IDENTIFYING AND PRIORITIZING NEW OPPORTUNITIES RECOGNITION RESOURCES FOR NEW PRODUCT DEVELOPMENT IN IRAN DISTINGUISHED FOOD INDUSTRIES

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ABSTRACT
Due to creation of agile changes in the conditions of competitors, Technology, and customer’s tendencies, companies are no longer able to have ongoing reliance on their existing products. Customers look for the newer and more advanced products and companies are inevitably forced to produce and supply more innovative products that meet the needs, companies have enhanced increasingly their attempts in the field of new product Development. There for , it is highlighted in this regard that companies and organizations resort to resources helpful for identification of appropriate opportunities to new product Development, in order to address the needs of customers in such a dynamic environment as fast possible. At the present research, after offering definitions about new product development and opportunity identifications, we proceed to determination of resources, indices and opportunities , and then we specify that strategic specification with the upper-most ranking are the most important resource and other factors constitute the least important of these identified resources. Also, the utmost pure coherence of 88 number is relevant to specifications of the product and other factors.

Keywords: New Product Development, Opportunity Identification, Food Industry and Opportunity Resources

INTRODUCTION
One of the most important environmental factors having direct influence on mechanisms of production organizations constitute competitive factors with domination over organizational environment, production and development of new products constitute a process that is always posed as a competitive advantage for production organization. On the other hand, new product development and production process should positively address customers need and provide an appropriate competitive arena for the organization with reliance on technology superiority and an adequate allocated budget. Changeability of competitive rules in the world of business has manifested special importance for new product development presentation process to the market. Nowadays, most of organization have more than ever realized that mere reliance and dependence on traditional competitive levers such as quality enhancement, cost reduction and differentiation Differentiation in products and services presentation is not sufficient and instead conception such as agility and flexibility in competition has been highlighted and tendency towards presentation of new products and services to the market justifies by itself this change of perspective.

New product development comprises a significant part of any business activity. New products provide growth opportunities and competitive advantage for the companies. Nowadays, survival of the organizations is highly dependent on having tendency towards new products and implementation of methods of producing new successful products. Due to technology advancement, the more increasing competitiveness among organizations, advent of new productive equipment and sciences, fundamental changes in requirements and preference of customers and so on, new products production has been confronted with new challenges and also because of risks involved with products supply chain, companies should always think over improving new products development process( Akhbari, 2007).

According to the definition presented by management association of product development, new product

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development process consists of all processes related to strategy, organizing conceptual production, creation and evaluation of marketing plans, and commercialization of a new product (Garet and Bausson, 2006). Cooper also states that new product development consists of utilizing resources and capabilities for creation of a new product or improvement of an existing one (Chin et al, 2006).

During the past thirty years, much research work has been done on effectiveness of new product development processes and a variety of paradigms for making these processes systematic have been presented. On the other hand, some indices as key factors of success for new products have been introduced by researchers. Offering new products and diversification strategies are recognized as key factors of success. For organizations and in order to reach success and guarantee their survival, they are required to move along the horizon of identification and having access to opportunities of new product development. Opportunity recognition has been defined as an ability to identify good notions and transfer them to business activity so that it produces value-added and income (Corbett, 2007).

Managers are evidently in need of adequate managerial activities on one hand and following appropriate opportunities on the other hand, for their business growth. Resources of these opportunities might be found among some methods of environmental changes such as technological breakthroughs or by some prominent changes in the job market such as derailing a competitor (Hubbert & Carson, 2013). Economical, socio-political changes and also competitive activities, growth of demand and changes in the supply chain and so on can be refer to as opportunity resources for small and medium size companies (Hubbert & Carson, 2013).

Theoretical research principle

Opportunity resources

Peter Darker (1986) can probably be known as one first researcher who has grouped opportunities resources. He has recognized seven resources for opportunity. The first four resources are related to the internal environment. A company whether it be a commercial one or to be sort of public services institutes is at first observable by those working in that industry or that service segment. These four resources are as follows:

- Unexpected happenings: Unexpected success, Unexpected failure and Unexpected external events
- Incompatibility between a reality which exists in practice and a reality which is assumed to be existing or shall be existing
- Innovation based on requirements processing
- Changes in the industry or market structure that everybody is unaware of them

The other three opportunity resources which are created in the intellectual and social environments outside the company are as follows:

- Changes in population characteristics
- Changes in perceptions, preferences and conceptions
- Advent of a new knowledge

These resources are somehow overlapping but different from risk-taking, difficulty and sophistication perspective and at one time, more than one of them can consist an innovation factor. However, the above-mentioned instances explain cause for most of innovation opportunities (Deraker, 1998).

Timose has differentiated factors that cause entrepreneurial opportunities to appear. These factors are as follows:

- Changes in rules and regulations
- Recovery of value chain and distribution channels
- Specialized advantage under self- ownership or under contract
- Entrepreneurial leadership
Research Article

- Adherence of market leaders to customs and traditions, and disregard of customers requirements, and preferences
- Unpredicted events.
- Changes in the industry structure
- Demographic changes
- Changes in customer values
- New knowledge (Yeganegi, 2004)

Also, opportunity resources from Gandry's perspective are as follows:

- Working experience
- Having similar business (rivals)
- Personal preferences and entertainments
- To be lucky
- Family and friends
- Training and expertise (Yeganegi, 2004)

Schwartz and his colleagues have divided the whole process into two stages of recognition and exploitation of opportunity in their studies, using a comparison of research results obtained in 1989 and 1998.

In their article, they have introduced a persistent and provisional paradigm for opportunity recognition, results obtained in this research also show that opportunity recognition is at first a process and more over, its different stages entail each other consecutively and some stages might be not observable in some instances. Another key point achieved in this research implies that time factors and industry-related variables have influence on how stages are implemented by the entrepreneur (Schawrtz Teach, 2000).

The two for-mentioned researchers believe that in the general stage of opportunity recognition, all people are in consensus that there is an opportunity. But this one cannot be defined as an opportunity for everybody; it is only in the stage of suitability recognition of an opportunity that it becomes definable for a certain person. It can be concluded that some factors affect compatibility of entrepreneurial opportunities arises from different resources.

New product development and its objectives

New product development is undertaken as a novel approach to address environmental changes and is a preface for entering competitive arena of today's dynamic world.

New product development projects are defined with a process approach in alignment with conversion of market opportunities into the organization's profit. A new product is considered to be prosperous if it could be offered to the market at the right time, by observing quality standard and at a competitive cost (Viloscorecona et al, 2007). Aligned with the definition of new product development, it can be stated that this development consist of a set activities and the policy for growth, which during different stages of production for existing segments of the market brings about changes and partial or overall amendments in the commodities (Cooper, 1990).

Why do we develop a new product? Why do we try to accelerate this process?

Nowadays, acceleration of product development processes and quicker presentation of services and products to the market is an issue that companies and organizations pay special attention to. If we consider the product development process as race consisting of three sorts of time, which are as follow:

1) Production time: It is the stage of developing the initial notion for the new product up to the stage before product presentation to the market.

2) Market entry time: it is the stage of product presentation and supply to the market (product marketing).

3) Time to earn profit: It is the stage, we pass by breakeven point and earn profit.

A company or organization would be the real winner, which has been winner in all three sections of the race. Achievement of such prosperity induces us to call the product development process as the process of
prosperity access time. It is worth mentioning that during products presentation to the market, there are three different sorts of approaches taken by the competitors for product supply to the market. These approaches are as the following:

“To be the first in the market” approach: organization tends to be the first supplier of the new product to the market.

“To be the first follower” approach: in this approach, organization did not go to be the first. New product supplier in the market as the pervious approach, but intends to be the fastest supplier of that product.

“To be a normal follower” approach: organization is not first follower, but is accounted among followers of the new product producers and suppliers (Akhbari, 2007).

**Key success factors in new product development**

Key success factors can be defined as some scopes in which if the results obtained are satisfactory, a prosperous competitive performance for the organization would be guaranteed (Rockart, 1979). Key success factors are known as scopes in which the organization property is guaranteed by attainment of satisfactory results.

A variety of studies have been performed to explain key success factors in the new product development. Brown and Eisehardt (1995) have described researches performed on the success or failure factors of the new product development projects under three general subjects. These subjects include logical planning, communications networks, and systematic solution of issues. Logical planning for systematic solution of issues constitute a significant matter that should be exact, structured and systematic in nature and it should also have an appropriate relationship with the strategy, planning and internal and external communications of the organization.

Pooltan and Barclay (1998) also have described success factors in terms of two general levels of tactic and strategy, with respect to the company’s strategy. On the other hand, Hernard and Symanski (2001) instances having strong linkage with these two general levels. These researchers have also described market specifications as environmental situations which should certainly be evaluated and get aligned with the company’s strategies.

In another study performed by Kandemir and his colleagues in 2006, key success factors have been divided into sets of human resources, development resources, evaluation resources and initialization resources. Moreover, findings reveal that most significant factors for success consist of: 1- product advantages, 2- definition of the required product and expertise prior to development, 3- technological synergy and 4- marketing.

Suwannporn and Speece (2010) have also performed another study on success factors of new product development in Tiland’s food industries, which have consequently grouped 15 key factors exploited from the literature in four general as follow: utilizing market research in evaluation of product sample. Use of market research for guidance of R&D projects, use of market research prior to commencement of R&D projects, and use of market research for determination of the status and pricing first factor (marketing research), knowledge sharing within the team, knowledge sharing at teams level, ability to follow up new products information, having informal communications along the work process, focusing knew product notions on the company’s merits as second factor (information and communication), declare of new product as an organizational merit, top management commitment and support for new product development projects, planning for new product development and utilizing sort of a tool for measurement of new product development in the organization as third factor (new product strategy and planning), communications with raw material supplier in food industries and communication with supplier in food industries as fourth factors (supplier circles).

Balclay (2000) also points out that one of methods for creation of new product is to make use of research and development unit. Besides, with regard to ceasing expenditures of producing new products. Some companies produce similar types of a product by copying the existing brands or somehow by research and development activities revive the old brands. If he company’s R&D activities are so strong that new
designs and notions can be presented, then company would be successful in the course of new products production. After vast review of the performed researches, effective components (indices) on the success have been summerized in detail in table 1.

**Table 1: NPD success factor**

<table>
<thead>
<tr>
<th>Factors</th>
<th>Research\researchers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Real needs of customer</td>
<td>Gupta and Wilemon(1990)</td>
</tr>
<tr>
<td>Cooperation with marketing activities and R&amp;D</td>
<td>Maitique and Zirger(1999)</td>
</tr>
<tr>
<td>IT</td>
<td>Mathieu (1996)</td>
</tr>
<tr>
<td>Applying experience gained from previous projects.</td>
<td>Leen et al (1996)</td>
</tr>
<tr>
<td>Exist a lot of internal communication within the organization.</td>
<td>Montoya-Weiss and Calantone (1994)</td>
</tr>
</tbody>
</table>

By complete study of the past researches performed on new product development, this conclusion is reached that many success factors for new product development have been stated by researchers which
everyone of them can play an important role under special circumstances of the product. This is due to the fact that these factors in different environments can constitute a source for opportunity recognition or have different impacts on the new product development process. Moreover, lack of a comprehensive view and existence of information gas are important. On the other hand, past researches generally could not explain complete set of these factors. Therefore, it has been attempted in this study that all studies performed on the basis of expert viewpoints and with respect to the research subject to be collected and presented in table 1.

RESEARCH METHODOLOGY
Prior to beginning the research work, researcher should clearly determine a statistical society framework for its research so that his/her assignment is concurrently specified and it can be simply introduced to others. Statistical society consists of all the people, Events or other things that the researcher wants to researcher on them, so that they have at least one characteristic in common, the present research society includes all expert forces working in five food industry companies located in Tehran city and its suburbs, with the following characteristics:

1- Having at least 5 years of working experience.
2- Having bachelor degree higher.
3- Being acquainted with new product development debates in food industry.

To obtain the number of samples from among five selective companies, initially some pieces of information about the number experts working in each of the companies with relevance to present research were collected, which totally includes a statistical population of 270 people, then the sample number of 160 was obtained by using Demorgan table. Also for determination of number of questionnaires that should be collected from each plant, we used the classified sampling method and finally 160 questionnaires were distributed among five food industry plants.

Validity and Reliability measurement of the questionnaire
After reviewing the literature about the afore-mentioned subject of indices, resources, and opportunities exploited, a questionnaire was documented and delivered to 10 experts acquainted with the research subject to validate its content reliability. Also with regard to the thesis subject, in an interview with 10 people of experts in different fields of involvement with the new product development, the number was described and discussed in 30 minutes. Finally, since those questioned were emphasizing on the massiveness of the questionnaire, we used the method of structure qualitative interview, for this sake, They were asked to answer the questions with two options to response such as are you an opportunity recognition resource for the new product development or not? In the end required amendments were made on the basis of their collected viewpoints and then the questionnaire was resent for some experts that finally received validation.

By stability it is meant that a measurement tool, which has produced for measurement of a character, should represent similar conditions under the same circumstances. Usually a capacity coefficient domain ranges from zero (non-connection) to +1 (complete connection). The reliability coefficient shows us, how much the measurement tool can measure stable, provisional and variable characteristics under examination. It is worth mentioning that within an examination, reliability can be a different value from position to position, and from a group to another group. In this regard after use of cronbach's alpha method from among the existing methods, coefficient of %78 has been obtained.

Information analysis

T test
This test has been implemented by us of spss software, to show the significant value of the identified variables, and results have been presented in table (2).
Table 2: T test results

<table>
<thead>
<tr>
<th>factor</th>
<th>Number of people</th>
<th>Avg</th>
<th>Standard error of Avg</th>
<th>T of Observed</th>
<th>T of Table</th>
<th>sig</th>
</tr>
</thead>
<tbody>
<tr>
<td>Market specification</td>
<td>160</td>
<td>18</td>
<td>0.39</td>
<td>18.55</td>
<td>1.96</td>
<td>0.001**</td>
</tr>
<tr>
<td>Product specification</td>
<td>160</td>
<td>9.5</td>
<td>0.77</td>
<td>25.19</td>
<td>1.96</td>
<td>0.001**</td>
</tr>
<tr>
<td>Strategic specification</td>
<td>160</td>
<td>15.36</td>
<td>0.16</td>
<td>32.53</td>
<td>1.96</td>
<td>0.001**</td>
</tr>
<tr>
<td>Process specification</td>
<td>160</td>
<td>14.13</td>
<td>0.41</td>
<td>18.22</td>
<td>1.96</td>
<td>0.001**</td>
</tr>
<tr>
<td>Organization specification</td>
<td>160</td>
<td>33.84</td>
<td>0.64</td>
<td>41.25</td>
<td>1.96</td>
<td>0.001**</td>
</tr>
<tr>
<td>another</td>
<td>160</td>
<td>13.79</td>
<td>0.74</td>
<td>35.24</td>
<td>1.96</td>
<td>0.001**</td>
</tr>
</tbody>
</table>

A survey by friedman test and pierson correlation to

Fridman test has been used for ranking and specifying significant of each one of measures. Also, for obtaining impact of variable on one another.

A Pierson correlation has been used. As it can be seen some the following table the strategic specifications variable plays the most role and the other factor play the least role. They result have been given in tables 3 and 4.

Table 3: Friedman test

<table>
<thead>
<tr>
<th>factor</th>
<th>Rank</th>
<th>Chi</th>
<th>df</th>
<th>sig</th>
</tr>
</thead>
<tbody>
<tr>
<td>Market specification</td>
<td>14.45</td>
<td>16.99</td>
<td>5</td>
<td>0.001</td>
</tr>
<tr>
<td>Product specification</td>
<td>16.22</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Strategic specification</td>
<td>30.10</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Process specification</td>
<td>14.41</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Organization specification</td>
<td>12.45</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>another</td>
<td>10.22</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 4: Pierson

<table>
<thead>
<tr>
<th>factor</th>
<th>Market specification</th>
<th>Product specification</th>
<th>Strategic specification</th>
<th>Process specification</th>
<th>Organization specification</th>
<th>Another factors</th>
</tr>
</thead>
<tbody>
<tr>
<td>Market specification</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Product specification</td>
<td>r=%61</td>
<td>r^2=%37</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Strategic specification</td>
<td>r=%64</td>
<td>r^2=%40</td>
<td>r=%88</td>
<td></td>
<td>r^2=%77</td>
<td></td>
</tr>
<tr>
<td>Process specification</td>
<td>r=%75</td>
<td>r^2=%56</td>
<td>r=%85</td>
<td>r^2=%72</td>
<td>r=%73</td>
<td>r^2=%53</td>
</tr>
<tr>
<td>Organization specification</td>
<td>r=%87</td>
<td>r^2=%75</td>
<td>r=%49</td>
<td>r^2=%24</td>
<td>r=%84</td>
<td>r^2=%70</td>
</tr>
<tr>
<td>Another factors</td>
<td>r=%49</td>
<td>r^2=%24</td>
<td>r=%94</td>
<td>r^2=%88</td>
<td>r=%84</td>
<td>r^2=%70</td>
</tr>
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<td></td>
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DISCUSSION CONCLUSION AND FUTURE SUGGESTIONS

In today's of dynamic world of business, company's struggle to achieve competitive advantages. So that they can out to their competitor. Undoubtedly, new product development is an introduction for entering this stage. With respect and too shortening of product realized life-cycle, there is much pressure to lower cost and product development time. By acceleration by market delivery time of new product, higher sells volume will be achieved. Therefore, it is very important to simplify products development process to accelerate development projects (Langerak & Hultink, 2005). Hence, recognition of opportunity resources for new product development is highly important for the companies. In this research, six groups of factors has been identified as discovery sources of new opportunities for the new product development in superior food industries of the country each are as follows:

Market specification, Product specification, Strategic specification, Process specification, Organization specification, another. Which most significations of them are resources as strategic specification and the least important are recognition as other factors. In fact, we can name them on order of important as follows: Strategic specification, Product specification, Market specification, Process specification, Organization specification and another factor. Besides, the greatest effect is relevant to product specification and the other factor and the result has been shown in the final model in figure 2.

![Final model](image)

**Figure 2: Final model**

Regard to the important of new product development, resources of opportunities recognition and the role it plays for organization prosperity, It is in doubted the matter of high value to identifying priorities new opportunities discovery sources for new product development in companies of food industries. Therefore, future research facilities can bring about opportunities recognition sources for new product development in other industries. Besides, opportunity recognition source for new product development in other industries are comparable. In this research, the definition presented by expert for new product development in the afore-mentioned grouping is interesting.

**REFERENCES**


Research Article


Research Article

