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An Empirical Study on the Impacts of Market Orientation and Innovation on New Product Success (Case Study: Food Manufacturers in Isfahan, Iran)

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Abstract

Today's highly competitive business world has made the business success of a firm based on its ability to anticipate market opportunities and to capture these opportunities through organizational resources. Presenting successful new products is a way through which organizations could achieve to a favorable market position. The objective of this study is to determine factors impacting new product success. Data were collected from 118 respondents who were working as managers and staffs in marketing, sale and R&D departments of food manufacturers in Isfahan, Iran selected by random sampling method. Structural Equation Model was used to test four proposed hypotheses. Statistical results demonstrated and confirmed the positive impact of innovation, customer orientation, R&D marketing cooperation and competitor orientation on new product success.

Keywords: innovation, customer orientation, competitor orientation, R&D-mrketing cooperation, New Product Success.

1. Introduction

Today's highly competitive business world has made the business success of a firm based on its ability to anticipate market opportunities and to capture these opportunities through organizational resources. Firms need to create and maintain sustainable competitive advantages in order to survive as market leadership, market share, and sustainable growth are enabled through the process of developing and launching successful new products and services (Barczak and Kahn, 2012). The performance of a firm is based on its sustained competitive advantage and sustained competitive advantage, in turn, is described by idiosyncrasy and immobility of firm resources (Kandemir et. al, 2006). One major determinant of sustaining competitive advantage is the ability of the firm to develop and launch successful new products, as new products are vital for the viability and success of a firm (Song and Parry, 1997). New products are viewed as a solution to a need. Successful products are those that provide efficient solutions to strong customer needs (Toubia, 2008). Therefore, firms allocate considerable resources in their quest to develop new products offering an advantage over competitors (Slotegraaf and Atuahene-Gima, 2011). However, what should firms do to launch a new product development successfully? In other words, what are the items essential for a firm to succeed in implementing and maintaining a new product project? Innovation has been produced as an antecedent in examining the determinants of NPS (Calantone et al., 2006; Szymanski et al., 2007). Innovation plays an important role in an organization's goal achievement, particularly in creating new products that meet the needs of the market (Wong, 2012). However, although being innovative, as an internal competency can considerably empower an organization to foresee and capture new ideas and even to lead consumers to certain needs and wants it cannot alone sustain organizations' statues in the market by itself. Organizations need to have an external perspective by which they can achieve their favorable market position. Extensive research has been done on the antecedents of NPS, concentrating on its different aspects, but what is aimed in this study is to conceptualize a comprehensive framework regarding both internal and external aspects for a company to succeed in the process of developing a new product. Hence, we examine the hypothesized impact on innovation as the internal factor and elements of market orientation as the external factors on new product success.

2. Literature Review and Model Development

In the age of product orientation, firms are increasingly allocating considerable resources for developing superior products, improving them over time and positioning them correctly in markets (Wong and Tong, 2012). New product performance can be expressed as the new product's outcomes in terms of sales, market share and profitability (Carbonell and Rodriguez, 2006).

2-1. Innovativeness

Given the fact that in the business context the most important goals of each organization to fulfill are growth and profitability, they have to allocate considerable resources in these areas and to achieve the overarching objectives of profit-making and growth, several other goals, including the goal of innovation, must be defined and pursued (Wong, 2012). While some firms take a low-price strategy and control costs by copying their competitors' products, the

others chose the strategy of fostering innovation in the hope that new and innovative products will generate new markets and fresh revenue (Wong and Tong, 2012; Chang and Horng, 2010; Shi and Zhu, 2010). Innovation, in a business context, refers to the purposeful search for wealth-creating opportunities and turning these opportunities into action plans (Wong, 2012). Carbonell and Rodriguez, (2010) found a substantial positive impact of innovation on new product performance outcomes. Other studies also have proved a positive association between innovation related activities and overall new product success (Carbonell and Rodriguez, 2006; Chen et al., 2005). On the other hand, a number of authors also have discovered that the lack of innovation is a major cause of new product failure (Wong and Tong, 2012; Sethi et al., 2001). Regarding the results mentioned above the first hypothesis is developed as:

H1: There is a positive association between innovation and new product success.

2-2. Market Orientation

The relationship between market orientation and new product success has gain considerable attention in recent years demonstrating a positive impact of market on new product performance (Baker and Sinkula, 2005). As consumers may suffer from a lack of full knowledge of what is available in the market and what might best meet their needs, a firm that understands the market and its customers well, would enjoy a significant competitive advantage over its competitors (Slater and Narver, 1994). Market orientation has been viewed from different perspectives by different authors. Considering Market orientation as an operative process, Kohli and Jaworski (1990) believe that it is conceived as a set of organizational behaviors and processes, market intelligence generation; market intelligence dissemination; and responsiveness to such intelligence across departments (Kohli and Jaworski, 1990). Market orientation also has been seen as an organizational culture that emphasizes the use of firm-wide cooperation to create superior values for its customers, outperform competitors and generate more profit for a firm (Baker and Sinkula, 2007; Li et al., 2010; Narver and Slater, 1990). However, Narver and Slater proposed their model in 1990 on the three core elements of market orientation (Davis et al., 2010) that are considered in this study either. These elements are customer orientation, competitor orientation and R&D and marketing cooperation (RMC).

2-2-1. Customer Orientation

Expanding knowledge is the inevitable necessity for firms which are to compete in today's unstable market. Firms do need to listen to the voices of their customers, respond to their needs in order to maximize their long-term profitability (Atuahene-Gima and Evangelista, 2000). Customer orientation is the attitude which contributes organizations to achieve these capabilities. Customer orientation can be defined as "an active firm-wide process which drives a firm to continuously identify and meet their customer needs to gain sufficient knowledge to generate superior value to its customers" (Wong and Tong, 2012). Kotler et. al, (2006) believe that about 28 per cent of new product ideas are driven by matching and listening to customers therefore, it can be claimed that customer orientation plays a significant role in New Product Success. NPS depends significantly on how a product is perceived by its target customers and the functionality and quality of its product performance (Wong and Tong, 2012). Therefore, it can be hypothesized that:

H2: Customer orientation is hypothesized to influence new product success positively.

2-2-2. R&D- Marketing Cooperation (RMC)

Although customer orientation influences firms' capabilities to understand and meet their customers' needs and wants it is not easy for the firms to achieve such a device. But it needs a cross functional cooperating between involved departments. The most influential functions involving in the process of designing and developing new products based on market information and customer preferences are research and development and marketing departments. Nonetheless, Gupta et al. (1986), argue that there are socio-cultural differences between managers in R&D and marketing departments which can influence the cooperation between the two groups. RMC is considered as the most important and most challenging cross-functional cooperation and has so far received the greatest amount of academic attention (Becker and Lillemark, 2006; Shaw et al., 2004; Sherman et al., 2005). Wong and Tong, (2012) claim that as all the new innovative products produced by the firm are not acceptable for customers, the cooperation between R&D and marketing in order to design and make new products according to customers' prefers not only innovative but also marketable is an essential necessity for the firm. A number of authors also have found RMC as one of the key success factors of new product success (Millson and Wilemon, 2006; Rodr´guez et al., 2008). Despite the fact that R&D and marketing have different knowledge that jointly contributes to the success of a NPD project, the two functional areas tend to have different perceptions as to their respective contributions (Wong and Tong, 2012). Moreover, close RMC narrows the knowledge and perception gaps, increase mutual understanding and reduce new product development risks (Luca et al., 2010). The relationship between RMC and NPS is predicted as:

H3: R&D marketing cooperation can influence new product success in a positive way.

2-2-3. Competitor Orientation

As mentioned in previous parts Kotler et.al, (2006) estimated 28 percent of new product ideas driven by customers; they also believe that about 30 per cent of new product ideas come from analyzing the competitors' products (Wong and Tong, 2012). It means that in additional to customers and internal cross-functional cooperating, firms need to consider their competitors as an important external factor that can influence new product development activities of the firm. In other words, to enhance their chances of NPS, firms not only have to know what customers need, but also what its competitors are doing in meeting such needs (Kotler, et al. 1999). Carson and Carson, (2003) define competitor orientation as a firm-wide endeavor to understand the market or an industry where the company is operating in and to continually monitor the activities of its competitors, learn from their successes and failures to ensure that its own product will be a real improvement over those of its competitors. Wong and Tong, (2012) claim that this crucial competitor knowledge enables NPD team to make informed decisions and develop new products that surpass those of its competitors. Hence, the hypothesized relationship between competitor orientation and new product success is presented:

H4: competitor orientation is proposed to have a positive impact on new product success.

The conceptual framework is developed based on the literature review:

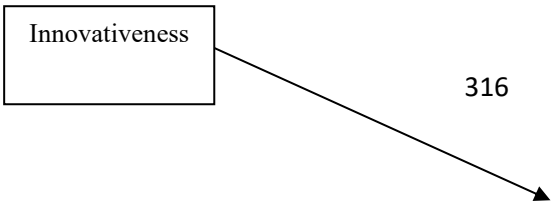
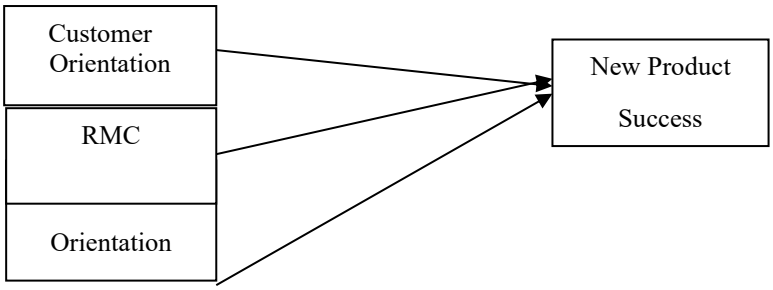


Figure 1.



3. Research Method

3-1. Sample and Data Collection

The target population of this study consists of managers and staffs of food manufacturers in Isfahan. Random sampling method was used to have a sample of 175 respondents. A total of 160 usable questionnaires out of 175 were returned, which demonstrates a response rate of 91.42 percent. The final analysis was performed based on 160 questionnaires. A self-administrated questionnaire which comprised five parts with a total of 32 questions was developed adapting sets of previously validated measurement scales from pioneering research studies. Items assessing the impact of innovation on NPS and the items capturing respondents' perceptions of NPS and its status among examined samples were adapted from Wong (2012), those of customer orientation and competitor orientation were from Kahn (2001), and those of R&D-marketing cooperation from Rodr´guez et al. (2008).

4. Findings

4-1. Data Analysis

As the questionnaire items for each construct were adapted from prior studies, the validity had already been established. However, having modified the wording of these items in order to meet the needs of the current study, factor analysis was performed to confirm the validity of the modified items. CFA on market orientation including 11 items (5 items for RMC, 3 items for customer orientation and 3 items for competitor orientation), innovation with 5 and on NPS with 16 items confirmed the suitability of the measures to be used for further analysis (Table 1). The reliability of the questionnaire was also estimated by The Cronbach's Alpha Coefficients (Table 2).

Table 1. Results of the Confirmatory Factor Analysis

chi-square	231.52
Df	114
p-value	0.11
RMSEA	0.095

Table 2. Research Measures and constructs reliability

Construct	Cronbach's Alpha
NPS	0.894
Innovation	0.901
Customer orientation	0.911
RMC	0.832
Competitor orientation	0.878
Total	0.903

4-2. Hypotheses Testing

In order to test the research's hypotheses Structural Equation Analyses (SEM) was used using LISREL software. This technique enables the simultaneous estimation of multiple regression equations in a single framework. Therefore, all direct and indirect relationships in the model can be estimated simultaneously, and thus the method allows all the interrelationships among the variables to be assessed in the same decision context. As shown in table 1 the results indicate that chi-square is 231.52 calculated by LISREL software. As degree of freedom is 114, χ^2 / df = 2.03, the lower amount of χ^2 / df demonstrates the more suitability of the proposed model. Other results are P-value=0.11, RMSEA= 0.095. These results can prove the proposed model. Covariance matrices were analyzed in all cases. The correlation matrix of data is shown in table 4. Other results based on LISREL's output are illustrated in table 3. Such results prove that the proposed model exhibits a reasonably good fit to the data. The principal model of research is illustrated in figure 2, figure 3 also illustrates the results of the hypothesis testing. Circumstantial evidence t is used to find out whether or not proposed relationships are significant. This circumstantial evidence refers to the proportion of each parameter's coefficient to the standard deviation error of that parameter which will be significant when it is higher than 2 (t ≥2) in t-test and higher than 1.96 (z ≥ 1.96) in z-test. Hypotheses testing in table 4 shows that innovation can influence new product success (H1: γ_1 =0.73, p<0.05). These results also confirm the positive impact of market orientation elements on new product success, customer orientation (H2: γ_2 = 0.52, p<0.05), RMC (H3: γ_3 =0.60, p<0.05), and competitor orientation (H4: γ_4 =0.48, p<0.05).

Table 3. Fit indices for the path model

GFI (Goodness of Fit Index)	0.91
RSMEA (Root Mean Square Error of Approximation)	0.095
CFI (Comparative Fit Index)	0.89
SRMR (Standardized Root Mean Square Residual)	0.004
NFI	0.90

Table 4

Independent variable	Dependent variable	Hypotheses	Coefficient	T-value	p
Innovation	New Product Success	H1	0.73	4.56	<0.05
Customer orientation	New Product Success	H2	0.52	7.43	<0.05
R&D-marketing cooperation	New Product Success	H3	0.60	3.23	<0.05
Competitor orientation	New Product Success	H4	0.48	8.12	<0.05

5. Discussion

This study examined the impacting antecedents of new product success, and showed that innovation and creating new ideas for new products can lead to higher levels of new product success (hypothesis 1). This finding shows the unstable status of the market and that customers' preferences are changing continuously and therefore highlights the importance of innovativeness to capture their switching tastes and meet them in an appropriate speed. On the other hand, this study confirmed the impact of market orientation as an external attitude on new product success. According to this part of findings the more a company pays attention to the external environment the more it can provide new products successfully. The first element was customer orientation. This aspect of market orientation is closely associated with innovation, as by having close relationships with customers firms can extent their knowledge about customer' needs and wants and this is what a company requires for providing innovative products to meet those requirements (hypothesis 2). Only those companies can survive in the market that can understand what their customers want and even foresee their future wants and then design and produce innovative products matching these wants. Customer orientation and innovativeness also can enable companies to influence and pursue their customers and lead them towards new ideas created by the company. The other element of market orientation that its impact on new product success was confirmed in this study is cooperation between R&D and marketing departments (hypothesis 3). According to literature review these department are of the most important functions in firms with different but crucial attitudes and perspectives. Companies can impart this cooperation in order to balance the novelty of new products and marketing activities capturing customers' attention and leading them towards these products. Finally, the impact of competitor orientation on new product success was found in this study (hypothesis 4). It shows that in addition to customers and internal cross-functional cooperating, there is a necessity for the firms to monitor their competitors. Firms not only have to know what customers need, but also what their competitors are doing in meeting such needs. This is the way that a firm could succeed in the process of new product development.

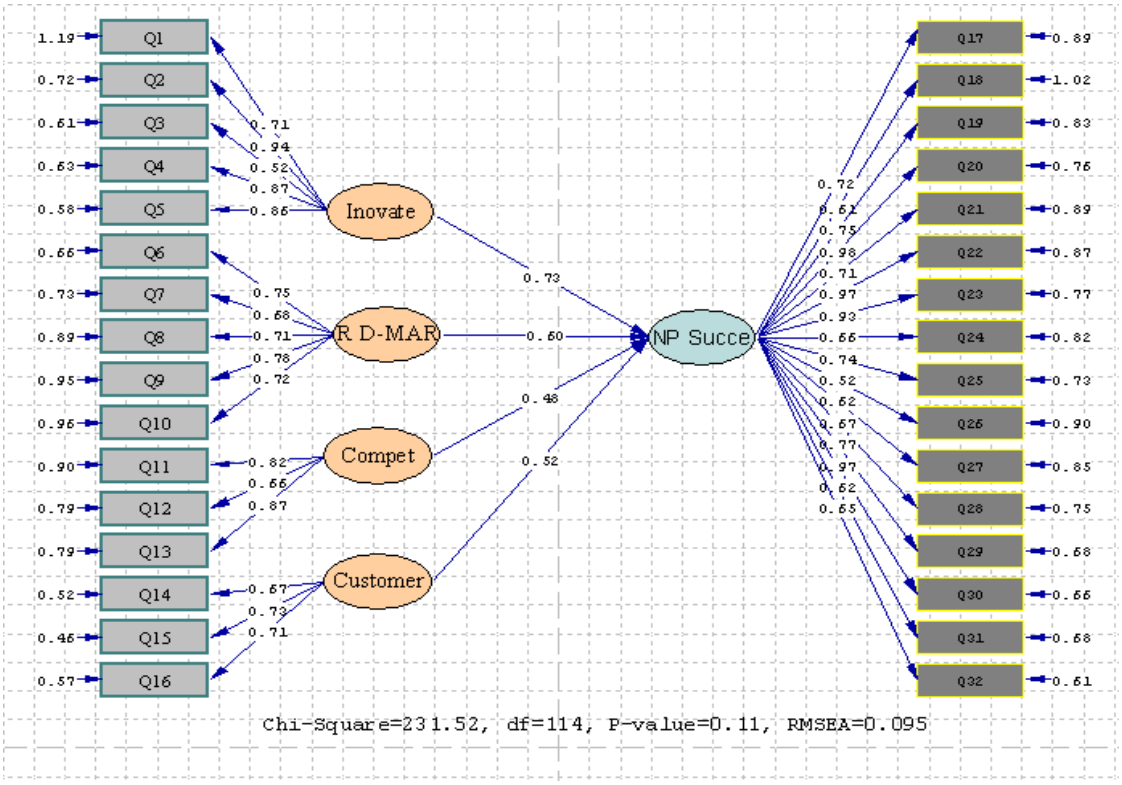


Figure2 . Principal Model of Research

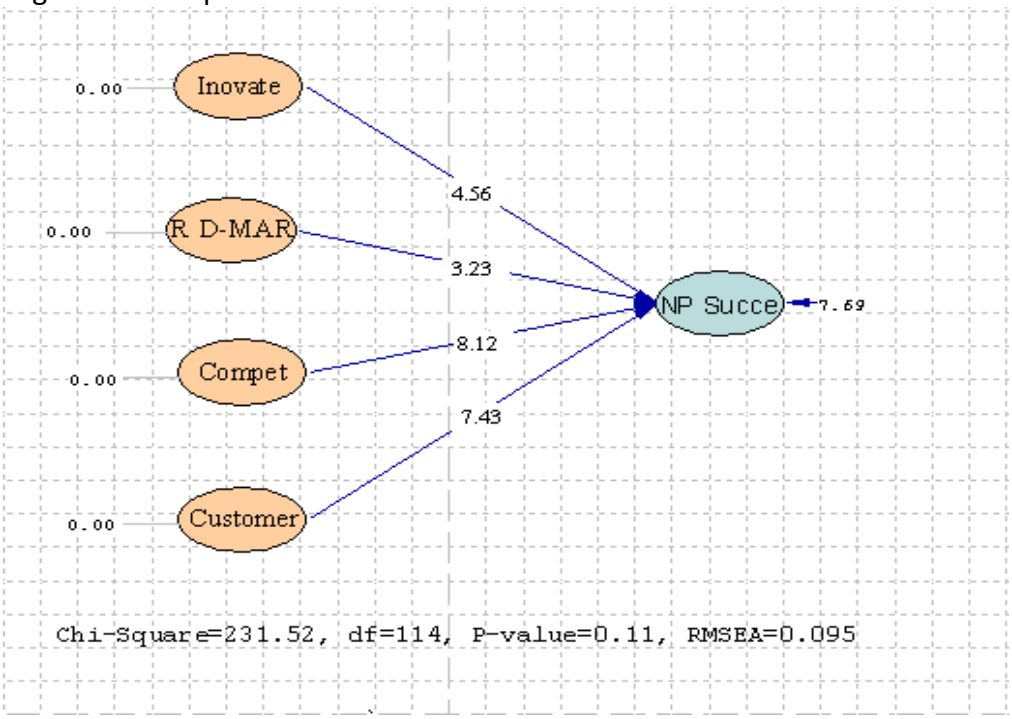


Figure 3. Model of Adjusted Index of T

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