

Identifying Barriers to the Establishment of Strategic Management based on the SWOT Model

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Abstract

In the current unstable world, where environmental changes and changes are accelerating, effective management of organizations is not possible except with a proper understanding of the conditions and requirements around them. The management of today's and tomorrow's organizations will face challenges that solutions based on past experiences and old teachings will not meet the truth that is accepted in a universally accepted interpretation as "strategic" management and strategic planning. The purpose of this study is to identify and investigate the various dimensions of the process and barriers to the establishment of strategic management in knowledge-based companies located in the science park based on the SWOT model. Therefore, the statistical population of this study consists of managers working in knowledge-based companies located in the science park, whose number is 250 people, so we obtained a sample size of 123 people with Cochran's formula. The method of the present research is a descriptive survey and applied in terms of purpose. The researcher-made questionnaire is based on the Likert five-dimensional spectrum, the validity, and reliability of which were confirmed. To analyze the research questions, a one-group t-test was used. The research findings showed that internal and external factors are effective in the establishment of strategic management in knowledge-based companies located in the science park. "Training of all managers and employees on the importance of strategic management" and the most important role of external factors "full reliance of the country's economy on export earnings" on the establishment of strategic management in knowledge-based companies located in the science park.

Key-words: Strategic Management, Knowledge-based Companies in Science Parks, Internal and External Factors.

1. Introduction

In today's unstable world, where environmental changes and changes are accelerating and strongly influenced by the amazing advances of science and technology, effective management of

organizations is not possible except with a proper understanding of the conditions and requirements around them (Arslandere et al., 2016). One of the effects and results of attention and a correct and intelligent understanding of the changes and changes in the environment of organizations is the fact that the management of organizations today and tomorrow will face challenges that solutions based on past experiences and old teachings will not meet the truth that is accepted in a universal interpretation and refer to strategic planning as "strategic" (Purahmad et al., 2013). Urban sustainable development is a dynamic and continuous process in response to changes in economic, environmental, and social pressure (Yigitcanlar et al., 2016). This approach helps managers (senior and middle) to formulate appropriate strategies and implement them with ability and confidence. According to the above, the researcher finally seeks to find a conceptual strategy (model) to examine the obstacles to the establishment of strategic management and provide optimal solutions (Yusr et al., 2017). The number of articles and books on strategic management is very high and it is not easy to extract scientific and citationable examples, but regarding the impact of strategic management on public and private companies in Iran, research has been conducted in the form of dissertations they are mentioned (Valmohammadi & Roshanzamir, 2015).

It is noteworthy that there is no record of barriers to the establishment of strategic management and the provision of optimal solutions despite the review. Therefore, the purpose of this study is to identify the current position of the knowledge-based companies in science parks and its role in the national economy and sustainable economic development, identify and examine the various dimensions of strategic management process including strategic thinking, strategy formulation, strategic planning, strategic control and evaluation, strategic implementation, determination and evaluating the effectiveness of strategic management on the role and valuable position of the science park in the national economy based on the criteria, recognizing and introducing the important reasons for establishing strategic management to turn the science park into a strategic organization (Shah & Jan, 2014).

2. Theoretical Foundations and Research Background

History of Planning and Strategic Planning

Human history shows the use of simple forms of human planning since the first centuries of human existence on Earth. It is safe to say that the planning process began when human beings were able to set goals for their future (albeit short-term). The first scientific forms of planning in

economics and industry were established after the Industrial Revolution. Following the growth of technology, industrial organizations sought to make optimal use of facilities to increase production as much as possible (Moradi, 2011). The first steps were taken in the late seventeenth and early eighteenth centuries by the English economist Adam Smith. With the principle of assigning and dividing work into small parts, for the first time in a factory, he laid the foundation for planning operations. After him, Charles Baich developed this model of planning by developing the division of tasks. Frederick Taylor and Henry Fayol discussed scientific management in the late nineteenth and early twentieth centuries. In the early twentieth century and after the above stage, which was more focused on increasing the efficiency of operations using planning? The period of attention planning for a longer period began in large organizations (Lorenz, 2011).

Strategic Management

Strategic management is a set of management decisions and activities that determine the future performance of a company and includes environmental review (both internal and external environment), strategy formulation (strategic planning), strategy implementation, evaluation and control, Therefore, strategic management emphasizes monitoring and evaluating external opportunities and threats in the light of considering the strengths and weaknesses of a company in order to formulate and implement a new strategic orientation for an organization. Strategic management is in fact making today's decisions according to environmental conditions and from an operational point of view to achieve tomorrow's results (Yousefi, 2007).

Background Research

Pazouki et al., (2017) determine the sustainability indicators and create a future development model for District 22 of Tehran. The data was collected by having a review of similar studies and field research on the subject and therefore the effective factors were identified. After accomplished proceedings, the questionnaire was prepared and the results were used in SWOT charts' grading after analyzing at interior and exterior matrix. Ultimately, quantitative strategic planning matrix (QSPM) was performed based on the results and analysis. This process provided a comprehensive model for sustainable urban development as sustainable development urban landscape pattern.

Janaki et al. (2015) ranking and improving the implementation barriers of strategic management in Petro-pars Company (PPC), enjoys key tools of the Multi-Criteria Decision Making.

The result of indicators importance ranking using TOPSIS technique reveals that three indicators, including ineffective senior management team, conflict at organizational culture for resistance against implementation of strategic planning and lack of consensus among the organization leaders, are of the greatest importance as barriers.

GÜREL (2017) examine SWOT Analysis in a historical, theoretical, time frame perspective, as an effective situation analysis technique which plays an important role in the fields of marketing, public relations, and advertising and in any fields of requiring strategic planning. In this qualitative and descriptive study, firstly the position of SWOT Analysis in the strategic management process is explained, secondly the components of SWOT Analysis is examined. The study includes an international sports wear brand's SWOT Analysis; historical origins of SWOT, advantages-disadvantages and the limitations of SWOT are also reviewed.

Arslandere and Öcal (2016) mentioned about SWOT analysis, which is the most used strategic technique in strategic management and then performed an implementation in a firm in machine industry. There are various frameworks and approaches used in the analysis of a company's strategic position. One of the most straightforward is the SWOT analysis. SWOT analysis is an acronym for strengths, weaknesses, opportunities, and threats and is a structured planning method that evaluates those four elements of a project or business venture. Knowing all these points of a company or of a supply chain is a good basis for strategy formulation.

3. Methodology

The method of the present research is descriptive-survey type. It is also an applied research because this research applies theories in a practical situation and in a plan. Due to the size of Iran, it was selected as the research unit. Therefore, managers and technical experts (employees with a bachelor's degree or higher) working in Tehran (head office) of the company in Tehran constitute the statistical population of this study, which is a statistical population of 250 people. A sample should be selected to provide information about the community.

Using simple random sampling method, we obtained the sample size with Cochran's formula of 123 people. In the present study, according to the type and purpose of the research, in collecting information, a researcher-made questionnaire on examining the obstacles to the establishment of strategic management and providing optimal solutions to bring knowledge-based companies in science parks to its high and real position and its unique role in sustainable growth and development

The national economy according to the SWOT model (1) (a questionnaire containing 35 questions) has been used according to the five-point Likert scale.

To determine the validity of the research tool, the method of face and content validity was used and a questionnaire was designed and developed using the opinions of experts and thinkers. In the next step, the questions and items that were vague were removed and other formal and content changes necessary to increase the validity of the questionnaire were performed.

Cronbach's alpha coefficient was used to evaluate the reliability of the questionnaire. For the dimension of internal effective factors (main hypothesis 1) the value of α for 18 questions (items) was 0.715 and for the dimension of external effective factors (main hypothesis), in this dimension the value of α was equal to 0.747 which is an acceptable value.

In the inferential statistics section, one-group t-test was used. In the present study, considering that the questionnaire was designed in a 5-point Likert scale (very high = 5, high = 4, medium = 3, low = 2, very low = 1), so its theoretical average is 3.

SWOT Matrix

SWOT is one of the tabular and conceptual techniques that can be used by all organizations, suggests strengthening strengths, reducing weaknesses and reducing the impact of environmental threats. This technique through:

1. Examining and status of the organization to identify strengths and weaknesses and classify major strengths and weaknesses.
2. Identifying environmental influencing factors and classifying them in the form of threats of environmental opportunities.
3. Drawing SWOT matrix as defined in the table below determines and suggests strategies.

Table 1 - SWOT Matrix

		Inside the organization	
		List of strengths (S)	List of weaknesses (W)
External	Contents Opportunities (O)	SO strategies Strategies to use strengths to maximize opportunities	WO Strategies Weakness reduction strategy in order to maximize opportunities
	Contents Threats (T)	ST Strategies Strategies for using forces to minimize the effects of threats	WT Strategies Strategies to reduce losses due to weaknesses and threats

As can be seen in the table above, the SWOT matrix provides a four-pronged strategy of comparing internal and external factors. Sufficient analytical skills are needed to determine strategy at this stage. At this stage, different strategies are presented, but not all strategies set at this stage are necessarily selected and implemented. One of the main features of the SWOT matrix is the presentation of specific strategies instead of general and general strategies.

SO matrix strategies: this is the most desirable situation for all companies. Because on the one hand, the organization has key strengths and competencies, and on the other hand, there are good opportunities for exploitation. In this case, the company, using its strengths and key competencies, seeks to make the most of environmental opportunities. For example, a company with high financial capacity, when faced with the growing market demand for its products, tries to maximize sales and profits by developing production capacity.

ST Strategies: when the organization has strengths and competitive advantages but is facing a future threat from the environment. Therefore, an appropriate strategy should be adopted to maximize the use of these capabilities in order to overcome or reduce the effects of environmental threats. For example, a company can use its R&D technical capabilities (1) to compete with a new competing product.

WO strategies: these strategies emphasize seizing opportunities by overcoming corporate weaknesses. In other words, despite the appropriate opportunities due to the existing weakness, it is not possible for the organization to take advantage of these opportunities, so it must adopt solutions to compensate for these weaknesses. For example, when the demand for a company product is high but due to high wages it is not possible to produce competitive products for the company, it creates a branch and production in another country where the level of wages is low.

WT strategies: this is the worst situation an organization can face and managers should try not to face it. In this case, the company is exposed to environmental threats despite its weakness. In this case, strategies are generally defensive in nature and emphasize minimizing weaknesses and avoiding threats. And for example, in such a situation, companies seek to reduce activities, merge into other companies and even liquidate (Moradi, 2011).

4. Results

The first main hypothesis: internal factors affect the non-implementation of strategic management.

The data in Table 2 show that since the value of t is significant at the level of $\alpha = 0.05$ in the degree of freedom 94, so it can be said with 0.95 confidence that the mean of the sample is larger than the mean of the population. Internal over non-implementation of strategic management is above average.

The second main hypothesis: external factors affect the non-implementation of strategic management.

The data in Table 2 show that since the value of t is significant at the level of $\alpha = 0.05$ in the degree of freedom 94, so it can be said with 0.95 confidence that the mean of the sample is larger than the mean of the population. External over-implementation of strategic management is above average.

Table 2 - Results of One-group t-test on the Main Hypotheses

Variable	Test Value = 3					
	t	df	Sig	Number	Average	Standard deviation
The effect of internal factors on non-implementation of strategic management	35.427	94	.000	123	3.7497	.02116
The effect of external factors on the lack of strategic management	31.280	94	.000	123	4.0807	0.33674

Test of Research Sub-hypotheses

1. Government ownership, the dominance of the political space over decision-making is one of the important obstacles to the establishment of strategic management.

The data in Table 3 show that because the value of t is significant at the level of $\alpha = 0.05$ in the degree of freedom 94, so with 0.95 confidence we can say that the sample mean is larger than the population average. As a result of government ownership, the dominance of the political space over decision-making is one of the important obstacles to the establishment of strategic management.

2. The full reliance of the country's economy, government budget on revenues from science park exports is one of the important obstacles to the establishment of strategic management in the knowledge-based companies in science parks.

The data in Table 3 show that since the value of t is significant at the level of $\alpha = 0.05$ in the degree of freedom 94, so with 0.95 confidence we can say that the sample mean is larger than the population average. As a result of the complete reliance of the country's economy, the government

budget to revenues from science park exports is one of the important obstacles to the establishment of strategic management in the knowledge-based companies in science parks.

3. Multiple management changes at different levels of the science park are one of the obstacles to the establishment of strategic management in the knowledge-based companies in science parks.

The data in Table 3 show that because the value of t is significant at the level of $\alpha = 0.05$ in the degree of freedom 94, so with 0.95 confidence we can say that the sample mean is larger than the population average. As a result, multiple changes of management at different levels of the science park are one of the obstacles to the establishment of strategic management in the knowledge-based companies in science parks.

4. The policies of the science park in a period of three to five years are effective in establishing strategic management.

The data in Table 3 show that because the value of t is significant at the level of $\alpha = 0.05$ in the degree of freedom 94, so with 0.95 confidence we can say that the sample mean is larger than the population average. As a result, the policies of the science park over a period of three to five years are effective in establishing strategic management.

5. The use of new technologies and technologies in the operational departments of the knowledge-based companies in science parks is effective in establishing strategic management.

The data in Table 3 show that because the value of t is significant at the level of $\alpha = 0.05$ in the degree of freedom 94, so with 0.95 confidence we can say that the sample mean is larger than the population average. As a result, the use of new technologies and technologies in the operational departments of the science park is effective in establishing strategic management.

6. Dynamic organizational culture is effective in establishing strategic management.

The data in Table 3 show that since the value of t is significant at the level of $\alpha = 0.05$ in the degree of freedom 94, so with 0.95 confidence we can say that the sample mean is larger than the population average. As a result, dynamic organizational culture is effective in establishing strategic management.

7. Performance appraisal system and reward in accordance with strategic goals is effective in establishing strategic management.

The data in Table 3 show that because the value of t is significant at the level of $\alpha = 0.05$ in the degree of freedom 94, so with 0.95 confidence we can say that the sample mean is larger than the population average. As a result, the performance appraisal system and rewards commensurate with the strategic goals are effective in establishing strategic management.

8. Creating efficient competition is effective in establishing strategic management.

The data in Table 3 show that because the value of t is significant at the level of $\alpha = 0.05$ in the degree of freedom 94, so with 0.95 confidence we can say that the sample mean is larger than the population average. As a result, creating efficient competition is effective in establishing strategic management.

9. Exercising complete control, evaluation and supervision in the operational departments of the science park is effective in establishing strategic management.

The data in Table 3 show that since the value of t is not significant at the level of $\alpha = 0.05$ in the degree of freedom 94, so with 0.95 confidence we can say that the sample mean is different from the community average. As a result, exercising complete control, evaluation and supervision in the operational departments of the knowledge-based companies in science parks is effective in establishing strategic management.

10. Improving the knowledge of managers and employees of the knowledge-based companies in science parks is effective in establishing strategic management.

The data in Table 3 show that because the value of t is significant at the level of $\alpha = 0.05$ in the degree of freedom 94, so with 0.95 confidence we can say that the sample mean is larger than the population average. As a result, improving the knowledge of managers and employees of the knowledge-based companies in science parks is effective in establishing strategic management.

11. Establishment of strategic management in the science park is effective in reaching the knowledge-based companies in science parks to its real position.

The data in Table 3 show that because the value of t is significant at the level of $\alpha = 0.05$ in the degree of freedom 94, so with 0.95 confidence we can say that the sample mean is larger than the population average. As a result, the establishment of strategic management in the science park is effective in reaching the knowledge-based companies in science parks to its true position.

12. Establishing strategic management in the science park in the field of organizational leadership creates effectiveness.

The data in Table 3 show that since the value of t is significant at the level of $\alpha = 0.05$ in the degree of freedom 94, so with 0.95 confidence we can say that the sample mean is larger than the population average. As a result, the establishment of strategic management in the knowledge-based companies in science parks in the field of organizational leadership creates effectiveness.

13. Appropriate organizational structure in the knowledge-based companies in science parks is effective in establishing strategic management.

The data in Table 3 show that because the value of t is significant at the level of $\alpha = 0.05$ in the degree of freedom 94, so with 0.95 confidence we can say that the sample mean is larger than the population average. As a result, the appropriate organizational structure in the science park is effective in establishing strategic management.

14. Having specialized, committed and efficient employees in the science park is effective in establishing strategic management.

The data in Table 3 show that because the value of t is significant at the level of $\alpha = 0.05$ in the degree of freedom 94, so with 0.95 confidence we can say that the sample mean is larger than the population average. As a result, having specialized, committed and efficient employees in the knowledge-based companies in science parks is effective in establishing strategic management.

Table 3 - Test of Research Sub-hypotheses

Sub-H	Variable	Test Value = 3					
		t	df	Sig.	N	Average	SD
1	Government tenure, the dominance of the political space over decision-making	51.904	94	.000	123	3053.4	0.24511
2	The complete reliance of the country's economy, government budget on revenues from science park exports is one of the important obstacles to the establishment of strategic management in the knowledge-based companies in science parks.	43.629	94	.000	123	4.8	0.40212
3	Numerous changes in management at different levels are one of the obstacles to the establishment of strategic management in the knowledge-based companies in science parks.	7.073	94	.000	123	3.35	0.479
4	The policies of the knowledge-based companies in science parks over a period of three to five years are effective in establishing strategic management.	15.427	94	.000	123	3.98	0.618
5	The use of new technologies and technologies in the operational departments of the science park is effective in establishing strategic management.	12.878	94	.000	123	3.7579	0.57364
6	Dynamic organizational culture is effective in establishing strategic management.	10.220	94	.000	123	3.53	0.502
7	Performance appraisal and reward system in accordance with strategic goals is effective in establishing strategic management.	40.644	94	.000	123	3.8842	0.21204
8	Creating efficient competition in the knowledge-based companies in science parks is effective in establishing strategic management.	20.768	94	.000	123	3.82	0.385
9	Exercising complete control, evaluation and supervision in operational departments is effective in establishing strategic management.	1.044	94	.299	123	3.07	0.688
10	Improving the knowledge of managers and employees is effective in establishing strategic management.	20.768	94	.000	123	3.82	0.385
11	Establishing strategic management is effective in getting the knowledge-based companies in science parks to its true position..	33.809	94	.000	123	4.12	0.322
12	Appropriate organizational structure is effective in establishing strategic management	22.986	94	.000	123	4.40737	0.45528
13	Appropriate organizational structure is effective in establishing strategic management	14.998	94	.000	123	3.71	0.458
14	Having specialized, committed and efficient staff is effective in establishing strategic management.	8.817	94	.000	123	3.45	0.5

5. Conclusion

Strategic management makes it possible to identify the future and take the initiative in the face of tough competition. Experience shows that this type of management will be effective not only in private enterprises but also in companies and government and service institutions. In line with the position of strategic management, this study tries to examine the effectiveness of the establishment of strategic management in bringing the knowledge-based companies in science parks to its true position and its role in the national economy and sustainable development. The test of research hypotheses showed that all internal and external factors are effective in establishing strategic management, which according to Friedman analysis of variance test to rank each of the independent variables of research among managers and staff of the knowledge-based companies in science parks regarding the impact of internal factors. On non-implementation of strategic management, the component of training all managers and employees in the field of strategic management has the highest priority and the component of participation of managers and operational staff in strategic planning has the least importance, also regarding the impact of external factors of knowledge-based companies in science parks on non-implementation of management. The strategic component of the complete reliance of the country's economy on revenues from science park exports has the highest priority, and the component of sanctions imposed by the US government on preventing large science parks from cooperating in the implementation of important projects is the least important.

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