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## Investigation of the Effects of Strategic Leadership on Strategic Change and Innovativeness of SMEs in a Perceived Environmental Uncertainty

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### Abstract

There is an extended literature on leadership adequateness since 1980s. One of the assumptions on adequateness is strategic leadership. Acting strategic stands out as a competent of leadership in many theories and hypothesis. The main purpose of this paper, subject to three dimensions of strategic leadership, investigating the strategic leadership fact of SMEs in Konya province of Turkey industrial zone. Besides, investigation of the effects of strategic leadership on SMEs' organizational change and innovativeness in a perceived environmental uncertainty is aimed. Accordingly, Bass & AVALIO's (1985) transformational, transactional leadership scale is used with regard to strategic leadership (Multifactor Leadership Questionnaire: MLQ). Separately, "Perceived Environmental Uncertainty Scale" developed by Waldman & Ark (2001) depending upon the study of Khandwalla (1976), "Strategic Change Scale" of Waldman, Javidan & Varella (2004) and "Vision Development" and "Innovativeness" scales of Elenkov, Judge & Wright are used. The validity and reliability of these scales are tested. Finally, some questions are added to the scale questions in order to determine the socio demographic features of employees. Separately, depending upon Koçel (2008), managers are asked to categorize their plans from most to the least related to their work (daily, 1 week later, one month later, 3–6 months later, one year later, two years later, 3–4 years later and 5–10 years later) and by this means, the planning scope of manager is evaluated. In this study, descriptive statistics are applied on the findings. In internal consistency of the scale, item total correlation and Cronbach Alpha reliability coefficient are used. Construct validity of the developed scale is controlled with the confirmatory factor analysis and path analyzing with Lisrel 8 programme.

As a result of study, it is seen that transformational strategic leadership through environmental uncertainty perception effects the strategic change and innovativeness significantly. On the other hand, strategic vision improvement through environmental uncertainty perception also has a significant effect on strategic change and innovativeness. Transactional leadership appropriate for management has no significant relation. In addition, the results of the study indicates that the scope of the strategic management of the largest portion of participants' preferences is creating over 5-10 years, respectively 1 week later and 1 month later are given as the planning horizon.

**Keywords** :Leadership, Transformational leadership, Transactional leadership, Visionary leadership, Perceived environmental uncertainty strategic change, Innovativeness, Small and Medium-Sized Enterprises (SMEs), Strategic management.

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## 1. Introduction

There is an extended literature on leadership adequateness since 1980s. One of the assumptions on adequateness is strategic leadership. Acting strategic stands out as a competent of leadership in many theories and hypothesis. In the 1970s and 1980s several studies on the importance of top management (eg, Child, Hambrick, & Mason's work, etc.) have formed a strategic leadership [1]. The new leadership theories are considered as three dimensional; charismatic, transformational and visionary leadership. By comparison, strategic leadership has an upper place than the theories which emphasize the relationship between leader and followers [2]. This development, technological progress, global competition, rapid change and this change impacts are becoming larger for that reason managers should have the features to can keep pace with developments [1].

One assumes that there are three areas of leadership in the organization. These are: Environment, strategy and organization [3]. Such that, in the description of strategy these three elements are emphasized together. For example according to Drucker, strategy is a terms that transforms business theory into performance and provides the desired results in an uncertain environment in an organization [4]. In other words, strategy can be defined as “the long term direction chosen by the organization in order to achieve goals” [5]. In another explanation, strategy is considered as the action plan to achieve the goal [6].

Strategic leadership is the wisdom and vision capabilities of planning and implementing of this plan in an unstable, complex, uncertain strategic environment that an experienced leader should have [6]. In other words, strategic leadership is the decision making activity to achieve the most appropriate, desired and acceptable plans for organization and partners [6].

As it is seen in the definitions, strategic leadership has a significant role for organization in environmental uncertainty. Because it is supposed that the organizations which are going to survive are the ones adapting the organizational changes [4] and for that reason strategic leaders should bring the innovativeness to their organizations [7]. Leader makes decisions in an uncertain environment especially by the increasing of globalization these uncertainties become more intense and global competition makes strategic leadership an important issue in local and cross cultural [8]. So much, Sun Tzu's “Art of War” (BC 400) is recommended as a resource for leaders of strategic principles [9]. Based on these views, this

study investigates the effects of strategic leadership on organizational change and innovativeness taking into accounts the environmental uncertainty.

## **2. Theoretical background**

### *2.1. Strategic Leadership*

Strategic leadership, according to Boal (2004) is a range of decisions and activities made by head of administration [10]. Boal & Hoojbeg identifies strategic leadership as absorptive capacity, adaptive capacity and managerial wisdom [2].

In other words, Boal et al., defines strategic leadership as a concept including “being aware of capacity, changing capacity and managerial wisdom” integrating charismatic, transformational, visionary leadership theories and social intelligence concepts [2]. Boal et al., put forth the idea of establishing and developing “absorbed capacity” and “adaptive capacity” in order to have managerial wisdom by strategic leaders [2]. Accordingly, absorbed capacity includes the awareness, learning and practice of new information. Adaptive capacity is the ability of change. Managerial wisdom is the ability of being aware of intuition, environmental perception and social relations [2].

There are different approaches for strategic leadership. For example, one of these approaches is owned by Covey. According to him, strategic leaders have three basic functions. The first is “to guide”, it is all about the organization’s vision, mission and the environment. Second, the “streamline”, it covers the organization’s structure and the system. Last dimension is “to strengthen” it means to increase the ability of the human potential and productivity [11].

Bolt talks about three features of leaders relating to strategic leadership. The first is the “job”, it includes how things should be in an organization. Second, the “leadership”, it is extensibility. Last dimension “personal activity” is related to improve the value and capabilities [11].

Spreitzers, Coleman, & Gruber evaluated many approaches for strategic leadership say that strategic leadership is developed through what leader did and environmental perception and there are some studies that research the inner world of leaders [10]. So this idea to include strategic leadership, his election as leader of the self respect, depending on the environmental opportunities and threats developed planning capability, and in others the power to influence others in accordance with this plan would become strategists as the ability to define the direction.

Dubrin (1998) has identified the strategic leader must have a number of features. These qualities can be summarized as follows: a) High level of cognitive activity: A Conceptual Thinking ability, b) In formulating the strategy to provide information from different sources: the different sources of

information make easy to reach formulating real strategy. c) Creating a future: it can predict the future leaders to make routing. d) The Transformational Thinking: product, market, industry leader in the field is a revolutionary way to monitor and motivate employees, it can in this regard. e) The re-designing a product or service: adding value to your product or service, as a re-designing. f) Re-determine the Market: Global market focus and make it accessible to many people as possible. g) To determine the borders of the industry: the leader is the organization of local, regional and global perspective is the ability to re-identify. h) Creating a vision: the vision of the leader is also considering a long-term strategy of the followers [12].

Appelbaum & Paese (2001) talk about nine roles for the leaders, they are strategically necessary to engage in what to help leaders, for the management of the strategic hill referred to the important role to play in nine. These roles are defined briefly as follows: a) Determining the route: the complexity of the problems and opportunities from the opportunities to see and analyze problems, b) The Strategist: Long-term objectives linked to business development, or to put forward a vision of the organization, c) The Entrepreneur: New products, services and markets opportunities to discover, d) Action Pass: being active, not passive, providing the activity complex targets, e) Ability to pro: The appropriate skilled people to pull the organization, to provide them to continue their development and organization, f) Stimulating: in accordance with a common goal and a passion Creating loyalty, g) Global Thinking: The best way to manage organizational performance information from all sources, h) Exchange Manager: Create an environment for change, to accept new ideas, i)The Keeper Initiative: to support entrepreneurship, to provide confidence to shareholders in terms of decision making to provide encouragement [13]. Some approaches accept that strategic leadership is taken from the studies of Bass's "Transformational Leadership Theory", and transformational leadership, is considered as the type of strategic management leadership applied effectively [12]. In some studies, the theory of transformational leadership, strategic leadership theory is the leader of a team such as lack of interaction with employees adequately resolve the noted deficiencies [14]. In another approach, the strategic leadership, transformational, transactional and visionary, to be considered in three dimensions [15]. At our research, they are taken into account recent opinion study of transformational, transactional and visionary leadership dimensions is considered strategic.

Transformational leadership, according to Bass (1990), a leader who can affect followers in more ways than one. Accordingly, it is to be charismatic, to inspire, to meet the individual needs of individual followers and the ways to encourage them intellectually. Transformational leadership's charisma dimension is a key element of strategic leadership and represents the potential [16]. Charisma, leader, role model for followers of the leader believed to possess extraordinary abilities, and thus the size of a high-level guidance for the purposes of [17]. Bass (1985) Transformational Leadership subscales are regarded as intellectual stimulation is regarded as a cognitive view of strategic leadership [2]. Transformational leaders have the intellectual stimulation through the continuous questioning what encourages innovation,

innovations and encouraging followers to provide the appropriate environment [17]. Another sub dimension of Bass's (1985) transformational leadership is inspiration and it shows how to reach to a valuable future [9]. Last dimension is individual consideration which means in the personal development of followers providing support, recognition of individual differences, and development of the provision [17].

Bass assumes that a leader may be both transactional and transformational [18]. According to this, Bass (1985) thinks that leadership is transformational in troubled times, while the transactional leadership is much more appropriate in a good social mechanism. Transactional leadership is considered as a second sub dimension of strategic leadership and it is considered in three dimensions. Bass (1985) assessed the dimensions of transactional (transactional leadership in three dimensions; contingent management by exception active and management by exception passive). Contingent reward means followers are going to be rewarded when the initial agreement is fulfilled [9]. Management by active exceptions is leader's following the rules actively and intervene the faults of audience while management by exception passive is defined as the absence of any action before the problems occur [19].

The third and final dimension of strategic leadership, visionary leadership, the ability to create his vision of the future the organization or unit in the future for the organization clearly defined, real, reliable, attractive is the ability to create his vision of the future [20]. According to the Tichy & Devanna vision is the organization where the means to create a road map of the conceptual word to reach [21]. Vision is defined charismatic leadership as a collective; provider of loyalty among employees is also considered as factors [16].

Strategic leadership today has been a leadership approach because of global competition and rapid technological progress that is much more important than indeterminate because of the environmental media. In our study, therefore, the effect of environmental indeterminate is investigated.

## *2.2. Perceived Environmental Uncertainty*

The concept of perceived environmental uncertainty is manifesting itself more in times of crisis, support the formation of charismatic leadership as a phenomenon that presents itself [16]. Information society and global economy created a complex business environment, ambiguous and a dynamic environment in 20<sup>th</sup> century. The new technological trend in the new economy caused a rapid change in the nature of competition and the nature of the strategy has led to a rapid change. In this environment includes risk, uncertainty of the future forecasts, and competition and strategy [3]. Uncertainty surrounding is defined as term which individuals can not understand the change in the environment, in organizations and effects of environment directly [16]. The leaders are obliged to take decisions in a changing environment. Such a responsibility for strategic leadership requires faster learning in individual,

group and company level and change in external environment [3]. High perceived environmental uncertainty is a risk for the organization continuousness. In such a case, leaders are expected to make decisions which are going to reduce the environmental risks [16].

### 2.3. Innovativeness

Innovation means the successful application of creative ideas within the organization if you have a look from the perspective of an organization. In other words, it can be defined as new stuff or new methods [22]. According to Drucker (1985) innovativeness, from the perspective of a manager is to bring up a change in order to create new opportunities and use the one existing [23], [24]. Innovation is the “company’s success and precondition of survival” and shows itself in the form of the market orientation, entrepreneurship, learning orientation [22]. Jansen et al., (2009) have found in their studies that strategic leadership transformational leadership contributes to innovation. In the same study, the growth of existing information by providing strategic leadership for innovation have also contributed to the transactional behavior. Visionary means to accomplish the image of the organization in the future and the organization should be more realistic, reliable and attractive [25]. Therefore, determinations on the basis of this study, the effects of strategic leadership’s transformational and transactional leadership sub dimension in a perceived environmental uncertainty on innovativeness. Accordingly, the following hypotheses were developed.

*H1. Strategic-transformational leadership behaviours will have a positive relationship with innovation.*

*H2. Strategic-transactional leadership behaviours will have no relationship with innovation.*

*H3. Strategic-vision development leadership behaviours will have a positive relationship with innovation.*

Jansen et al., (2009) find out that environmental dynamic should be taken into consideration in strategic leadership. In our study, as a similar approach, environmental uncertainty is considered as an intermediary between strategic leadership and innovativeness. According to this, hypothesis 4 is developed.

*H4a. In Strategic leadership-transformational and innovation relationship perceived environmental uncertainty has the role of mediating.*

*H4b. In strategic leadership-vision development and innovation relationship perceived environmental uncertainty has the role of mediating.*

### 2.4. Strategic Change

Strategic leadership is the ability of seeing the future, determine a vision, provide flexibility and strengthen the staff in a changing environmental condition in order to start the strategic change [26]. Each company applies different strategies. Strategy can be defined as the transformation of opportunities created through business environment into advantage, avoidance of continuous threats [16]. Strategic change is defined as a significant phenomenon. Because it means the organization's changing competitive, technological and social environment come up with the same level, to uncover their fears, their lives to sustain and ensure the effectiveness [27]. Heterogeneous and totally different companies, creating different strategic change are increasing their financial performance [16]. Transformational and visionary theories suggest changes in values and strategies. Charismatic leaders changing the world view of the followers lead a real change [2]. Based on this, study assumes that strategic leadership is effective on the change of three sub- dimensions of the strategic leadership and the hypotheses below are given.

*H5. Strategic-transformational leadership behaviours will have a positive relationship with strategic change.*

*H6. Strategic-transactional leadership behaviours will have a positive relationship with strategic change.*

*H7. Strategic-vision development leadership behaviours will have a positive relationship with strategic change.*

In addition, it is stressed that strategic leadership is important on the uncertain environmental strategic leadership. Environmental dynamism refers the change of a company in external environment and change being unpredictability [28]. It is characterized by dynamic environments, changing technologies, customer preferences diversity, demands and the provision [28]. Therefore, a similar approach to study, environmental uncertainty is the assumption that the strategic leadership and strategic change in a variable movement between the tools was. According to this, 8th hypothesis has been developed.

*H8a. Perceived environmental uncertainty has a mediating role in strategic leadership-transformational and strategic change relationship.*

*H8b. Perceived environmental uncertainty has a mediating role in strategic leadership-vision development and strategic change.*

### **3. Method**

In this study, the relations with strategic leadership (transformational, transactional and visionary), strategic change, innovativeness, and perceived environmental uncertainty the in Small and Medium-Sized Enterprises (SMEs) were studied. The data were evaluated by the packet programme of SPSS 10.0. In order to examine the content validity of those measures, we performed confirmatory factor analysis (CFA) with LISREL VIII. Besides the descriptive statistics, path diagram analyses were carried out.

### 3.1. Variables and Measure

*Multifactor Leadership Scale Questionnaire (MLQ):* Bass et al.'s (1985) Multifactor Leadership Questionnaire (MLQ) scales related to strategic leadership is used. The questionnaire of Aslan (2009) and Tuna (2009) which has the validity and reliability in Turkish [29] as it is previously applied is used. This questionnaire contains three scales, transformational leadership, transactional leadership, laissez faire leadership. Transformational leadership scale has four dimensions; charisma, inspirational, intellectual stimulation and individualized consideration. Transactional leadership has three dimensions scale, contingent reward, and management by exception active and passive management by exception. Participants were asked to respond to each item on 5-point scale ranging from 1 (strongly disagree) to 5 (strongly agree). Charisma (7 questions), inspirational (4 questions), intellectual stimulation (4 questions), individualized consideration (7 questions), contingent reward (4 questions), management by exception active (4 questions), MBE Passive (4 questions), total 34 questions of the scale used.

*Strategic Change Scale:* It is a scale developed by Waldman et al., (2004). The reliability of the scale is found Cronbach Alpha 0.73. It is rated as five Likert one dimension and 7 questions (1: very small size, 5: very large in size) scale.

*Perceived Environmental Uncertainty Scale:* This one is developed by Waldman, Ramirez & House (2001) using the Khandwalla (1976) scale, reliability of the scale was Cronbach Alpha 0.73. It is rated as five Likert one dimension and 4 questions (1: completely disagree, 5: completely agree) scale.

*Vision Development Scale:* This scale is developed based on the studies of Baum & Arc. (1998) and improved by Elenkov & Arc. (2005). Showed satisfactory scale reliability ( $\alpha = 0.76$ ). Items of the scale- clarity, brevity, challenge, abstractiveness, future orientation, stability, and desirability or ability to inspire attention on seven attributes-which were investigated. It is a five Likert consisting of 7 dimensions and one dimension (1: completely disagree, 5: completely agree) scale.

*Innovation Scale-Product-Market (PM) Innovations and Administrative (ADM) Innovations:* The scale improved by Elenkov, Judge, & Wright (2005) is used. It is a five Likert rated (1: completely disagree, 5: completely agree) scale. There are two dependent variables in this study: executive influence on Product-Market (PM), Innovations and executive influence on the Administrative (ADM), Innovations. The scale consists of two dimensions with 3 questions. It is rated the amount of influence (1= no influence to 5 = a dominant influence), the reliability (Cronbach Alpha) of the scales measuring executive influence on PM and ADM was 0.78 and 0.80 respectively.

## 4. Results

### 4.1. Characteristics of Sample

Our surveys were carried out with 189 employees in the SMEs in the province of Konya in Turkey. The sample mostly consists of male with 87.8%, collage with (%31.2), technical education (50.3%), married (83.1%), in lower level management positions (49.7%). Participants consist of managers from 15 different sectors (food, automotive, construction and plastics industry, etc.). Average age of the participants is 37.69, work experience is 7.40 years.



#### 4.2. Confirmatory Factor Analysis of Scales

In order to examine the content validity of those measures, we performed confirmatory factor analysis (CFA) with LISREL VIII (Joreskog & Sorbom, 1996) using a sample of 189 managers working for companies in Konya province of Turkey. CFA results of scales are shown at Table 1.

Table 1. Items and Item Loadings from Confirmatory Factor Analyses

Items	Standardized Loadings	t-Value	Mean	SS	Item-Total Correlations
<b>Strategic Change</b>	(CFA) <sup>1</sup>				
1. Product focus	.89	.42	3.55	1.40	.82**
2. Organizational structure	.82	.43	3.87	1.15	.73**
6. Divestments	.85	.49	3.76	1.33	.78**
7. Acquisitions	.86	.40	3.76	1.24	.77**
<b>Perceived Environmental Uncertainty</b> (Initial version)	(CFA) <sup>2</sup>				
1. Very dynamic, changing rapidly in technical, economic, and cultural dimensions.	.88	.22	3.95	1.10	.80**
2. Very risky, one false step can mean the firm's undoing.	.72	.48	3.81	1.24	.85**
3. Very rapidly expanding through the expansion of old markets and the emergence of new ones.	.88	.23	3.87	1.17	.80**
4. Very stressful, exacting, hostile, hard to keep afloat.	.82	.33	3.87	1.18	.82**
<b>Vision Development</b>	(CFA) <sup>3</sup>				
2. Brevity	.89	.20	4.19	1.01	.79**
3. Challenge	.84	.30	3.99	1.14	.74**
4. Abstractiveness	.90	.20	4.02	1.15	.80**
6. Stability	.79	.38	4.23	1.00	.73**
<b>Innovation</b>	(CFA) <sup>4</sup>				
1. New products or services (for existing markets)	.93	.13	3.77	1.20	.85**
2. New markets (for existing products/services)	.81	.34	3.89	1.15	.73**
3. New products or services for new markets	.91	.18	3.80	1.21	.82**
4. New planning and control system	.79	.38	3.76	1.23	.74**
<b>Transactional Leadership</b>	(CFA) <sup>5</sup>				
<b>Contingent Reward</b>					
Supports me when s/he feels my effort and interest.	.81	.34	4.33	.98	.65**
Provides adequate award when we achieve performance goals.	.73	.46	4.15	1.03	.58**
Appreciates good works.	.90	.19	4.26	1.06	.71**
<b>Management by Exception Passive</b>					
To move, bad things must have gone to.	.82	.33	2.34	1.33	.77**
Believes in unnecessariness unless be obliged.	.92	.16	2.29	1.30	.82**
Never interferes till problem become serious.	.86	.25	2.26	1.26	.79**
<b>Transformational Leadership</b>	(CFA) <sup>6</sup>				
<b>Charisma</b>					
I believe that respected by my employees.	.85	.27	4.23	1.04	.73**
My employees are proud of working with me.	.92	.16	4.13	1.09	.82**
I consider the ethic results of my decisions.	.83	.32	4.34	1.04	.77**
<b>Intellectual Stimulation</b>					
I seek differing perspectives when solving problems.	.85	.26	4.28	.90	.68**
I advise my employees to approach the problems from different perspectives.	.80	.36	4.16	1.14	.70**
I tell my expectations to my employees in a way.	.80	.36	4.29	.94	.68**
<b>Individualized Consideration</b>					
I spend time teaching and coaching.	.84	.30	4.06	1.16	.69**
I help others to develop their strengths.	.83	.31	4.25	.97	.69**
I supposed feed-back to my employees in terms of performance.	.83	.31	4.15	.99	.73**

Note: Standardized item loadings reported for CFA.  $p < .001$  for all loadings. \*\*Correlation is significant at the 0.01 level (2-tailed).

Goodness-of-Fit Statistics1:  $\chi^2/df = 5.02/2 = 2.54$ , NNFI=.98, CFI=.99, AGFI=.94, GFI=.99, IFI=.99, RMSEA=.08.  
 Goodness-of-Fit Statistics2:  $\chi^2/df = 9.05/2 = 4.53$ , NNFI=.96, CFI=.99, AGFI=.89, GFI=.98, IFI=.99, RMSEA=.010.  
 Goodness-of-Fit Statistics3:  $\chi^2/df = 3.57/2 = 1.79$ , NNFI=.99, CFI= 1.00, AGFI=.96, GFI=.99, IFI= 1.00, RMSEA=.06.  
 Goodness-of-Fit Statistics4:  $\chi^2/df = 0.71/2 = 0.36$ , NNFI=1.01, CFI= 1.00, AGFI=.99, GFI= 1.00, IFI= 1.00, RMSEA=.00.  
 Goodness-of-Fit Statistics5:  $\chi^2/df = 7.04/8 = 0.88$ , NNFI=1.01, CFI= 1.00, AGFI=.97, GFI= 0.99, IFI= 1.00, RMSEA=.00.  
 Goodness-of-Fit Statistics6:  $\chi^2/df = 37.23/24 = 1.55$ , NNFI=.98, CFI= .99, AGFI=.92, GFI= 0.96, IFI= .99, RMSEA=.05.

Validity and reliability of the scales have been identified using confirmatory factor analysis. Accordingly, transformational leadership scale, a new scale is developed with 3 dimensions and 3 questions and the questions that decrease the validity and reliability are removed. Transactional leadership as a result of the CFA, a new scale consisting of two dimensions with 3 questions is found and the questions that decrease the validity and reliability are removed. As a result of development Vision scale of the CFA, a scale consisting four questions and one dimension is found. Three questions that decrease the validity and reliability of the scale were removed. Strategic Change scale, confirmatory factor analysis, CFA is applied and a new factor structure with four questions and one-dimension is found. Three questions that decrease the validity and reliability of the scale were removed. The initial version of Perceived Environmental Scale is found valid and reliable. Finally, the Innovation scale, as a result of the CFA consisting one-dimension and 4 questions is developed. Two questions that reduce the validity and reliability of the scale were removed. Factor loads relating to each factor are given in Table 1. The goodness-of-fit of scales is investigated. The goodness-of-Fit Measures were used to assess the overall model fit. All the above for the initial CFA model fit indices indicated an acceptable fit. At the end of the application materials by calculating the mean and standard deviations are shown in Table 1. Mean values were found higher. In addition, the t values of all scales were significant (See. Table1). Factors were examined for levels of total-item correlations of the internal consistency for scale. Calculated materials at the end of the application to distinguish are shown in Table 1. According to the results of all application materials to distinguish from the other all scales, the border does not require correction adopted .25's over. The item-total correlations for the items were: values ranging between .65 and .85 ratings. According to these scales, showing a good level of internal consistency for the scale can be said.

#### 4.3. Findings

Table 2 reports means, standard deviations, correlations among variables, and Cronbach Alpha coefficients. As predicted, Transformational leadership has been found a positively relation to perceived environmental uncertainty ( $r = 0.712$ ,  $p < 0.01$ ), strategic change ( $r = 0.604$ ,  $p < 0.01$ ) and innovation ( $r = 0.542$ ,  $p < 0.01$ ). H1 and H5 are supported by the variable correlations found in Table 2. Moreover, transactional leadership has been found a positively but minor relation to perceived environmental uncertainty ( $r = 0.185$ ,  $p < 0.05$ ), and strategic change ( $r = 0.207$ ,  $p < 0.01$ ). But transactional leadership was not found to be meaningful related to innovation. H2 and H6 are supported by the variable correlations found in Table 2. On the other hand, vision development has been found a positively relation perceived

environmental uncertainty ( $r = 0.664, p < 0.01$ ), strategic change ( $r = 0.582, p < 0.01$ ) and innovation ( $r = 0.473, p < 0.01$ ). H3 and H7 are supported by the variable correlations found in Table 2.

Table 2. Descriptive Statistics and Correlations among Study Variables

	Mean	Std. Dev.	1	2	3	4	5	6	7	8	9	10	11
1.	4.22	.87	(.94)										
2.	4.23	.97	.877**	(.88)									
3.	4.23	.87	.906**	.762**	(.82)								
4.	4.19	.94	.899**	.748**	.773**	(.84)							
5.	3.49	.69	.300**	.233**	.312**	.337**	(.78)						
6.	4.26	.90	.835**	.772**	.777**	.786**	.366**	(.80)					
7.	2.30	1.22	-.181*	-.237**	-.124	-.113	.754**	-.232**	(.90)				
8.	4.18	.96	.721**	.670**	.637**	.694**	.188**	.714**	-.228**	(.89)			
9.	3.95	.94	.712**	.574**	.677**	.679**	.185*	.606**	-.164*	.664**	(.86)		
10.	3.80	1.11	.604**	.543**	.582**	.617**	.207**	.489**	-.058	.582**	.715**	(.90)	
11.	3.90	1.03	.542**	.497**	.546**	.495**	.070	.410**	-.166*	.473**	.724**	.781**	(.90)

1. Transformational leadership, 2. Charisma, 3. Intellectual stimulation, 4. Individualized consideration, 5. Transactional leadership, 6. Contingent Reward, 7. Management by exception Passive, 8. Vision Development, 9. Perceived Environmental Uncertainty, 10. Strategic Change, 11. Innovation. \*\* Correlation is significant at the 0.01 level (2-tailed). \* Correlation is significant at the 0.05 level (2-tailed), (Cronbach Alpha coefficient).

4.3.1. The Structural Model

The hypothesized model is depicted in Fig. 1.

Figure 1. The Model of Research

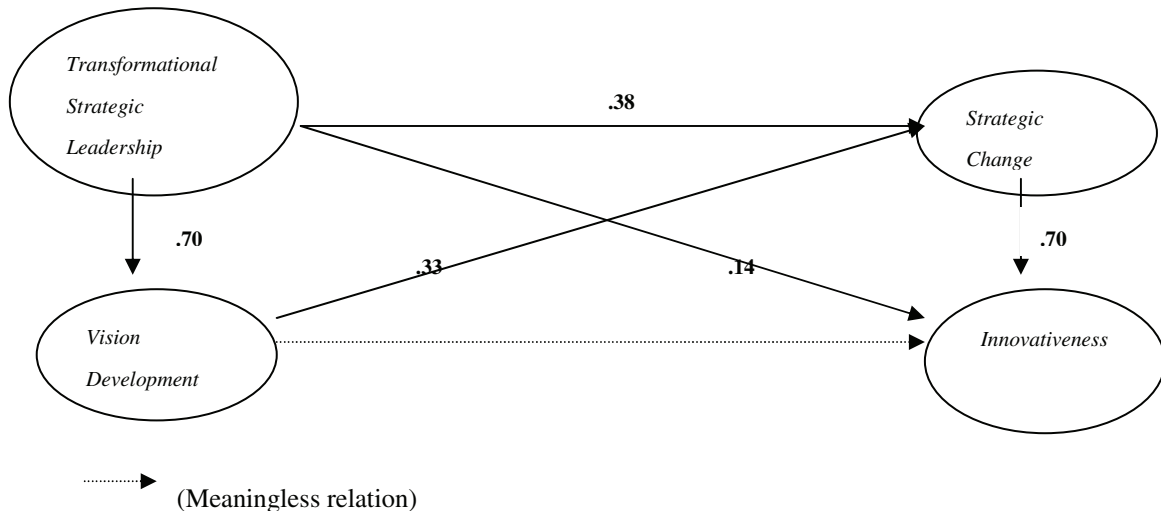


Table 3. Goodness-of-fit Indices for Different Proposed Structural Models

Structural Model	Chi-square ( $\chi^2$ )	df	$\chi^2/df$	RMSEA	CFI	IFI	NFI	RFI	AGFI	NNFI	GFI
Hypothesized	0.02	1	.02	.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Figure 2. The Model of Research

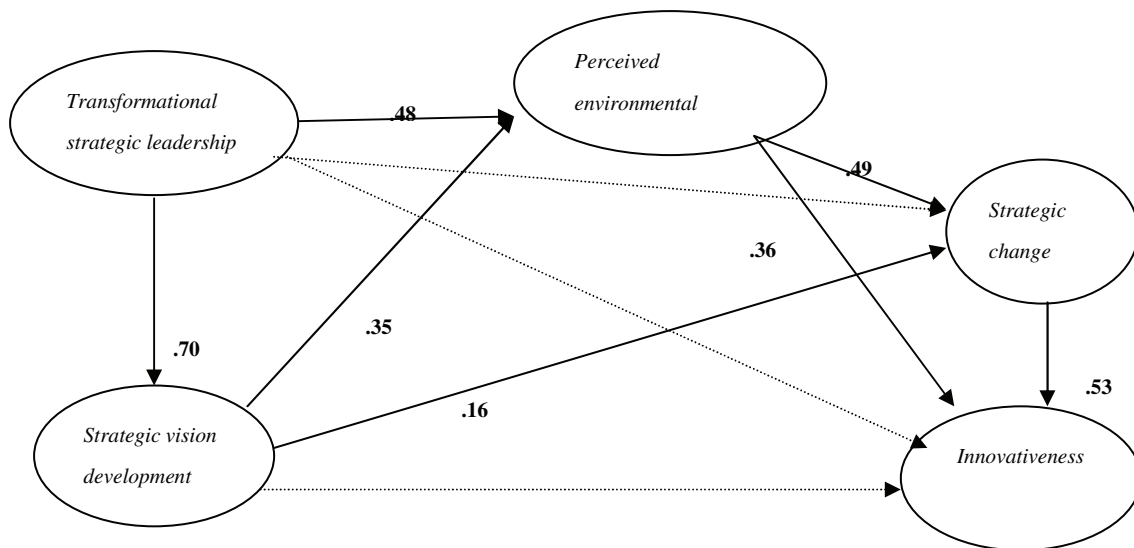


Table 4.

Table 4. Goodness-of-fit Indices for Different Proposed Structural Models

Structural model	Chi-square ( $\chi^2$ )	df	$\chi^2/df$	RMSEA	CFI	IFI	NFI	RFI	AGFI	NNFI	GFI
Hypothesized	2.93	2	1.047	.05	.99	.99	.99	.98	.95	.99	.99

In order to test and determine the mediating effects of H4a, H4b, H8a ve H8b hypothesis in a perceived environmental uncertainty, perceived environmental uncertainty is taken out of the model and other variables are determined alone using path analysis. As a result of path analysis the coefficient between transformational leadership and innovation is found .14 ( $p < .01$ ). The path coefficient between transformational leadership and strategic change is found .38 ( $p < .01$ ). This result indicates that intermediate reliable and relationship meets the conditions. Goodness of fit indices of Model 1 is examined, the values reached by the model, the model is acceptable because it best fit values (See Table 3). In the second stage, in order to determine the effects of intermediate variables, perceived environmental uncertainty Model 2 is investigated. As a result, it is seen that transformational leadership

and perceived environmental uncertainty (.48,  $p < .01$ ) and perceived environmental uncertainty and strategic change (.56,  $p < .01$ ) have significant relations. Similarly, between the development vision and perceived environmental uncertainty (.35,  $p < .01$ ), perceived environmental uncertainty and innovation (.36,  $p < .01$ ) have significant relationships. According to these results, all intermediate variable conditions are done. When goodness of fit indices of Model 2 is examined, the model is acceptable because it gives the best fit values (See Table 4). Absence of any relationships in the model indicates fully intermediation, whereas if there is a significant relationship but a decrease at the same time, it indicates the partial intermediation. As a result, strategic-transformational relationship, perceived environmental uncertainty and innovation has a full mediating role. Similarly, transformational and strategic change Strategic relationship-perceived environmental uncertainty has a full mediating role. Finally, the strategic-vision development and strategic change perceived environmental uncertainty relation is a partial mediating role. As a result of all these, 4b hypothesis has been rejected and hypothesis 4a, 8a and 8b has been accepted.

Finally, participants were asked to their planning horizon within strategic management. Accordingly, the following values were found. Participants' preference 5-10 years later is 22.2% with the largest portion. On the other hand, a week later (19.6%) and 1 month later (19%), respectively, as shown in the multi-adopted strategic planning horizon as appropriate ones.

Table 5. Planning Horizon

	Frequency	Valid percent	Cumulative percent
Daily	13	6.9	6.9
1 week later	37	19.6	26.5
1 month later	36	19.0	45.5
3-6 month later	21	11.1	56.6
1 year later	21	11.1	67.7
2 year later	9	4.8	72.5
3-4 year later	10	5.3	77.8
5-10 year later	42	22.2	100.0
Total	189	100.0	

## 5. Discussions

In the research, it is aimed to investigate the effects of strategic leadership in a perceived uncertain environment SMEs organizational change and innovation. As a result, transformational strategic leadership effects strategic change and innovation through the detection of environmental uncertainty positively. On the other hand the strategic vision development effects strategic change and innovation in the detection of environmental uncertainty positively. Transactional approach to leadership is more appropriate management style did not show a significant relationship in strategic leadership. Therefore, being transformational and visionary strategic change and innovation are significantly affected.

In addition, another result of the study is that transformational leadership affects visionary leadership; strategic change influences the innovativeness are important results. Finally, the scope of the strategic management of the largest portion of participants' preferences, creating over 5-10 years, respectively, that the future strategic planning horizon of 1 week and 1 month are shown in the future.

According to Ghosh et al., (2001), SMEs in Singapore are referred as tigers, their strategy dynamics and key success factors are magnificent. In SMEs, six specific components in terms of strategic dynamics are found [30]. Accordingly, (1) committed, supportive and strong senior management, (2) a talented, visionary and strong leadership, (3) to adapt the right strategic approaches, (4) to determine the capabilities and market focus, (5) sustainable capacity and development capability, (6) better customer relationships [30]. When the proactive and passive strategy types are compared, it is seen that proactive type companies are more successful [30], [31], [32]. In addition, the types of strategies of successful companies were found to show similar features [30].

On the other hand, Avlonitis & Salavou (2007), as a result of their study done in Greece with 149 SMEs on their active and passive entrepreneurial groups, when active and passive entrepreneurs are compared in terms of innovation, it is concluded that active entrepreneurs give importance to new products and product performance which have unique character [33], [34]. In this context, H1: Strategic-transformational leadership will have a positive relationship with innovation accepted in our study and literatures have similarities. Strategic-transformational leadership will have a positive relationship with innovation accepted in our study and the literatures have similarities.

When Rhee et al., evaluated technologic innovation performance using equation model in 333 SMEs in South Korea; it is seen that knowledge management has an important role on market orientation and entrepreneurial orientation [22]. Furthermore, knowledge management has an important influence on innovation. This certainly contributes to the innovation of creative organizations [22]. The study of Rhee et al. and the H3 accepted in our study have similar features. Strategic behaviors-vision leadership development will have a positive relationship with innovation with remarkable similarity. Strategic-vision leadership behaviors can be said to have positive affect on innovation if the knowledge management used actively.

The studies of Marcati et al., (2008) show the importance of psychology on the basis of human capital for innovation. Accordingly, many horizontal relationships based on vertical hierarchy of organizations are helping to build the development of psychological factors. On the other hand, the programs that strengthen creative thinking also stimulate the innovative behaviours [35]. In addition, positive link was found to support innovation in leadership [31]. On the other hand, O'Regan et al., (2006) find that leadership styles focused on transformational and human sources are much more successful at innovation. Furthermore, as strategy culture has a positive affect on innovation and employees' creativity, this

contributes to the company performance in a positive way [36]. The accepted H5 Strategic-transformational leadership behaviours will have a positive relationship with strategic change and the previous studies can be considered as having a parallelism when success in SMEs are taken into consideration as the result of human and psychology in strategic change.

In conclusion, in this study it is aimed to contribute to the literature through investigating the effects of strategic leadership in uncertain environment in SMEs on strategic change and innovation.

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