy means to capture technology leadership and market leadership by overcoming competitors in the process of uncovering new products (Freeman and Soete, 2003: 308). This strategy that aims to benefit from the advantages of moving first in the market thanks to the first development of product and process innovations (Güleş and Bülbül, 2004: 176).

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). The aggressive innovation strategy should not be thought to be unique to large businesses, which are only in the market and technical frontiers. Small businesses have also been observed and successful in aggressive innovation strategy that will provide technical and market superiority in some industries. The most important advantages of such enterprises are informal and flexible management style, innovative organizational environment, short internal communication channels and effective cooperation (Barutçugil, 1981: 36).

2.1.2. 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).

2.1.3. 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).

2.2. Innovative Performance and Firm Performance

Firm performance has been considered as a significant factor in today's world to maintain the continuity of campanies against the increasing competition. In this respect companies operates by giving attention to innovative practices and the positive effects of these practices (Küçük and Kocaman, 2014). Innovative performance defines as the achievements of companies in terms of ideas, models of new devices, products, processes and systems (Ernst, 2001: 149). Innovative performance is the combination of overall organizational achievements as a result of renewal and improvement efforts done considering various aspects of firm innovativeness, for instance, processes, products, marketing, organizational structure (Hagedoorn and Cloodt, 2003). Therefore, innovative performance is a composite construct, based on various performance indicators pertaining, such as, to the new patents, new product announcements, new projects, new processes, and new organizational arrangement. The innovative performance of firms depends on the economic, social and policy context in which these companies operate. The innovative performance of the key organizations mirrors the preconditions for innovative output provided by the institutional and socio-economic structures (Lundvall, 2009). Innovation enhances firm performance because the product of innovation increases firm competitiveness and the process of innovation transforms a firm's internal capabilities making it more adaptive to change (Laursen and Salter, 2006: 131).

3. RESEARCH METHODOLOGY

In forming the dataset of this study, survey method is conducted on small and medium enterprises (SMEs) in Konya/Turkey. The data of the 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 disagree with" and 5 = "I definitely agree with". In the study, in the determination of firms who will be included in the 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. In the study, in order to identify the level of innovative performance of the small and medium enterprises (SMEs) in footwear industry developed by Calantone et al. (2002) and applied by Avcı (2009) was used in the questionairre and in order to identify the level of innovation strategies of the organizations of footwear industry "Scale of Innovative Strategy", used by Örücü et al. (2011). The performance criteria used in the scale were developed by taking into account the criteria used by different authors in previous field surveys (Bülbül, 2003, Ömürbek, 2003, Çağlıyan, 2009, Türkmen, 2010). Before determinig the total score for the items in the scale, the cronbach alpha values of the scale were examined and the values obtained show that the total score can be used by adding the items.

In calculation of sample size, the method of 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, 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 study is carried out, 150 small and medium enterprises and as a result of application that is made, 120 questionnaires that are suitable for assessment were obtained. In this context, the return rate obtained is about 80% and it can be said that it has the power to represent the main mass. The hypotheses developed in the scope of study is put in order as follows. Data obtained from questionnaires was analyzed through the SPSS statistical packet software (v.20). The items reliabilities were tested through

Cronbach's Alpha analysis and proposed relations and hypotheses were tested through correlation and regression analyses. By this aim, developed hypothesis is as follows:

H_1: There is a positive and significant relationship between innovative performance and firm performance.

H_2: There is a positive and significant relationship between innovation strategies and firm performance.

When the number of employees is examined, it is seen that 12.5% of the companies participating in the research have 1-50 workers; 55.9 % have 51-500 workers and 31,6% have more than 500 workers. Most of these companies (72.8%) have been operating for 6 to 10 years. To measure the internal consistency of the scale used in this study, internal consistency and descriptive statistics of both scales have been calculated and shown in Table 1.

Table 1. Descriptive Statistics and Reliability Analysis Results of Scales

Scale	Cronbach's α	Mean	Std. Dev.
Innovation Strategies	0.932	3.16	0.71
Firm Performance	0.886	3.41	0.74
Innovative Performance	0.866	2.52	0.64

Cronbach's alpha is a common measure of internal consistency (reliability) of a test or scale. Reliability of the scales related to innovation strategies, innovative performance and firm performance are tested before data analysis is measured by Cronbach's Alpha. Alpha values of scales for innovation strategies is α= 0.932, and firm performance is α= 0.886, innovative performance is α= 0.866. Alpha values range from 0 to 1 and an acceptable value should be at least 0.70 (Altunışık et al., 2010). When reliability coefficient is examined, it is observed that the reliability of the scales belong to communication are over 0.70. Thus, it is concluded that scales were highly (α>0.70) reliable. When table 1 is examined, the highest values in the table (3.41) is firm performance. In addition to these values it can also be seen that innovation strategies is high (3.16). Examining the table 1, we can state that companies generally have a above-average innovative performance. Moreover descriptive statistics of three dimensions of innovation strategies including aggressive strategy, defensive strategy, imitative and dependent strategy are examined. It is concluded that aggressive strategy is above-average level (2.97), defensive strategy is high level (3.42) and imitative and dependent strategy above-average level (2.93).

Table 2. Correlation Analysis

	(IS)	(FP)	(IP)
Innovation Strategies (IS)	1		
Firm Performance (FP)	0.659**	1	
Innovative Performance (IP)	0.242*	0.481**	1

Note: **p<.001, *p<.05.

According to the results of the correlation analysis, a positive and significant relationship has been determined between innovative strategies and firm performance ($r = 0.659$, $p<0.01$). Furthermore there is a positive and significant relationship between innovative strategies and innovative performance ($r = 0.242$, $p<0.01$). Also there is a positive and significant relationship between firm performance and innovative performance ($r = 0.481$, $p<0.01$).

Table 3. Regression Analysis Results of Innovation Strategies, Innovative Performance and Firm Performance

Dependent Variable	Independent Variable	B	Std. Error	Beta	t	p	F	p
Firm Performance	(Constant)	4.809	0.381	-	12.637	.000	14.453	<0.001
	Innovative Performance	0.556	0.146	0.481	3.802	.000		
Firm Performance	(Constant)	1.232	0.37		3.332	.000	12.326	<0.001
	Aggressive Strategy	0.422	0.132	0.479	3.203	.000		
	Defensive Strategy	0.151	0.148	0.16	1.019	.000		
	Imitative and Dependent Strategy	0.096	0.146	0.106	0.66	.000		

When the results of regression analysis were examine that innovative performance has an effect on firm performance and the levels of innovative performance accounted for the variance on firm performance in the rate of 23.1%. In addition it was concluded that the model put forward was statistically significant ($p<0.05$) and that innovative performance positively affected the firm performance ($R^2=0.231$). So H_1 is supported. Furthermore, from Table 3, it can be seen that there is positive and statistically significant relationship between sub-dimensions of innovation strategies and firm performance ($R^2=0.446$). In addition, it was concluded that the model put forward was statistically significant ($p<0.05$). In this case it is observed that H_2 is provided. In this case it is observed that all hypotheses is provided.

4. CONCLUSION

In this study, survey method is used and the research conducted on the small and medium enterprises (SMEs) in the footwear industry in Konya/Turkey. Main aim of the study is examining the relationship between innovation strategies, innovative performance and firm performance. In accordance with this main aim, the accuracy of hypotheses are tested. As a consequence of the analysis, a positive relationship between innovative performance and firm performance is detected. The findings also showed that sub-dimensions of innovation strategies were positively associated with firm performance. To broaden the topic, other researches should be encouraged to develop some topics about the external and internal factors of organization impacting on innovation strategies or the effect of innovative performance on firm performances. The study has several limitations that should be underlined. First of all, this study does not taken into consideration the sub-dimension of firm performance. Second limitation of this study is that it is conducted in a specific sector and the study used survey data at one given time point. Therefore, generalisability of the findings should be done with caution due to the fact that future research should investigate the issue in other countries, contexts or different behavior settings. And also 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.

REFERENCES

Adler, P.S., McDonald, W.D. and McDonald, F. (1992), “Strategic Management of Technical Functions”, Sloan Management Review, 33(2), 19-37.

Altundağ, N. (2007), "Rekabet Sürecinin Dinamik Boyutu, Bileşenleri ve Dinanizmi Sürdürebilme Yolları", Süleyman Demirel Üniversitesi Sosyal Bilimler Enstitüsü Dergisi, 3(5), 15-29.

Altunışık, R., Coşkun, R., Bayraktaroğlu, S. and Yıldırım, E. (2010), Sosyal Bilimlerde Araştırma Yöntemleri SPSS Uygulamalı, 6.Baskı, Ankara: Sakarya Kitabevi.

Avcı, U. (2009), Ögrenme Yonelimliliğinin Yenilik Performansı Üzerine Etkisi: Muğla Mermer Sektöründe Bir İnceleme, ZKU Sosyal Bilimler Dergisi, 5(10), 121-138.

Aygen, S. (2006), "İşletmelerde Yenilik Yönetimi Sürecinde Örgüt Yapılarında ve Hizmet Tasarımlarında Yaşanan Dönüşümler: Antalya İli Beş Yıldızlı Konaklama İşletmelerinde Ampirik Bir Araştırma ve Hizmet Tasarımı Önerisi", Doctoral Dissertation, Selçuk Üniversitesi Sosyal Bilimler Enstitüsü, Konya.

Baregheh, A., Rowley, J. and Sambrook, S. (2009), "Towards a Multidisciplinary Definition of Innovation", Management Decision, 47(8), 1323-1339.

Barutçugil, İ.S. (1981), Teknolojik Yenilik ve Ar-Ge Yönetimi, Bursa: Uludağ Üniversitesi Yayını.

Bolat, B. and Sağlam, Ü. (2004), "Otomotiv Sektöründe Tam Zamanında Satın Alma süreci ve Tedarikçi Seçim Kriterlerine Etkisi", IV. Ulusal Üretim Araştırmaları Sempozyumu Bildiriler Kitabı, Konya.

Bülbül, H. (2003), Rekabet Üstünlüğü Elde Etmede Ürün ve Süreç Yeniliği: Bilişim Teknolojileri Uygulaması, Selçuk Üniversitesi Sosyal Bilimler Enstitüsü, Doctoral Dissertation, Konya.

Cui, C.C., Lewis, B.R. and Park, W. (2003), "Service Quality Measurement in The Banking Sector in South Korea", International Journal of Bank Marketing, 21(4), 191-201.

Çağlıyan, V. (2009), Yenilikçilik, Tedarikçi Katılımı ve İşletme Performansı Üzerine Değer Zinciri Yönetimi Temelli Bir Yaklaşım: Otomotiv Sektöründe Görgül Bir Araştırma, Selçuk Üniversitesi Sosyal Bilimler Enstitüsü, Doctoral Dissertation, Konya.

Drucker, P.F. (1998), "The Discipline of Innovation", Harvard Business Review, 76 (6):149-57.

Durna, U. (2002), Yenilik Yönetimi, Ankara: Nobel Yayın Dağıtım.

Ernst, H. (2001), "Patent Applications and Subsequent Changes of Performance: Evidence From Time-Series Cross-Section Analyses on The Firm Level", Research Policy, 30 (1), 143-157.

Freeman, C. and Soete, L. (2003), Yenilik İktisadı, Translated by: Türkcan, E., Ankara: Tübitak Yayınları Akademik Dizisi.

Göbenez, Y., Güleş, H.K. and Türkmen, M. (2008), "Rekabet Öncelikleri ve Rekabet Stratejilerinin İşletme Performansı Üzerine Etkisi: Küçük ve Orta Ölçekli İşletmelerde Alan Araştırması", 8. Üretim Araştırmaları Sempozyumu Bildiriler Kitabı, 24-25 Ekim, İstanbul, 291- 209.

Güleş, H.K. and Bülbül, H. (2004), "Yenilikçilik İşletmeler İçin Stratejik Rekabet Aracı, Ankara: Nobel Yayın Dağıtım.

Güzelcik, E. (1999), Küreselleşme ve İşletmelerde Değişen Kurum İmajı, İstanbul: Sistem Yayıncılık.

Hagedoorn, J. and Cloodt, M. (2003), "Measuring Innovative Performance: Is There an Advantage in Using Multiple Indicators?", Research Policy, 32(8), 1365-1379.

İraz, R. (2005), Yaratıcılık ve Yenilikçilik Bağlamında Girişimcilik ve Kobiler, Konya: Çizgi Yayınevi.

Kamien, M. I. and Schwartz, N. L. (1982), "Market Structure and Innovation", Cambridge University Press, Cambridge.

Kanter, R.M. (1984), "Innovation: Our Only Hope for Times Ahead?", MIT Sloan Management Review, 25(4), 51-55.

Küçük, O. and Kocaman, G. (2014), "Müşteri Yönlülük, İnovasyon Yönlülük ve İşletme Performans İlişkisi: Bir Uygulama", The Journal of Academic Social Science Studies, 29, 37-52.

Laursen, K. and Salter, A. (2006), "Open for Innovation: The Role of Openness in Explaining Innovation Performance Among UK Manufacturing Firms", Strategic Management Journal, 27, 131-150.

Lundvall, B.A., Joseph, K.J., Chaminade, C. and Vang, J. (2009), Handbook of Innovation Systems and Developing Countries, Building Domestic Capabilities in a Global Setting, Northampton: Edward Elgar.

Myers, S., and Marquis, D.G. (1969). Successful İndustrial İnnovation: A Study of Factors Underlying The Innovation In Selected Firms. Washington, DC: National Science Foundation.

OECD and Eurostat (2005), Oslo Manual: Guidelines for Collecting and Interpreting Innovation Data, 3rd Edition, Paris: OECD Publishing.

Ömürbek, N. (2003), Küresel Rekabet Ortamında Yeni Üretim Teknolojileri ve Teknolojik İşbirliği (Otomotiv Sektöründe Uygulama), Selçuk Üniversitesi Sosyal Bilimler Enstitüsü, Doctoral Dissertation, Konya.

Örücü, E., Kılıç, R. and Savaş, A. (2011), "Kobi'lerde İnovasyon Stratejileri ve İnovasyon Yapmayı Etkileyen Faktörler: Bir Uygulama", Doğuş Üniversitesi Dergisi, 12 (1), 58-73.

Porter, M. (1990), The Competitive Advantege of Nations, Macmillian, London.

Satı, Z. E. and Işık, Ö. (2011), "İnovasyon ve Stratejik Yönetim Sinerjisi: Stratejik İnovasyon, Celal Bayar Üniversitesi Sosyal Bilimler Fakültesi Dergisi", 9(2), 538-559.

Schumpeter, J.A. (1934), Theory of Economic Development, Cambridge, MA: Harvard University Press.

Tekin, M., Güleş, H.K., Öğüt, A. (2003), Teknoloji Yönetimi, Ankara: Nobel Yayın Dağıtım.

Türkmen, M. (2010), Küçük ve Orta Ölçekli İşletmelerde Üretim Stratejisi, Üretim ve İşletme Performansı Üzerine Strateji Temelli Bir Analiz: Tekstil ve Otomotiv Yan Sanayinde Karşılaştırmalı Bir Uygulama, Selçuk Üniversitesi Sosyal Bilimler Enstitüsü, Doctoral Dissertation, Konya.

Yazıcıoğlu, Y. and Erdoğan, S. (2004), SPSS Uygulamalı Bilimsel Araştırma Yöntemleri, Detay Yayıncılık, Ankara.

Zhou, L. (2004), "A Dimension-Specific Analysis of Performance only Measurement of Service Quality and Satisfaction in China's Retail Banking", Journal of Services Marketing, 18(7), 534-546.