

Review and prioritization of the external environment factors affecting the strategic capabilities in the banking industry with foresight approach: Case Study of Sepah Bank, 2013

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Abstract: Highly dynamic business environment in the banking industry has caused maintaining and developing strategic capabilities in this industry to be a major challenge for managers in the banking industry, especially for state-owned banks, and foresight as the most modern tools to meet this challenge, has assisted managers in today's organizations. In spite of the necessity of this matter. With respect to this matter, a special study has not been done so far in this regard. This study which is an applied - survey research associated with the complex research methods has the administrators, teachers and activists in the banking industry as its statistical population. This study tries to adapt the factors involved in the strategic capabilities based on interviews with 15 experts in Sepah Bank with industry space under review and then, 188 experts of Sepah Bank were identified and through incessant verbal and non- verbal negotiations, 134 of them were willing to cooperate. It should be noted that the survey sample, is the conventional method for the experts that is being introduced from other experts. Using TOPSIS software and SPSS for rankings test, environmental factors of the banking industry affecting the strategic capabilities were identified and prioritized.

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1. Introduction

To achieve long- term vision and plan for the banking industry is not possible without study of the organizational environment and considering the increasing changes. On the other hand, focusing on strategic capabilities based on a new concept of futures studies is necessary. In order to monitor organizational environment which is needed in the long-term planning, taking advantage of the new management model, the futures studies, and its application in strategic studies is a serious requirement, and this research is trying to move in this direction. Thus, even a small step, is taken toward helping theoretical frameworks in management in an interdisciplinary research, by linking the two concepts of strategic management and futures studies. Reviewing the studies in Iran indicate that management research conducted in relation to this research with futures studies approach is in its infancy, and despite the necessity of this, serious research has not been done in this regard so far.

2. Literature Review

2.1. Strategic Capabilities

Strategic capabilities is defined to help organizations develop competitive advantage; since the main focus of the research in strategic fields has been to prove the hypothesis that achieving the optimal and ideal competitive position would lead

organizations that step in this direction to achieve to a high level of positioning in comparison with their competitors. This objective can be clearly seen Table (1) below.

Table 1: Strategic Objectives

neutral	Minimizing the destructive effects	Being at the same level with competitors
supportive	High confidence support of the organization's strategy	Providing resources for establishing and developing competitive performance
	internal	external

Source: (Barnes, Rowbotham, 2003)

In this regard, providing the strategic factor and resources which result in creating and developing competitive advantage in organization should be relied on. These resources are mentioned as "supportive" in the strategic literature (Barnes, Rowbotham, 2003). In this research, organizational strategic capabilities have been studied in terms of external factors. These factors include market and customer dynamics, technology dynamics, competitors, social and cultural factors, political, and economic factors and laws.

2.2. Organization's Environment

The organization's environment include a set of factors that affect the organization's mission, goals, and correspondingly the organization's strategy, and are more or less affected by organization's functions, but the organization does not have much control over them. The main factors of recognizing the environment, which should be assessed separately for each of the components, are as follows:

A - Complexity: This factor is concerned with conflict and heterogeneity of different components of the environment. This means that each of the components must be examined viewed in terms of the relationship with the organization and the relationship with other components of the environment to determine the extent and degree of complexity.

B - Dynamism: it comes from when the parts of the environment are constantly changing and cannot be taken as fixed and unchanged in the analyses. Moreover, the vast majority of these changes is unpredictable and thus pinpoints what's coming to them and therefore the environment is not easy. Thus, each of the components in these areas should also be reviewed and categorized to determine the dynamics of the environment.

C - Toughness: each of the components alone or in partnership with other components, have access to the parts of necessary resources of the organization. Therefore, access to these resources depends on the mode of action of these components, these resources can be of importance for organization and easy access to different organizations; hence, the impact of these resources on the organization and degree of desirability of attaining them for the organization totally show toughness of environment. If any part of the environment is categorized in this regard, of course, the tenacity and toughness of environment is characterized.

Here's an important point that should be noted, that how much the environment of an organization is tougher and more dynamic, naturally requirements that are imposed to the organization are more, and then restrictions and coercions of to the organization are more. Such an environment is called environment with strong force and requirements, and by determining the environmental conditions for each organization, its high level of requirements can be realized (Shahmansuri, Norouzi, 2012).

Banks in order to optimize the performance of their activities and have participation in the development of the country now and in the future, requires timely and accurate information from reliable sources about the environmental have impact on their processes. This information is part of the banking industry to protect the bank from increasing

tension caused by environment changes. It should be noted that there is a wide range of information in the banks. However, in countries such as Iran, banking industry faces many uncertainties and bank managers often have experienced lack of information about the external environment. (POPOOLA, 2000).

2.3. Foresight

Almost in all fields of management, managing the future plays an important role. However, this concept has different meanings in management. This concept is widely used in deciding making. Upon the type and amount of information that is available to decision makers, taking decisions has three categories, including (1) decision making under certainty, (2) decision making under risk, and (3) decision making under uncertain conditions. The first describes the situation in which the decision maker knows that it can predict exactly what will happen in the future. In the second case, the decision maker cannot see future improvements, but is aware of the possible developments and considers how this development may be possible. In this case, the future is an open concept, but is defined only in a certain range. In the third case, the decision maker knows only future development is possible, but its probability is beyond the scope of the second case. In this case, the decision-makers' goal is making relationships between the organization's current status and future developments (Seidl, Aaken, 2004). The third case is about the future Term foresight entered in the late 1980s, into management sciences, and social sciences and were used by the organization (Anderson, 1997). Experts tend to the foresight for three separate reasons and the intersection of these three different aspects form the foresight. These three areas are: a) strategic planning, b) futurist and c) Networking (Miles, 2002) visible in Figure 1.

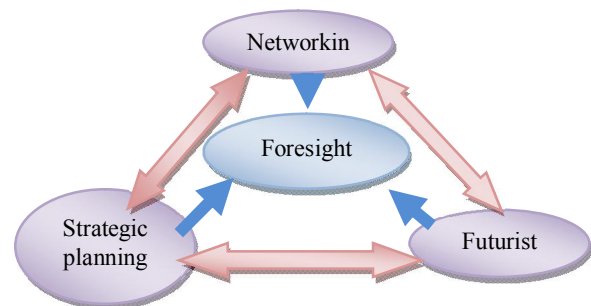


Figure 1: The origin of foresight (Miles, 2002)

This process of certain focus on senior manager's cognitive mechanisms facilitates decision making respectively through networking, collective understanding of the factors involved in the issues, the impact of each of these factors on each other, the major issue in another time, and modeling. Based on

the presented final model, the strategic planning is carried out, and the steps necessary to implement the program in time horizon is determined (Bootz, 2010,3).

1.2.3. Networking

As the foresight definition shows, output of this process is to better anticipate and shape the long-term future. Among the wide range of opinions and perspectives of experts (consensus) on each dimension of the problem at hand is needed (Apšvalka et al., 2008). Networking is among the measures necessary as prelude to the process of futures studies. The team started its activities at this time is responsible for establishing and managing the network better in terms of constructive communication among members for the effectiveness of its work. Members of this network can be divided into two groups, each of which have a significant impact on the decision making process, the industry experts whose members are selected among academicians, artisans, government officials and senior scientific advisors. The second group includes stakeholders, policymakers and external stakeholders who are indirectly influenced by the decisions made by the first group (Anderson, 1997).

There are no clear rules on how to select the number of participants in the network does not have the foresight. Depending on the number of factors: the size of the project or plan, decision quality, time and resources are available for data collection. With the advent of information technology in recent decades, the development of a network for consensus among members was created and by employing this technology, the speed of decision making is increased and the effectiveness of communication is also increased, and the exchange of information among members is facilitated. Some new forms of networking and facilitating communication between members are the followings:

1. Email tool is widely used to update their information and invite experts to attend meetings and conferences.
2. Activation of electronic portals to publish news about recent developments in technology, changes in customer demand and requirements, along with analyzes of the News.
3. Causing official websites of foresight that provides access to a number of reports and notices of futures studies programs.
4. Experimental Marketing Website to facilitate communication between customers and other stakeholders of the company, to assess their needs and to design products according to customers' demands about their views
5. Brainstorming international community set up the company which enables a large number of experts,

customers and stakeholders to participate in the presentation of an electronic survey (Smith, Mason, 2004).

2.2.3. Futurist

Futurist can be defined as activities with short term, but a continuous period, for the main process of futures studies, which juxtaposition of these sub- activities, determine the general trend of foresight. Among the features that foresight will have through this is scientific credibility, being structured, Macro perspective, the wide and long term, and continuous view on activity, a framework of cause and effect, tool for knowledge transfer, less attention to processes of output, focusing on human resources and incentives, and efforts to promote the formation of consensus among members (Technology Foresight for Organizers, 2003).

3.2.3. Planning

One of the messages that the foresight have for managers and many scholars have approved and stressed it is considering the fact that there is no need for detailed knowledge of the future, it is sufficient just to be prepared for the future. This message explicitly represents the need to deployment of strategic management for planning in this process. Strategic management approach is based on the identification of the main factors affecting the company's objectives and performance over a long period, and analyzing the potential impact of these factors on the organization's mission, and finally tracing the development of landscapes created by the transformation of these factors. Strategic thinking seeks to explore the underlying assumptions and pursue the process of changes from the present to the future, passes its evolution and in order to achieve the development associated with these changes, accommodate planning which is required (Jackson, 2011).

3. Research Background

Petti & Zhang (2011) in their study on the theoretical review of models of entrepreneurship in technology, review a model that represents the concept that internal and external organizational factors and organization's mission have a direct impact on the strategic capabilities. Jabbour et al. (2010) in their study argue that examining institutional environment is imperative for the organizations with stable and unstable strategies and considering the knowledge-based capabilities to provide high quality products and services and customer satisfaction. Three strategies on external environment are faced the organizations. The organizations on the basis of their strategy choose one of those strategies. The first one is being a function of the environment (reactive approach), the second one is integration of internal factors with

respect to changes in external factors (preventive approach), and the third one is integration of internal and external factors (proactive approach). This research is based on the theoretical aspects and has not found the application yet. Fergusson & Langford (2006) in their study have examined the impact of environmental factors on the ability to develop models and strategies have been studied in this context are discussed. The results indicated that six environmental factors including the dynamics of the technology, market and customer dynamics, policy making and legislation, economic, cultural, and social and competitors influence the strategic capabilities of the organization. Lenz & Engledow (1987) in relation to environmental factors affecting organizational strategy, consider the governmental, social and competitive factors as the most important factors in organizations associated with educational institutions and universities. According to Hedari's studies, (2009) environmental factors affecting the competitive advantage include of the market dynamism, technology dynamism and competition severity, and according to the space of the industry under study, other environmental factors can be added to them. Finally, factors related to competitive performance include the marketing capability, technological capability, a relational capabilities, production capabilities, and knowledge-based capabilities. Doustyari and Nourbakhsh (2006) argue that one of the main concepts in the literature on strategy is the environment. Strategic management is basically a response to environmental challenges and chaos. In the prosecution of their missions, organizations are faced with two main questions; the first question is what they are and how their quality is? And the second question is where they are standing and what their relation with their surrounding is. The answer to the first question requires an evaluation of the internal factors and the answer to the second question requires evaluation of external factors. However on the discussion of strategies for "issues "of public administration, distinction between environmental factors (opportunities and threats) often creates problems and confusion.

4. Research Methodology

In terms of goal, this research is an applied research, since it seeks to achieve a desired scientific objective and its emphasis is on the present and future situation's desirability (Delavar, 2010). In terms of method of data collection, the study is considered as descriptive - survey research, since it deals with the issue in which the researcher has not possibility to intervene with the subjects (Sarmad et al., 2006). The research methodology is based on a "blended futures studies study". The ultimate results

of research are a combination of approaches rather than a specific method. This approach combines three methods of survey research, library data, and semi-structured interviews with 15 experts of Sepah Bank and the members of 134expert panels through two rounds of semi-structured questionnaires of the original group of industry experts. The questionnaire consisted of 18 closed questions and one open question, with Cronbach's alpha of 0.8226 / 0, that examines a complex and uncertain situations in the future which would not be possible with a single method. It should be noted that the reliability of the questionnaire was confirmed by a number of professors from the Department of Management.

4. 1. Rating of Environmental Factors – strategic capabilities

The most common method for ranking the relations in management science is using TOPSIS method. TOPSIS (technique similar to prioritize the positive ideal solution) is known as one of the classical methods, which was developed in 1981 by Hwang and Yoon to solve problems on the basis of the ideal. The selected option must have the shortest distance from the positive ideal and the maximum distance from the negative ideal in other side (Hwang & Yoon, 1981). The history of using TOPSIS model in the Iran is beginning of 1991 decade and the use of fuzzy status is limited to a few years.

Step 1 - obtain the weight vector $w \sim j$ (using entropy method)

Step 2 - normalizing the matrix derived from expert opinions.

Step 3 - The Formula 4 is formed by weighted matrix:

$$\tilde{V} = [\tilde{v}_{ij}]_{m \times n}, \quad i = 1, 2, \dots, m, \quad j = 1, 2, \dots, n$$

$$\tilde{v}_{ij} = \tilde{r}_{ij} \otimes \tilde{w}_j$$

Step 3 – Therefore the weighted matrix is:

$$\tilde{V} = [\tilde{v}_{ij}]_{m \times n}, \quad i = 1, 2, \dots, m, \quad j = 1, 2, \dots, n$$

$$\tilde{v}_{ij} = \tilde{r}_{ij} \otimes \tilde{w}_j$$

Step 4 – Determining the Fuzzy positive ideal solution \tilde{v}_j^* and Fuzzy negative ideal solution \tilde{v}_j^- :

$$\tilde{v}_j^- = \begin{cases} \min_{i=1, \dots, m} \tilde{v}_{ij}; j \in B \\ \max_{i=1, \dots, m} \tilde{v}_{ij}; j \in C \end{cases} \quad \tilde{v}_j^* = \begin{cases} \max_{i=1, \dots, m} \tilde{v}_{ij}; j \in B \\ \min_{i=1, \dots, m} \tilde{v}_{ij}; j \in C \end{cases}$$

Step 5 - Calculating the distances of measurements

Step 6 - Calculating the relative closeness to the ideal and ranking

$$CI_i = \frac{d_i^-}{d_i^- + d_i^*}$$

5. Expert's Consensus

5.1. The first round of foresight

5.1.1. Adaptation of factors with the industry's environment

Since the list extracted from the theoretical studies has been related to the results of the overseas studies, for the localization and depth review of these factors and the situation in which we are placed. (Mirzaei Rubber et al, 2011, 4). Some of these factors also do not affect the present study's results.

5.1.2. Justifying the experts about the subject

The first practical step in the expert's consensus on the foresight is establishing the research subject and providing the necessary documentation required to answer the interview questions, so that we can achieve the high level of conceptual agreement on the overall dimensions of the problem and related concepts between the experts and researcher (Smith, Mason, 2004, 6). Therefore, some related documentations are sent to the experts before the interview.

5.1.3. Refining the list of factors

It seems necessary to review the research indicators with a small number of experts familiar with the banking industry. 15 experts, among the 23 of them, were willing to cooperate in the interview that lasted for 12 hours.

Table 2: Factors and sub-factors

Environmental factors						strategic capabilities		Sub-factor
customers' dynamism	Market and competitors	Social and cultural	Las and policies	economic	Technology	knowledge-based	marketing	

5.2. The second round of foresight

5.2.1. Selection of members (industry experts)

After refining the list of factors relevant to the strategic capability in terms of the organization's external environment, with the help of experts in the banking industry the main process of futures studies starts. The first step is to determine the desired expert to acquire information and consensus opinion of experts through a semi-structured questionnaire for them. In this study, the indicators for identification of industry experts include management experience, people who have academic and research activities

this field, and the main actors in this industry that are introduced by other experts.

5.2.2. Re-justifying the experts about the subject

In this step, providing the necessary documentation needed to answer questions of the experts seems essential. Then we can achieve a high level of conceptual agreement about the overall dimensions of the problem and related concepts between the experts and researcher. Therefore, some related documentations are sent to the experts before or during the presentation of the questionnaire.

6. Analysis

6.1. Establishment of relationships by the experts

In this step, a semi-structured questionnaire is used in order to obtain the exact opinion of the experts for establishing the relationships between the factors. In summary, only the initial and final tables are presented.

Table 3: Matrix of environmental factors - strategic capabilities

	strategic capabilities		
	Technology	marketing	knowledge-based
Technology dynamism	4/3059	4/477	4/1716
economic	4/2910	4/014	2/4179
Social and cultural	1/9850	3/828	4/2164
competitors	4/3880	3/977	4/5
Market and customers' dynamism	4/2761	3/843	4/2537
Las and policies	3/2164	4/283	2/1865

Table 4: Weights of indicators (entropy method)

	Technology	marketing	knowledge-based
Weight	0/449102	0/028433	0/522465

Table 5: Ranking of environmental factors

	environmental factors	Chi
1	competitors	0/935851
2	Market and customers'	0/914814
3	Technology dynamism	0/911634
4	economic	0/497025
5	Social and cultural	0/46723
6	Las and policies	0/37431

Table 6: Results of Friedman's test at a significance level of environmental factors in the organization's strategic capabilities

Number	134
Chi square	282/042
Degrees of freedom	5
Significant	0/000

Average Rating for competitive variable is 4.6 which show that this variable is more important than other variables. The variables of market and customer dynamics, technological dynamics, economic, cultural and social factors and laws and policies have the next priorities respectively. In conclusion we can say that competitive factor has more role than other contributing factor in the organization's strategic capabilities, and according to the fact that the significance level in Friedman test is 0.000, with 99 percent of confidence and one percentage of error can be concluded that competitive factor is the most important factor in strategic capability of the organization.

The third round of foresight

6.2. Confirming the previous step's results and re-accountability

After analyzing the questionnaires of the previous step, the results and another copy of the questionnaire are returned back to the experts, so that they can provide their additional comments.

Table 7: Matrix of environmental factors - strategic capabilities

	strategic capabilities		
	Technology	marketing	knowledge-based
Technology dynamism	4/32089	3/8432	4/26119
economic	4/30597	4/0522	2/41791
Social and cultural	2	3/8358	4/20149
competitors	4/44776	3/9925	4/5
Market and customers' dynamism	4/44776	4/5895	4/31343
Las and policies	3/18656	4/2462	2/17910

Table 8: Weights of indicators (entropy method)

	Technology	marketing	knowledge-based
Weight	0/450	0/0323	0/51761

Table9: Ranking of environmental factors

	environmental factors	Chi
1	competitors	0/992435
2	Market and customers'	0/957676
3	Technology dynamism	0/912374
4	economic	0/521361
5	Social and cultural	0/458292
6	Las and policies	0/230371

Table 10: Results of Friedman's test at a significance level of environmental factors in the organization's strategic capabilities

Number	134
Chi square	319/304
Degrees of freedom	5
Significant	0/000

Average Rating for competitive variable is 4.8 which show that this variable is more important than other variables. The variables of market and customer dynamics, technological dynamics, economic, cultural and social factors and laws and policies have the next priorities respectively. In conclusion we can say that competitive factor has more role than other contributing factor in the organization's strategic capabilities, and according to the fact that the significance level in Friedman test is 0.000, with 99 percent of confidence and one percentage of error can be concluded that competitive factor is the most important factor in strategic capability of the organization.

7. Conclusion

According to the step by step procedure of the research, the results are divided into the three parts of the foresight process's first round, second round and third round.

The first round of foresight process:

Environmental factors: Experts' consensus for the effect of technology dynamism factor on the banking industry is 80 %, the economic conditions factor is 87 %, social and cultural factors is 74 %, competitive factor is 100, market and customers' dynamism factor is 100 % and laws and policies factor is 93.40 %. These figures indicate the fact that the factor of market and customers' dynamism has the most value and the factor of social and cultural has the least value amongst the other environmental factors.

Factors of Strategic capabilities: Agreement of experts for factors of strategic capabilities in the banking industry. Experts agree on the technological capabilities of the banking industry for 73 percent, the market capabilities for 93 percent, knowledge-based capabilities for 87 % and finally relational capabilities for 13 %, which indicates the fact that factor of marketing capability has the highest value and social and cultural factors have the lowest value among the other environmental factors. As the percentage of agreement between the experts is less than 70 % only for relational capabilities factor, this factor is removed from factors associated with strategic capabilities.

Competitive performance factors:

The second round of foresight process:

Environmental factors directly affect the strategic capabilities. The competitors is the main factor in organization's competitive performance and after that market and customers dynamics, technological dynamics, economic, cultural and social conditions and finally legislation and policies are ranked.

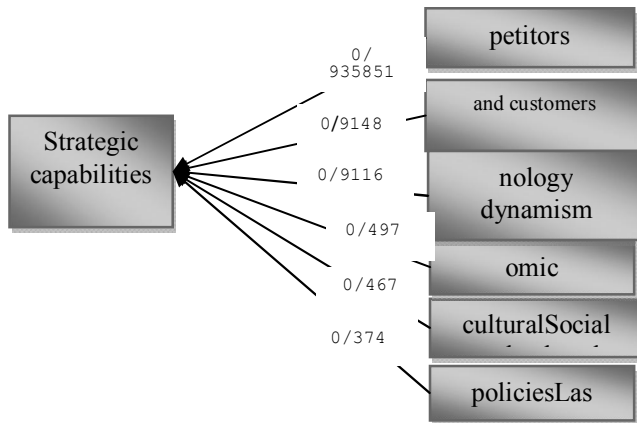


Figure 2: Ranking based on the first round questionnaire

The third round of foresight process:

The third round of futures studies process is completely consistent with the results of the previous stage, and at this point, environmental factors directly affect the strategic capabilities. The competitors is the main factor in organization's competitive performance and after that market and customers dynamics, technological dynamics, economic, cultural and social conditions and finally legislation and policies are ranked.

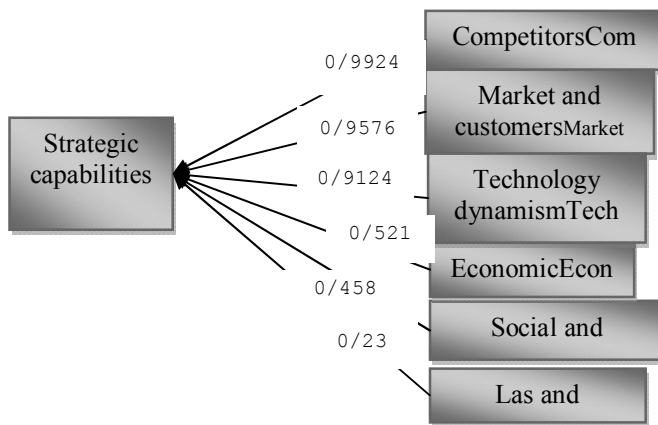


Figure 3: Ranking based on the second round questionnaire

Suggestions based on research findings

According to the findings of this research, in the current era, environmental and organizational knowledge has the main importance in proceeding the strategic goals and programs to promote the organization's competitive position level, it is therefore recommended that organizations try to pay attention to this important issue and institutionalize acquiring the up-dated environmental and

organizational knowledge in the whole organization and even industry.

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