Effect of Market Orientation and Entrepreneurial Orientation on Innovation
Evidence from Auto Parts Manufacturing in Iran

Ali Reza Maatoofi and Kayhan Tajeddini

Abstract
Continuous environmental changes are forcing firms to adopt an appropriate strategic approach and match its strengths with environmental opportunities. Researchers in marketing and strategic management have shown the relationship between marketing and entrepreneurship with the organizational operation in different industries. In spite of the effects of such variables on the innovation of products, these are less considered by Iran’s auto parts manufacturers. Considering the importance of market orientation and entrepreneurial orientation approaches for the maintenance of organizations and confrontation with the rivals, the present research investigates the effect of such variables on the innovation of new products. The research findings will provide the managers with appropriate information for the adoption of a strategic balanced approach.

Keywords: Entrepreneurship orientation, market orientation, innovation of product, auto parts manufacturing

INTRODUCTION
Intensity of competition, rapid globalization and changing technology have made innovation inevitable for firms. It is crucial for commercial organizations not only to capture new opportunities but also to pay more attention on the development of their products and market to maintain their competitive advantage (Tajeddini, Trueman and Larsen, 2006). It is established in the literature that organizations that foster the ability to build an effective relationship between entrepreneurial orientation and market orientation are better able to create and sustain competitive advantage (e.g., Atuahene- Gima and Ko, 2001; Tajeddini, 2010). Moreover, with known needs of their customers, market oriented firms may lose some of their opportunities for developing new product only due to customer’s inability to describe their new needs (Hamel and Prahalad, 1994). Therefore, these firms are in need of creating an entrepreneurial oriented approach to make sure of continuous care to novel and unknown needs of customers (Atuahene-Gima and Ko, 2001). On the other hand, concentrating on unknown and novel needs of customers, entrepreneurial oriented approach is seeking superiority and dominance in market over other rivals (Atuahene -Gima and Ko, 2001; Slater and Narver, 1995; Hamel and Prahalad, 1994). However, the danger threatening firms is
that their new products that are of an advanced technology may face defeat in market (Atuahene-Gima and Ko, 2001). Thus, an appropriate combination of the two approaches enables any firm to acquire a suitable knowledge regarding customers, rivals and also the firm’s present and future situation. Therefore, a high capability for environmental adaptation and its management will enable any firm to effectively satisfy needs of customers and accordingly to increase the probability of the firm’s success with creation of innovation in product and its operation. Although extensive research has focused on integrating market orientation and entrepreneurial orientation (e.g., Hult, Hurley and Knight, 2004; Tajeddini, 2010), few studies have focused on the Middle Eastern countries. This paper fills this gap by focusing on these factors in auto parts manufacturing industry of Iran.

**AUTO INDUSTRY IN IRAN**

The first car manufactured in Iran called “Paykan” was produced in “Iran National Industrial Corporation” licensed by British Talbot Company and offered to market in 1967. Afterwards, on a gradual basis, different models of American and French car were produced. At present, the Iran’s domestic vehicle production is extensively growing quickly. The present research examines the auto parts industry, having the intention of investigating the effect of market orientation and entrepreneurship orientation on innovation in product. Being one of the greatest productive industries in Iran and because of its having a strategic importance, auto parts industry has always been supported by different governments. Statistics show that the amount of capital with these firms is an average of sixty billion Rials and about one thousand small and big units that have provided the possibility of 500 thousand job opportunities are currently functioning in the chain of supplying auto parts. In recent years the yearly financial turnover of the network has allowed the auto parts’ provision of about 50 trillion Rials which is anticipated to amount to 100 trillion Rials in the coming few years. The present research, pays attention to this area of the country’s economy and

the viewpoints available for it, is trying to investigate the effect of the two approaches of market orientation and entrepreneurship orientation on innovation in products of auto parts firms.

**MARKET ORIENTATION**

Researches on market orientation indicates the researches’ attention to this area of this strategic significance (Li, Ching-Yick Tse and Yan Gu, 2006; Schindehutte, Morris and Kocak, 2008; Gopal, 2008; Sen, 2006; Li, 2005; Kok, Hillebrand and Biemans, 2003; Cadogan, Diamantopoulos and Siguaw, 2002). Market oriented approach consists of learning about market and using it for marketing actions. Market orientation as a philosophical approach in marketing pays attention to not only customers, but also rivals and also many of the factors effective on needs and preferences of customers (Kok, Hillebrand and Biemans, 2003). Market oriented approach is considered as the ability of a firm in relation to outside environment. This approach enables a firm to challenge (with rivals) through predicting market’s necessities and creating long term relationship with customers, members of distribution channels and suppliers (Schindehutte, Morris and Kocak, 2008). Hammond, Webster and Harmon (2006) believe that a high level of market orientation leads to a higher ability on the part of organization to attain its goals. Thus, for a firm to be more successful it needs market oriented approach more than other strategic approaches. Market orientation causes organizations to become adjusted to environment and to develop their comparative advantages. Market oriented approach in organization leads to increase in individuals’ sensitivity against market development and change in their view towards the risk and also enhances the among-parts relationships in organization. The development of market orientation in all levels of organization is accompanied by the observance of among-part meetings and cooperation of marketing staff with other sections for discussions about the trends of market and their changes and also about the change in the environmental laws (Diamantopoulos and Siguaw, 2002). Many researches have shown
that market orientation approach has a correlation with market share, sales and quality of customer services (Gopal, 2008), commercial value (Sen, 2006), innovation (Elg, 2005; Sen, 2006), creation of a communication network (Li, 2005), entrance to foreign markets (Elg, Ghauri and Sinkovics, 2004), and export performance (Diamantopoulos and Siguaw, 2002; Cadogan et al., 2002).

**Entrepreneurship Orientation**

The concept of entrepreneurship has been expanded by Morris and Paul (1987), Covin and Slevin (1988) as a human factor in acquiring international advantages. It is also considered as a motor for economic achievement, job openings and society's reform (Gürol and Astan, 2006). To Schumpeter, entrepreneurship is more related to the ideas of new jobs which may cause some changes in the nature of the market. Entrepreneurship orientation is an approach that focuses on innovation in product market and risky projects; and has tendency to be a pioneer in innovation, it seeks superiority over rivals (Miller, 1983). Being a technological viewpoint, the entrepreneurship orientation approach increases the ability of a firm; and with the provision of technical knowledge, the approach makes it possible to introduce technical solutions for answering the needs of consumers ( Gatignon and Xuereb, 1997; Workman, 1993). Numerous studies in the area of entrepreneurship orientation approach indicate the existence of relationship between this variable and other variables such as: innovation (Elenurm, Ennulo and Laar, 2007), firm’s performance (Li, Ching-Yick Tse and Yan Gu, 2006; Zhang and Li, 2007; Matsuno, Mentzer and Özsomer, 2002), control systems (Morris et al, 2006), staff control (Zhang and Li, 2007), management of human resources (Morris and Jones, 1999), possibility of devolving choice to staff, providing adequate opportunity for the creativity of staff to appear and motivating them (Akbari, 2005), education level, organizational position, age and job experience (Azizian, 2006), psychological features and managerial abilities of graduates (Jafarzadeh, 2005), social capital (Ashna, 2005), organizational structure (Rahimi FilAbadi, 2004), social status of family (Parents Job and Literacy), (Mashayekh, 2004), national culture and business policy (Swierczek and Quang, 2004), and strategic planning (Li, Ching-Yick Tse and Yan Gu, 2006).

**Market Orientation and Entrepreneurial Orientation**

Despite being an approach that supports a firm in caring and its sensitivity to market desires and customers’ known needs, market orientation leads to enhancement of innovation opportunities in the direction of firm’s present situation and the acquisition of learning and experience in its current area; and instead of developing with customers’ fresh and novel needs, this approach adjusts organization’s products with the existing needs of customers. Considering the nature of market orientation approach which is known to be as a reactive response against needs of customers and actions of existing rivals, it is possible that some of the opportunities available for the development of new product may be lost regarding novel needs of customers (Atuaheme-Gima and Ko, 2001). Being often misleading, market orientation approach should not be used for the sake of innovation in product (Martin, 1995). As opposed to market orientation approach, entrepreneurship orientation approach having an exploratory nature and risky behaviors can be known as a mechanism for learning and choice in the process of innovation in product (Lumpkin and Dess 1996; Slater and Narver, 1995; Miller, 1983). However, entrepreneurship orientation approach as a strategic organization leads to the actions effective on innovation of the product which is of high level of risk and has no financial confidence (As opposed to the adaptive learning in market orientation approach) (Atuahene-Gima and Ko, 2001). An appropriate combination of the two approaches helps a firm match market environment and its management in order to response the existing and novel needs of customers (Lumpkin and Dess, 1996).
RESEARCH HYPOTHESES

**Product Quality** refers more to the superiority and advantages received from firm's new product than to rivals. Hunt and Morgan, (1995) believe that market orientation is an unseen resource that enables a firm to assemble information about market and to use it for the sake of creating the product which is congruent with market needs. Kohli and Jaworski (1990) found that market orientation creates an insight that causes the actions of staff to be conducted. According to Atuahene-Gima and Ko (2001), in order to acquire the greatest advantages from these unseen capabilities, not only must a firm act quickly, but also it must decrease costs with its risky, innovative actions and provide customers with a unique value. Therefore, each of the two approaches of entrepreneurship and market orientation and especially appropriate combination of the two will provide a set of behaviors for the production of new products that have qualities higher than those manufactured by their rivals and that are congruent with the present and future market. Atuahene-Gima and Ko (2001) state that the firms that are following an entrepreneurship orientation approach produce higher quality products as compared to firms having other strategic approaches. Covin (1991) believes that the firms following entrepreneurship oriented approach will offer products that are of high quality and probably with newer characteristics compared to those existing in market. Therefore, these products will supply customers with unique and distinct characteristics and advantages; however, there is a possibility that the products may face some problems to be adapted for potential customers. Taking into consideration the above-mentioned explanation, we can state that quality of product can be different regarding the strategic approach firms adopt and entrepreneurship oriented firms will produce products that are of higher quality as compared to other firms.

**H1:** There is a difference between quality of products made by the firms pursuing entrepreneurship orientation and those having market orientation.

**Marketing Synergy** refers to the concept that the resources and skills needed for the production of new products should be in agreement with firm’s existing resources and skills. Each firm formulates and performs a strategy in order to maximize the value of its resources. Hence, if the new product is put in the realm of the existing products, the possibility of success will increase in their performance. According to Hunt and Morgan (1995), market oriented approach increases firms’ knowledge about themselves through adding awareness about the outside environment. Covin (1991) believes entrepreneurship oriented approach provides some information about industrial trends and application of effective competitive strategies. Since the two strategic approaches provide some information about the outside environment, they both lead to a vivid understanding of a firm’s capabilities for responding to market demands. Atuahene-Gima and Ko (2001) state that market oriented firms choose new products that have the greatest coordination with their existing marketing resources and skills. Moreover, entrepreneurship oriented approaches follow the production of new products that are more probable to have advantages above their present ones (Burgelman, 1991). Considering the above-mentioned explanations it can be declared that firms’ marketing synergy is different regarding the strategic approach they use. In other words, Market oriented approaches have a better marketing synergy as compared to other firms having other strategic approaches.

**H2:** Marketing synergy is different in the firms having entrepreneurship orientation from those having market orientation.

Expertise in offering new product refers to a firm’s effectiveness in commercializing new products. This variable focuses on a firm’s effort to harmonize customers with firm’s products. Effective offering of new product needs a creative organizational atmosphere and an active system so that assurance can be made about staff’s commitment to product market. Atuahene-Gima and Ko (2001) state that it is expected for entrepreneurship oriented firms to be more
effective in offering new products to market as compared to other firms with other strategic approaches, and it is more probable that these firms be more active and more risk-taking to produce new products. Therefore, they claim that entrepreneurship oriented firms foster staff’s skills for the sake of offering new product and supporting it in removing obstacles for effective offering of the product. In contrast, market oriented firms may have new products that are in agreement with skills of their sales persons people and other staff. Hence, there is a small possibility for them to perform a significant action for offering a new product. It is more probable that market oriented firms, due to their focusing on the stable environment and the existing technology, have more expertise in offering new product than entrepreneurship oriented firms. Because of new product’s being probably new and novel to market and therefore incompatible with staff’s skill and also due to staff’s being less experienced in getting access to new markets, it seems that entrepreneurship oriented firms would face some problems in offering new product to market (Covin, 1991). Considering what mentioned above, there it is expected that firms’ amount of expertise in offering new products to market is different regarding the strategic approach they adopt. Thus, it can be expected that market oriented firms have a higher expertise as compared to other firms having different strategic approaches.

**H3:** Expertise in offering new product is different in the firms having entrepreneurship orientation from those with market orientation.

Management support for innovation refers to amount of support on the part of organization’s top managers for innovative actions in the organization. This variable is evaluated in two dimensions; the first one being the direct participation of management in the activities related to the production of new product and encouraging such actions while the latter is the importance given to these innovative actions by the management in organization’s strategy of human resources. Organization’s strategic approach is determined by the nature and effectiveness of its manpower’s performance (Schuler and Jackson, 1987). In entrepreneurship oriented firms where staff is able to create some changes in technology, manpower’s performance is supported so that innovation and risk-taking behaviors can happen. Similarly, market oriented firms start developing performance of manpower by considering their present situation (Narver and Slater, 1990). Relying on various researches (Covin and Slevin, 1988, 1989; Hart, 1992; Venkatraman, 1989), Atuahene-Gima and Ko (2001) state that entrepreneurship oriented firms are enjoying more support on the part of managers for innovation and thus are specifically focusing on risk-taking and experience of innovation in product. Considering the above framework it seems that amount of support on the part of managers for innovation is different regarding the firm’s strategic approach. It also seems that this support is more in entrepreneurship oriented firms than others having market oriented approach.

**H4:** Amount of management support for innovation is different in the firms having entrepreneurship orientation from those having market orientation.

Intensity of environmental competition refers to amount of competition, lack of opportunities existing in market, and difficult and unpleasant commercial situations for a firm that is too small to be able to have influence on environment (Covin and Slevin, 1988). Various studies relating to the approaches of market as well as entrepreneurship orientation and organization’s performance (Covin and Slevin, 1988, 1989; Jaworski and Kohli, 1993) have shown that entrepreneurship oriented approach and firm’s performance are influenced by intensity of competitive environment. Therefore, conservative method of management is more suitable for peaceful environments while entrepreneur method of management is more appropriate for competitive and rough environments. Since this variable refers to firm’s level of control on the environment, it can be expected that amount of...
intensity for competition or the competitive environment firms understand their strategic approach not being different.

H5: Intensity of competitive environment is the same in the firms having entrepreneurship orientation and those having market orientation.

RESEARCH METHODOLOGY

Sample

The statistics present in the website of the organization of Industry and Mining Agro industries indicate the presence of about 146 auto parts manufacturing firms in Tehran province. Considering the significance level of the statistical tests and the results acquired from other researches, sample size for the present research was determined to be at least 70 firms. Being anticipated not to answer all the questionnaires and therefore causing loss of data, 110 firms were selected through a simple random sampling without replacement and the questionnaires were sent to them. Out of these questionnaires, 71 were collected.

Questionnaires and Scales

Market orientation: to investigate this variable 10 questions were utilized using Narver and Slater (1990). Entrepreneurship orientation: to investigate this variable 8 questions were applied by Covin and Slevin (1989). Product innovation: to investigate these variable 12 questions were utilized using Atuahene-Gima and Ko’s scale (2001). To this aim, 4 variables of product quality (3 questions), marketing synergy (3 questions), expertise in offering product to market (2 questions), and amount of management support for innovation (4 questions) were used. Intensity of environmental competition: to investigate this variable the scale of Covin and Slevin (1989) was used. All the above questions were designed into the frame of Likert scale having 7 levels from “1= strongly agree” to “7= strongly disagree”.

Data Analysis

Classification of firms based on the strategic approach: Based on the score received from each firm and with the aid of the following logical model, the firms under analysis were first divided into two groups with the first group having market...
oriented approach and the latter having an entrepreneurship oriented one. As a result of this classification 37 firms (%52) were decided to have market oriented approach and the remaining 34 firms (%48) were considered as having entrepreneurship orientated approach. In the following model, Mean M refers to the average rank of each firm considering the variable of market orientation and Mean TM refers to the average of the average rank of all firms considering the variable of market orientation; Mean E refers to the average rank of each firm considering the variable of entrepreneurship orientation and Mean TE refers the average of the average rank of all firms considering the variable of entrepreneurship orientation. Then, spearman correlation coefficient was used for measuring the correlation between the items under investigation (Table 1).

Group 1: if (mean M - mean TM) > (mean E - mean TE) = Market Orientation

Group 2: if (mean M - mean TM) < (mean E - mean TE) = Entrepreneurship Orientation

Hypothesis Testing

Due to the scales of the research variables’ being qualitatively ordinal, a nonparametric Mann-Whitney test was applied for the sake of testing the hypotheses. Comparing the means of the ranks of the variable Product Quality in the two strategic approaches of market orientation and entrepreneurship orientation indicates the difference between the two approaches in which the mean of the rank of quality in entrepreneurship oriented firms is more than market oriented firms. However, this difference is not statistically significant at the alpha level of 0/05(α=0/05) (z-value = -1/36; p= 0/17). Therefore, the first hypothesis is rejected. Similarly, comparing the means of the ranks of the variable Marketing Synergy between market oriented firms and entrepreneurship oriented ones shows, although there is a difference between the means of the ranks and while the mean of the rank of this variable is more in entrepreneurship oriented firms than market oriented ones, the difference is not statistically significant at the alpha level of 0/05(α=0/05) (z-value=-1/12; p=0/26) and the second hypothesis is also rejected. The results of Mann-Whitney test state, the mean of the ranks of the variable Expertise in Offering New Product to Market is more in entrepreneurship oriented firms than that of market oriented ones. This difference, however, is not statistically significant at the alpha level of 0/05(α=0/05) (z-value=0/94; p=0/34) and the third hypothesis is also rejected. Furthermore, the results show, the mean of the rank of the variable Amount of Management Support For Innovation is greater in

<p>| Table 2: The Mean of the Rank of the Firm under Analysis Based on Independent Variables |
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<th>Rank Mean</th>
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<th>Firm’s Approach</th>
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<tr>
<td>Product Quality</td>
<td>Market Orientation</td>
<td>37</td>
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<tr>
<td></td>
<td>Entrepreneurship Orientation</td>
<td>34</td>
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<tr>
<td>Marketing Synergy</td>
<td>Market Orientation</td>
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<td>Entrepreneurship Orientation</td>
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<td>Expertise in Offering New Product to Market</td>
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<td>Intensity of Environmental Competition</td>
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entrepreneurship oriented firms than market oriented ones and the difference is statistically significant at the alpha level of $0.05 (\alpha=0.05)$ and the fourth hypothesis is accepted ($z$-value=$-2.24$; $p<0.05$). The results of data analysis about the research’s fifth hypothesis show, the difference between the means of the rank of the variable Intensity of Environmental Competition between entrepreneurship oriented and market oriented firms is not significant at the alpha level of $0.05 (\alpha=0.05)$ and the hypothesis that there is no significant difference in the intensity of competition environment between the firms having entrepreneurship orientation and those pursuing market orientation is accepted ($Z$-value=$-1.44$; $p=0.14$)(Tables 2 and 3).

**CONCLUSIONS**

The present research has dealt with investigating the effect of the two approaches of market orientation and entrepreneurship orientation of firms producing auto parts on innovation in products. In the direction of the literature existing in the area of the variable ‘Innovation in Products’ the following variables were introduced and 4 hypotheses were formed: product quality, marketing synergy, expertise in offering new product to market and amount of management support for innovation. Moreover, to investigate the intensity of environmental competition that the firms are faced with the fifth hypothesis was introduced. Some of the findings of the present research are in agreement with the results of the previous researches (Jaworski and Kohli, 1993; Covin and Slevin, 1988; Schuler and Jackson, 1987). The results of the research show, the variable of product quality, marketing synergy and expertise in offering new products to market do not have statistically significant differences with each other in entrepreneurship oriented and market oriented firms. Considering the research literature, entrepreneurship oriented firms, due to the provision of technical knowledge, are able to introduce different solutions for satisfying customers’ needs (Gatignon and Xuereb, 1997; Workman, 1993), and therefore can offer products with high quality and probably with newer characteristics as compared to the products existing in market. Similarly, market oriented firms pay attention to not only customers, but also rivals and also many of the factors effective on customers’ needs and preferences (Kok, Hillebrand and Biemans, 2003; Hunt and Morgan, 1995). On the other hand, as market oriented firms offer only the new products that are congruent with skills of their sales persons and other staff and because their concentration is on their stable environment and the existing technology, there is a small probability for them to perform any specific action for offering new product. As continues, the research finding show, managers’ support for innovation is greater in entrepreneurship oriented firms than market oriented ones and this finding is in agreement with the results of the previous researches (Zhang and Li, 2007; Atuahene-Gima and Ko, 2001; Morris and Jones, 1999). The research findings confirming the last hypothesis indicate, firms are not faced with different conditions and do not have any control on

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<th>Table 3: Result of Mann-Whitney Test</th>
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<td><strong>Product Quality</strong></td>
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<td>Mann-Whitney U</td>
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* $P < 0.05$
environment, considering the strategic approach they have adopted and with regard to the intensity of environmental competition (limited opportunities for marketing, severe competition over the price and the high environmental risk). Although the results of the present research do not show a significant difference between the two firms of market orientation and entrepreneurship orientation with the statistical sample under analysis in the area of variables of product Quality, Marketing Synergy, and Expertise in offering New product to market, the existing theoretical literature states that the adoption of a balanced strategic approach in the area of market orientation and entrepreneurship orientation will enable firms, while acquiring knowledge about the present conditions of market, rivals and customers, not to fail to pay attention to future conditions. Such an approach will also enable firms not only to effectively satisfy customers’ needs, but also to increase the probability of firms’ success with the creation of innovation in product while acquiring competitive advantage. A balanced combination of the two approaches of market orientation and entrepreneurship orientation will provide managers with the probability to make use of firm’s existing abilities such as the available knowledge related to preferences and demands of customers, conditions of market, rivals, skills and expertise of firm’s salespeople and its marketing resources together with the novel technology and innovative methods, through encouraging entrepreneurship and providing innovative opportunities in product.

Limitations

Like any other research, the present research has also some limitations which seem necessary to be mentioned. First of all, the research was restricted to the auto parts manufacturing industries in Tehran province. Therefore, the statistical sample used and the results found cannot be generalized to other industries, secondly, due to that fact that no noticeable research is reported in the field under investigation in the country, it seems impossible for the results to be compared with other researches. Thirdly, considering the scale of the research variable a nonparametric test, not a parametric one, was used for data analysis.

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