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THE EFFECTS OF AMBIDEXTERITY AND GENERATIVE LEARNING ON INN OVATIVE FIRM PERFORMANCE: THE MEDIATING EFFECT OF TRANSFORMATIONAL LEADERSHIP

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ABSTRACT

The purpose of this study was to explore the relationships between ambidexterity in the context of innovation strategies, generative learning, innovative firm performance and the role of the transformational leadership to answer the question "how does ambidexterity affect organizational performance?" Data analyzed in this study were collected via questionnaires from mid and top –level managers (n=224) working at manufacturing organizations operating in different industries in Marmara Area, a major industrial region of Turkey. Our research model emphasizes associations among innovation strategies, ambidexterity, learning, innovative firm performance and leadership as a moderator. Our study provides compelling evidence for future work to gain further insight into ambidexterity and learning-related and leadership related organizational processes and includes several implications for management practice and future research. It was found that ambidexterity and generative learning affect innovative firm performance positively. This study further examines the existence of the moderating effect of transformational leadership on generative learning and its impact on performance. Our findings reveal that, ambidexterity and generative learning are found to be significantly associated with innovative firm performance and transformational leadership fully moderates the relationship between explorative innovation strategy and generative learning. This empirical study provides a new approach to understand the mechanism between ambidexterity and innovative firm performance considering the organizational learning process and the moderating leadership behaviors.

Keywords: Innovation Strategies, Ambidexterity, Generative Learning, Transformational Leadership, Innovative Firm Performance

INTRODUCTION

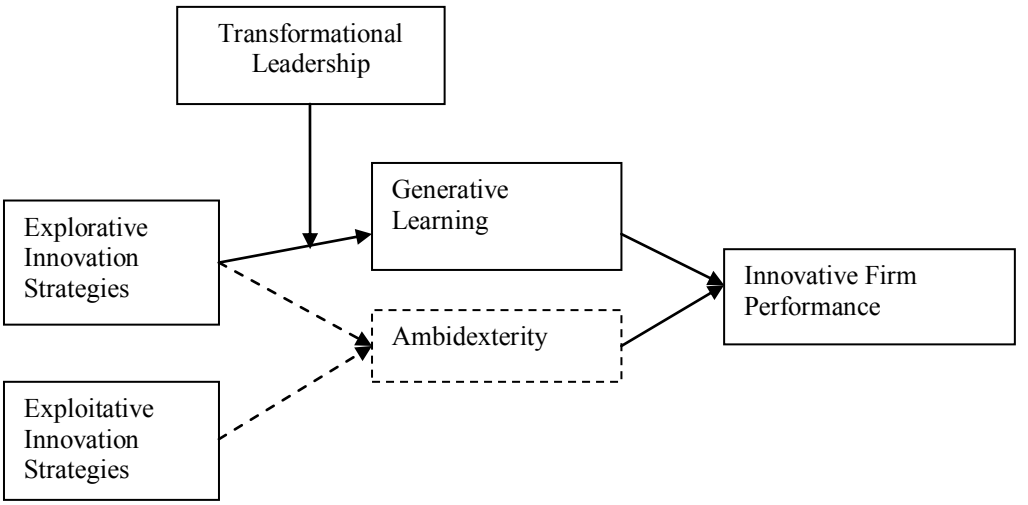
Organizations, which use their capabilities and competitive advantages better and learn new information more quickly and internalize it, will be one step ahead of their competitors. Dess and Origer (1987) suggest that firms operating in dynamic and complex environments should implement their corporate strategies effectively for being more competitive. To achieve this they should get feedback from their shareholders, labours and even from their customers, competitors, improve and differentiate their core competencies by using them (Cegarra and Dewhurst, 2007). This is a learning process and learning can improve organization's performance (Jonhson and Sohi, 2003).

With respect to Argyris's single-and double-loop learning definition; learning is termed as adaptive and generative learning in some studies (He and Wong, 2004). The impacts of generative learning on firm performance can be evaluated in the short term (Wang and Rafiq, 2009). The literature suggests that corporate strategies and organizational learning may influence the firm performance and survival significantly. Examples of lit needed Companies active in current jobs and, but at the same time, having enough adaptability to future conditions are called ambidextrous. This concept is becoming of great importance in the literature (Tushman and O'Reilly, 1996; Gibson and Birkinshaw, 2004). In our study we searched for the effect of the ambidexterity on firm performance in the strategic context and assumed that the ambidexterity is the interaction between explorative and exploitative innovation strategies.

In the literature, some studies are reported but it is not known precisely yet how transformational leadership behaviours influence the ambidexterity process at organizational level (Berson et al., 2006). Some studies show that transformational leadership behaviours are more effective in dynamic environmental conditions (Waldman et al., 2001; Nemanich and Vera, 2009) and their effects were reported as positive on both explorative and exploitative innovation processes of ambidexterity (Vera and Crossan, 2004; Nemanich and Vera , 2009) In the light of this information, this empirical study will examine the role of transformational leadership behaviours on the relations between explorative innovation strategies and generative learning and their effects on firm performance. We introduce to the literature an empirical study which was carried out in an emerging country. The business environment in Turkey allowed us to apply our research in a dynamic, transitional condition. The Turkish economy is rapidly growing and because of its young and highly increasing population, Turkey is a dynamic market. There are many multinational firms which realized the dynamics of the Turkish market and preferred to switch some of their operations in Turkey. Additionally, Turkey's valuable geopolitical position gives it the chance to build economic cooperation and develop relationships with business firms from European, Asian, Middle Eastern and African countries. However, rapid changes in economic, social or political conditions may have a negative effect on the business climate. This could be realized as a condition of the transition economy and brings with it high rates of environmental uncertainty and risks in doing business. We believe that our study will highlight the issues about understanding and examining the universal validity of the arguments which were first suggested and examined in the Anglo-Saxon countries.

Figure 1 exhibits our theoretical model of the relationships between ambidexterity, generative learning and innovative firm performance with the moderating effect of transformational leadership. In our model we identify how we derive ambidexterity from exploitative and explorative innovation strategies in accordance with literature. We investigated the simultaneous impacts of ambidexterity and generative learning on innovative firm performance with the moderating effect of transformational leadership behaviours.

Figure 1. Theoretical model of the Study



LITERATURE REVIEW AND HYPOTHESES

Ambidexterity and Innovative Firm Performance

Modern business life forces organizations to be agile, creative, competitive, flexible and multifaceted. (Cegarra and Dewhurst, 2007; Menguc and Auh, 2008). They should not only meet customer needs but also exceed their expectations and serve new concepts (Menguc and Auh, 2008). For sustainable competitiveness and survival, firms should exploit their current competencies while exploring new ones (Floyd and Lane, 2000) thus beings *ambidextrous.*Following this argument in our literature review we note that the ambidexterity concept is gaining in influence in academic research and writing and is accepted as a key capability for sustainable competitive advantage of organizations (de Geus, 1988, Grant and Bade-Fuller, 2004). There are several studies from different disciplines in the

literature, seeking to clarify the ambidexterity process (from their aspects). Some of these studies refer to marketing literature (Authene-Gima, 2005; Narver and Slater, 1990, Morgan and Berthon, 2008), strategic management literature (Gibson and Birkinshaw, 2004; He and Wong, 2004; Tushman and O'Reilly, 1996; O'Reilly and Tushman, 2004), and management (organization theory) literature (Volberda and Elfring, 2001).

The term "ambidexterity" is explained in Oxford English Dictionary as the power of using both hands alike and Robert Duncan first used this term in his innovation model in 1976 (Menguc and Auh, 2008). Tushman and O'Reilly (1996) defined ambidexterity as the ability to manage an appropriate balance between exploration and exploitation. Raisch and Birkinshaw (2008) give the definition of ambidexterity as an organization's ability to manage today's business demand efficiently and being adaptive to environmental changes, simultaneously.

In general, the distinction between exploration and exploitation occurs because they are fundamentally different concepts (He and Wong, 2004) and they need different structures (He and Wong, 2004), mindsets (March, 1991) and routines and processes (Burgelman, 2002). We believe that this distinction led to a tension between exploration and exploitation with the competition for scarce sources. At this point March (1991) suggested in the name of ambidexterity that firms should consider the balance between exploration and exploitation. Because these two concepts are fundamentally different, they would add to the organizations creativity, flexibility and agility for sustainable competitive advantages and their survival. If a firm concentrated on current capabilities too much and prefers to extend them rather than searching for new ones it may have the organizational inertia or organizational myopia (Radner, 1975, Levinthal and March, 1993). He and Wong (2004) suggested ambidexterity as the strategic logic to solve this problem. Following this study, Morgan and Berthon (2008) extended the exploration and exploitation concepts and sought to define a new typology of technological innovation strategy which is based on the market pull-technology push approach and includes the dimensions of explorative innovation strategy and exploitative innovation strategy. Furthermore, Morgan and Berthon (2008) suggested that exploitative innovation strategy deals with basic knowledge, learning processes and adjustments in technological practices in organizations while explorative innovation strategy occurs from proactive technological policies and advances the existing knowhow and technological practices.

Although exploration and exploitation are processes that compete for scarce sources and have distinctions and tensions between, they should ideally work in synergistically for organizational competitive advantage leading to superior firm performance (Teece et al, 1997).

Studies, approaching ambidexterity as the interaction between explorative and exploitative innovation strategies and searching for the relationships between ambidexterity and firm performance, have been conducted, but there is still a gap in the literature explaining clearly how the ambidexterity process influences the firm performance. According to these studies (Benner and Tushman, 2002, Lewin et al., 1999, Jansen et al, 2006), explorative innovation is characterized as hazardous and risky, bringing uncertainty, dealing with radical change processes, new product development, technologies or services for emerging customers. Consequently, its impacts on firm performance may be over the long-term and far away from the expected values or even negative in the short run (Menguc and Aug, 2008; Morgan and Berthon, 2008; He and Wong, 2004). Exploitative innovation strategy, in contrast, uses existing knowhow and organizational competencies to extend the existing process, product or services for existing customers (Jansen et al., 2006). As a result of its nature, exploitative innovation strategies are more predictable and positive in the short run but this can cause organizational myopia and decrease in the performance

From the above explanations it is obvious that the different impacts on performance outcomes make it important to balance the two dimensions of innovation strategies, called ambidexterity, to get the excellent performance and therefore, in our empirical study it can be proposed that ambidexterity might affect (innovative) firm performance positively. Therefore we propose the following hypothesis:

H1: Ambidexterity positively affects innovative firm performance

Generative Learning, Transformational Leadership and Innovative Firm Performance

As knowledge is becoming the most strategically important resource for organizations, organizational learning is becoming a considerable strategy (Russo and Vurro, 2010) essential for organizational

success (Bong et al., 2004; Cegarra and Dewhurst, 2007). There are many definitions from different perspectives of the organizational learning process in the literature (Srivastava et al, 2001; Bontis et al. 2002) .Argyris and Schön's conceptionalization has wide acceptance. They first defined the process in their studies in 1978 as "*single-loop learning*" and "*double loop learning*" which is associated with "*adaptive learning"* and "*generative learning"* in the literature. According to Senge (1990), companies put emphasis on generative learning called double-loop learning and on adaptive learning called single-loop learning (McGill et al, 1994).

Given the importance of it, the tendency in the literature is to search for the relationship between learning and other organizational concepts. For example, Crossan et al. (1999) presented in their study the 4I framework of learning process (*intuiting, interpreting, integrating and institutionalizing of information*) and connected strategy and learning.

Following these studies we explored the literature and discovered the relationships between organizational learning and strategies. Our starting point was Argris's double-loop learning, named generative learning which is defined as the process of generation, distribution and interpretation of new ideas and organizational risk taking action (Morgan and Berthon, 2008). This style of learning is based on experimentation and open-mindedness combining and developing existing knowledge with new ideas. Generative learning increases creativity and encourages organizations new ways of viewing old methods (He and Wong, 2004).

Consequently, relying on the cause-effect relationship between environment and the firm, it can hardly be said that generative learning occurs in dynamic environments which force organizations to be proactive, risk-taking and question their missions and strategies in the boundaries of their capabilities (Slater and Narver, 1995; Wang and Rafiq, 2009).

Furthermore, many studies assume that generative learning is the source of and leads to explorative innovation strategy (Morgan and Berthon, 2008; He and Wong, 2004). We are of the same opinion that there is a strong relationship between generative learning and explorative innovation strategy but we propose that the corporate strategies are assessed by the top management and their effects can be reflected on many processes within the organization. We advance the following hypothesis:

H2: Explorative innovation strategy positively affects generative learning.

Innovation requires the creation and implementation of new ideas, introducing new products or services, new production processes or a new managerial system and is closely related to generative learning. Dibella and others (1996) accepted learning as a change process that improves the outcomes or performance of the organizational activities and according to Slater and Narver (1995) learning might improve organizational outcomes; considering our model, innovation outcomes. Damanpour (1991) mentions that innovation outcomes focus on the performance improvement and Hurley and Hult (1998) aim to relate organizational learning and innovation outcome positively. In line with the literature, we suggest that the generative learning process may influence an organization's innovative performance positively and develop our third hypothesis:

H3: Generative learning positively affects innovative firm performance.

Moderating Role of Transformational Leadership

We assume that the leaders of organisations are responsible for implementing strategic plans in the whole organization. They act as a learning agent and their influence can be seen strongly in acquisition and distribution of knowledge. Especially in dynamic environments, visionary and strong charismatic leaders play a major role in learning and transformational leadership. These leaders are supportive leaders. They have a vision of the future and share it with others with great enthusiasm. They also empower their followers to be creative, learn from the past experiences and reach the performance beyond expectations (Bass and Avolio, 1994). Snell (2001) describes transformational leadership as the most important function for development of learning organization. Evidence of the positive influence of the transformational leadership on organizational learning are found in the literature (Burke, 2006; Llorens, 2005). We assume that transformational leaders may influence the application of strategies and therefore, there might be a positive effect on generative learning abilities of the organization. Consequently, we propose the following hypothesis:

H4: Explorative innovation strategy and generative learning relationship is moderated by transformational leadership

METHODS

Data collection and Sample

Data analyzed in this study were collected via questionnaires from mid and top –level managers working at manufacturing organizations operating in different industries (e.g. metal, automotive, chemistry, machinery and equipment, textile, food, etc) in Marmara Region, Turkey. Marmara region including Istanbul is among the main locations of manufacturing activities and a large recipient of investment in science and technology.

By choosing geographically homogeneous firms we reduced the impact of confounding variables (variables that cannot be controlled in empirical research) (Triandis, 1994). Of the 688 surveys distributed, 224 were received with a response rate of 32,6%. Most of the respondents were males (82%) and out of these 12.5% were top-managers. The average age of the respondents was 43,6 .

Measurement and Validation

In this study, we used existing validated scales from the literature. To enhance the validity of the construct of the questionnaire we conducted a pilot study of 30 managers using surveys or interviews. As a result we reviewed our questions and revised some of them and produced the final version of our survey. All items except demographics were measured on a five-point Likert-type scale, indicating the relative strength of their agreement or disagreement with responses ranging from 1 to 5, where 1 = Strongly Disagree and 5 = Strongly Agree. Participants were also asked, to provide some additional information for statistical analysis: *about the managers:* Age, Gender, Educational background, Position in the firm, Department of the occupation; *about the firm:* Age of the firm, number of staff, net current assets.

Dependent Variables

Innovative firm performance was measured with a five item scale adapted from the study of Prajogo and Sohal (2004). Respondents were asked to assess their firm's performance over the previous three year period.

Independent Variables

Ambidexterity is a derived variable and measured with 10 items adapted from the questions asked to measure exploration and exploitation innovations from Jansen et al. (2006). We came to this idea from the studies of Menguc and Auh (2008) and Morgan and Berthon (2008). Menguc and Auh, derived ambidexterity as a multiplication of exploration and exploitation in accordance with the conceptualism from Gibson and Birkinshaw (2004). Morgan and Berthon, considered ambidexterity with two dimensions: explorative and exploitative innovation strategies. We logically combined these two studies in our research and derived ambidexterity from multiplication of the variables namely explorative innovation strategies and exploitative innovation strategies and adapted the questions asked in the research from Jansen et al. (2006).

Generative Learning is measured with a three item scale adapted from the study from Morgan and Berthon (2008).

Transformational Leadership is measured in four dimensions (*idealized influence, inspirational motivation, individual consideration* and *intellectual stimulation)* with 12 items adapted from the original MLQ (Multifactor Leadership Questionnaire) which is developed by Bass and Avolio (1998) and existed as a widely used and generally accepted measurement for leadership behaviors. From the means of the dimensions we derived our reduced variable *transformational leadership.*

Factor Analysis and Correlations

Since the scales were used with a new sample, all scale items were submitted to exploratory factor analysis. We completed the factor analysis separately for the moderating variable and for the four constructs of our model. In these two separate factor analyses, the screen plot indicated that all the constructs should be retained (above 1.0). The best fit of the data was obtained using a principal component analysis with a varimax rotation. Table 1 displays the factor loadings of moderating variable (transformational leadership) and Table 2 displays the results of the principal factor loadings of the components of the constructs of our model. Consistent with our expectations, all items were loaded (i)

with high-standardized coefficients onto their respective factors and (ii) with substantially lower standardized coefficients on other factors.

As can be seen at Table 1, the lowest factor loading is 0.554. Factor 1 consists of four idealized influence items with an internal consistency coefficient of 0.72. Factor 2 includes four inspirational motivation items with an Alpha coefficient of 0.71. Factor 3 includes two individual consideration items with an Alpha coefficient of 0.53. Factor 4 consists of three intellectual stimulation items with an Alpha coefficient of 0.65. The Alpha coefficient of the reduced variable Transformational Leadership is 0.79. As can be seen at the Table 2, the lowest factor loading is 0.508. Factor 1 consists of five generative learning items with an internal consistency coefficient of 0.92. Factor 2 includes seven exploitative innovation strategy items with an Alpha coefficient of 0.85. Factor 3 includes three explorative innovation strategy items with an Alpha coefficient of 0.78.

Factor 4 consists of five innovative firm performance items with an Alpha coefficient of 0.86. The coefficient alpha estimates for all the scales are greater than the recommended level of 0.70 (Nunnally, 1978). We therefore decided that the measures have adequate internal consistency and computed composite scores (i.e. averages of item scores in a scale) of each scale for use in further analyses. We also calculated means and standard deviations for each variable and created a correlation matrix of all variables used in hypothesis testing. Means, standard deviations, reliabilities, and correlations among all the scales used in the analyses are shown in Table 3.

Table 1: Factor Loadings of Transformational Leadership

	1	2	3	4
Idealized Influence				
I act in ways that build other's respect for me.	,554			
I display a sense of power and confidence.	,629			
I talk about my most important values and beliefs.	,795			
I specify the importance of having a strong sense of purpose	,752			
Inspirational Motivation				
I talk optimistically about the future.		,555		
I talk enthusiastically about what needs to be accomplished.		,679		
I articulate a compelling vision of the future		,799		
I express confidence that goals will be achieved		,736		
Individual Consideration				
I spend time teaching and coaching.				,758
I help others to develop their strengths				,756
Intellectual Stimulation				
I seek differing perspectives when solving problems.			,729	
I get others to look at problems from many angles.			,793	
I suggest new ways of looking at how to complete assignments.			,598	

Table 2: Result of the principal component analysis

	1	2	3	4
Generative Learning				
Individuals in this business unit have a 'license to think'.	,826			
Individuals in this business unit are encouraged to think for themselves.	,850			
The 'system' is open to new ideas.	,879			
Ideas in this business unit flow freely and openly.	,810			
Ideas in this business unit are shared	,791			
Exploitative innovation strategies				
We frequently refine the provision of existing products and services.		,781		
We regularly implement small adaptations to existing products and services		,755		
We introduce improved, but existing products and services for our local market		,713		
We increase economies of scales in existing markets		,634		
Our unit expands services for existing clients		,790		
Lowering costs of internal processes is an important objective		,508		
We frequently refine the provision of existing products and services.		,539		
Explorative Innovation Strategy				
We invent new products and services.			,646	
We experiment with new products and services in our local market.			,797	
We commercialize products and services that are completely new to our unit			,822	
Innovative Firm Performance				
The number of new products our firm has introduced to the market.				,773
The number of our new products that is first-to-market (early market entrants).				,864
The speed of our new product development.				,813
Number of the patented products				,793
The rate of change in our processes, techniques and technology				,633

Table 3: Descriptive Statistics and Correlations

		Mean	Sd	Alfa	1	2	3	4
1	Explorative Innovation Strategy	3,76	,65	0,85				
2	Generative Learning	3,46	,96	0,92	,452(**)			
3	Innovative Firm Performance	3,40	,81	0,86	,294(**)	,331(**)		
4	Transformational Leadership	4,11	,41	0,79	,353(**)	,189(**)	,052	
5	Ambidexterity	-	-	-	-	,528(**)	,335(**)	,368(**)

***P< 0.01*

The results of correlation analysis (Table 3) indicate that innovative firm performance is positively related to explorative innovation strategy and exploitative innovation strategy (P<0,01). Consistent with our expectations, innovative firm performance is positively related to ambidexterity (P<0,01). Generative learning is positively related to innovative firm performance (P<0,01). Moreover, transformational leadership is also found to be strongly and positively correlated with explorative innovation strategy and generative learning (P<0,01).

Regression Analysis

We performed a separate regression analysis to explore the proposed relationships in our hypotheses. In our analysis, we modelled in the regression equation ambidexterity and generative learning as independent and innovative firm performance as dependent variables. The regression model is found to be statistically significant with (F= 18,625, P<0.01). Results of the regression analysis are displayed in Table 4. The results indicate that ambidexterity and generative learning are found to be significantly associated with innovative firm performance (Ambidexterity, β=0.223, P<0.01; generative learning, β=0.214, P<0.01). Therefore, our hypotheses 1 and 3 are supported.

Additionally, to test our hypothesis 3 seeking for a relationship between explorative innovation strategy and generative learning, we use the correlation matrix. As shown in Table 3 there is a positive correlation between explorative innovation strategy and generative learning (P<0.01), therefore our hypothesis 2 is supported.

Table 4 Regression Analysis

	Beta	t	Sig.
Ambidexterity	,223	3,028	,003**
Generative Learning	,214	2,906	,004**
R^2	,145		
F	18,625		
Sig.	.000		

a Dependent Variable: Innovative firm performance

***P<0,01*

Moderating effect of Transformational Leadership

To analyze the moderating effect of the transformational leadership on the relationship between explorative innovation strategies and generative learning we completed a separate regression analysis (Table 5). The regression model is found to be statistically significant with (F=18,625, P<0.01) and the derived variable explorative innovation strategies X transformational leadership is found to be significantly associated with generative learning (β=0.367, P<0.01). This finding indicates that transformational leadership fully moderates the relationship between explorative innovation strategy and generative learning.

Table 5: Moderating effect of Transformational Leadership

	Beta	t	Sig.
Explorative Innovation Strategies X Transformational Leadership	,367	5,871	,000**
R^2	,145		
F	18,625		
Sig.	.000		

a Dependent Variable: Generative Learning
***P<0,01*

DISCUSSION and CONCLUSIONS

The purpose of this study was to explore the relationships between ambidexterity in the context of innovation strategies, generative learning, innovative firm performance and the role of the transformational leadership to answer the question "how does ambidexterity influence organizational performance?" Our study provides compelling evidence for future work to gain further insight into ambidexterity and learning-related and leadership related organizational processes and includes several implications for management practice and future research.

This study has gathered important information about ambidexterity, learning and innovation outcomes measured as innovative firm performance and the role of the transformational leadership in this process. Initially, our model emphasizes associations among innovation strategies, ambidexterity, leadership, learning and innovative firm performance.

If organizations operate in competitive environments or forced by their internal and/or external shareholders, competitors, customers to change their process, product or services they should develop clearly their vision and following appropriate strategies. By implementing these strategies, organizations should not only be proactive, creative and search for new opportunities but also look inside and try to understand and use their existing capabilities. Furthermore, they should find the ways to benefit and keep their existing situations. Ambidexterity covers this aspect and by modelling our research questions we approached it in the innovation strategy context. To measure its effect, we modelled the (innovation) outcome as performance (innovative firm performance). Our results show that ambidexterity influences innovative firm performance positively. Generative learning is seen in many studies as a core corporate strategy and leads to explorative innovation strategies (He and Wong, 2004; Menguc and Auh, 2008).

Considering our aspect we propose generative learning as an organizational process leading to better performance. The logic here is that the explorative innovation strategy influences generative learning process. In the analysis of our modelling we found evidence supporting our proposal. There was a positive effect of explorative innovation strategy on generative learning which was considered as an evidence for the proof of our hypotheses. To explain the results of our research and give to readers a more deepen idea about ambidexterity process and how it influences organizational performance, we give literature information about our factors and try to explain the logic of the modelling of our research.

Organizational learning is considered as a key process for organizational innovation and success (Vera and Crossan, 2002; Morgan and Berthon, 2008; Raisch and Birkinshaw, 2008) and there are studies empirically showing the relationships between organizational learning and firm performance (Bontis et al. 2002; Jimenez and Cegarra, 2007).

Researchers have begun to investigate the effects of organizational learning on different organizational outcomes from different perspectives. For example, Burgelmann (2002), searched for the effects of the exploratory (generative) and exploitative (adaptive) learning in strategy development process and He and Wong (2004) investigated the influences of generative and adaptive learning on innovation and firm performance. In these studies, firm performance was measured in terms of sales growth rate, financial performance, operational performance and the like. There was a gap in the literature concerning research on firm innovation performance. A few studies investigated innovation performance within the framework of learning and strategy building. For example Russo and Vurro (2010) found that balancing explorative and exploitative learning strategies leads to enhanced innovative firm performance.

All the studies mentioned above are proposing that the resulting effect of the generative learning process may be especially influential under radical change conditions and its effects on firm performance can be realized quickly in the organizations. Because this type of learning is proactive and risky, it might decrease the performance rates in the short term but its creativity and innovation supporting character leads to superior performance in the long term.

In the literature, leadership has been considered as an antecedent of organizational innovation (Elenkow, et al., 2005; Damanpour, 1991), organizational learning (Vera and Crossan, 2004) and organizational ambidexterity (Raisch and Birkinshaw, 2009). Studies seeking the effects on firm performance indicated that there are significant relationships between firm performance, leadership behaviours, innovation and learning (Vera and Crossan, 2004). Because of the supportive, motivating and intellectual stimulating character of the transformational leadership, it is suggested that transformational leadership effects explorative, generative and innovative organizational activities positively and enhance their quality and performance (Vera and Crossan, 2004; Zagorsek, et al., 2009; Elenkov et al., 2005).

In light of the literature review, first we approached ambidexterity in a strategic manner and proposed that balancing exploratory and exploitative innovation strategies which are constituted at the top management level will increase organizational success and maintain survival. Considering the interactions between strategies, leadership, learning activities and performance outcomes within an organization, we assumed that ambidexterity might affect the firm performance via influencing the organizational learning activities. To show the effect of the leadership in this process we included transformational leadership as a moderator variable in our model. Though our model is a hybrid one it has important implications for the relationships between ambidexterity, organizational learning and performance making our model unique and significant.

We conducted our research on a sample of Turkish managers working in Turkish firms. The homogenenity of the sample in this manner may give an impression about the role of the social-cultural context. Social (national) culture is defined as a system of the values, norms, attitudes, rituals among the members of a social group (Elenkov, et al, 2005; Hofstede, 2001). Recent studies assume that socio-cultural context affects both leadership behaviours and innovation process (Elenkov et al, 2005). In our research, the sample may give information about the effects of the Turkish social-culture on leadership behaviours, learning process and innovation. Additionally, these assumptions might be enhanced in the Asian context because Turkey is an Asian country and its social culture has similarities (like giving respect to old people, giving importance to personal relationships and friendship, to collaborate rather than being individual etc.) with the Asian social culture. In this framework, it is believed that this study

will be fruitful in drawing some meaningful conclusions about Asian-social culture implications on learning process and innovative performance.

Managerial Implications

Our research has the potential to have four main managerial implications. First, it gives practitioners the opportunity to be aware of the existence of the critical factors of ambidexterity and firm innovation performance. Second, the research enables practitioners to realize the nature of the critical success factors so that they can investigate their innovation strategies, organizational learning process and managerial leadership for increasing performance. Third, the study suggests practitioners to understand the importance of balancing the exploratory and exploitative innovation strategies for superior firm innovation performance. Fourth, the positive impacts of the transformational leadership behaviours are emphasized for the practitioners to remain supportive, motivating, stimulating and influencing their followers. These leadership skills obviously are useful in creative and innovative situations.

Limitations and Future Research Implications

The findings of the study suggest that future research on the ambidexterity could include and examine change management perceptions. In other words, organizational learning is seen as a change process by many researchers, so that organizational learning applications should be undertaken with an emphasis on change. Therefore, relationships among change management, ambidexterity, leadership and the organizational outcomes such as performance could be considered for further research.

We have not included in our model variables to examine the social culture impacts. Research on the interactions among leadership, innovation and social culture has gained an increasing interest in literature (Tomas and Muller, 2000; Hayton et al, 2002). Paying attention on the effects of social culture context on leadership, learning and their impacts on firm innovation performance will be a rather new research area producing new insights in the topic.

This study had several limitations. The first limitation relates to data collection at a single point in time (as in the case of this study), which does not allow for changes in perception and attitudes over time. For this reason, a longitudinal study of culture is strongly recommended. Future research should examine the usefulness of the revised instrument in different populations.

Secondly, balancing the innovation strategies, measured as ambidexterity may be influenced by many other organizational and environmental factors such as learning orientation, diversification management. Researchers could also consider providing some control variables (e.g. firm size, firm age, market turbulence, environmental uncertainty) in their studies.

We used the Likert-5 scale to measure the whole constructs of our model. There might be other scale-configurations which fit better to measure the dimensions of the constructs.

The level of the research is also important on the results. We have performed our research at organization level. Future research might study on different organizational levels to gain better information about the relationships modelled in our research.

Investigating social-culture and its effects on organizational learning, strategies, and leadership and performance outcomes might be a challenging topic for research.

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