

The Empirical Link between Environmental Conditions, Organizational Culture, Corporate Entrepreneurship and Performance: The Mediating Role of Corporate Entrepreneurship

Nihal Kartaltepe Behram ¹

Ata Özdemirci ²

^{1,2}: Marmara University
Faculty of Business Management
Ressam Namık İsmail Sokak No: 1
Bahçelievler/ Istanbul 34180
Turkey

Abstract

Given the increasing findings that support a positive relationship between corporate entrepreneurship and firm performance, it is important to identify and examine the antecedents that stimulate or impede corporate entrepreneurship. This study examines the effect of environmental conditions and organizational culture on corporate entrepreneurship and the mediator effect of corporate entrepreneurship on environmental conditions, organizational culture and firm performance. Face-to-face or online surveys were conducted with three respondents per company – one junior administrative officer, one middle level manager and one top level manager. Mean averages for each company were used in data analysis. 561 surveys, which were properly filled out and included all three levels of managers, from 187 companies were approved. Results from regression tests showed that market culture and adhocracy culture have positive and strong effects on all corporate entrepreneurship dimensions, that clan culture positively affects innovativeness but has no significant effect on new business venturing-self renewal and proactiveness. Also, hierarchy culture has no effect on corporate entrepreneurship. So it is possible to suggest that adhocracy and market cultures enhance corporate entrepreneurship more than clan and hierarchy cultures. It can also be observed that innovativeness and proactiveness are negatively affected by munificence. Munificence also has a positive effect on sales and financial performance while dynamism negatively affects market share. Besides the direct effects of the environment on firm performance, proactiveness is a mediator between munificence and financial performance. The final findings of this research show that hierarchy culture directly, strongly and positively effects sales, financial performance and market share, which means that it is the best working culture type in the Turkey market although it has no significant effect on corporate entrepreneurship. Also new business venturing-self renewal is a mediator between market culture and sales, and new business venturing-self renewal positively and strongly affects market share, while proactiveness has a negative effect on financial performance and market share. This may be caused by the proactive attempts of firms that have financial problems or/and that lose their market share.

Key Words: Corporate Entrepreneurship, Competing Values Framework, Organizational Culture, Environmental Conditions

1. Introduction

In today's dynamically competitive environment corporate entrepreneurship has increasingly been recognized as an important means of ensuring firm survival and prosperity. In several studies that investigated the relationship between corporate entrepreneurship and firm performance, it was found that corporate entrepreneurship leads to improvements in firm performance (Naman and Slevin, 1993; Zahra, 1991, 1993; Zahra and Covin, 1995; Lumpkin and Dess 1996; Wiklund 1999; Wiklund and Shepherd 2005). Given the increasing findings that support a positive relationship between corporate entrepreneurship and firm performance, it is important to identify and examine the antecedents that stimulate or impede corporate entrepreneurship.

In previous studies, corporate entrepreneurship antecedents could be classified broadly on the basis of their relationship to the firm's external environment or organizational level internal factors (Kuratko et al., 1990; Covin and Slevin 1991; Guth and Ginsberg 1990; Zahra 1993b, Lumpkin and Dess 1996). Studies on external environment variables have included dynamism (Miller and Frisen 1982; Miller 1987; Covin and Slevin 1991; Zahra 1991; Antoncic and Hisrich, 2001; Antoncic and Hisrich, 2004), hostility (Covin and Slevin 1989; Miller and Friesen 1983), industry competitive structure and the underlying technologies (Güth and Ginsberg 1990), technological opportunities, industry growth and demand for new products (Antoncic and Hisrich 2004). And the organizational level internal factors include organic structure (Covin and Slevin, 1988; Russell and Russell 1992; Naman and Slevin, 1993), organizational resources for entrepreneurial initiatives (Antoncic and Hisrich 2001, 2004; Covin and Slevin 1991; Hornsby et al., 1993; Kanter 1985; Kuratko et al., 1990; Russell and Russell 1992; Stevenson and Jarillo 1990; Zahra 1991), management support, rewarding system, organizational boundaries, organizational structure and autonomy, resource availability (Kuratko et al., 1990; Hornsby et al., 1992), structure, controls, human resource management systems, culture (Kuratko and Morris, 2006) and innovative climate or culture (Antoncic and Hisrich, 2004; Zahra, 1986; Zahra et al., 1999). The findings of these researches in the large body of corporate entrepreneurship literature show that both external and internal factors particularly play an important role in stimulating corporate entrepreneurship.

Why do some firms pursue corporate entrepreneurship more than others, and why are these firms more successful than others? In an attempt to answer this question we focus on how a firm's external environment and organizational culture influence the firm's pursuit of entrepreneurial activities. In this context the purpose of this study is twofold: (1) to analyze the stimulating role of environmental conditions and organizational culture on corporate entrepreneurship activities; (2) to investigate the mediating role of corporate entrepreneurship in the relationship between environmental conditions, organizational culture and organizational performance. We suggest that both corporate entrepreneurship activities and environmental conditions/organizational culture for these activities are important for subsequent performance improvements.

2. Literature Review and Hypotheses

2.1. Corporate Entrepreneurship

The interest of both scholars and practitioners in entrepreneurship of the organizations (corporate entrepreneurship) has come along since the beginning of the 1980s (Antoncic and Hisrich, 2001). Zahra (1995:226) describes corporate entrepreneurship as "the sum of a company's innovation, venturing and renewal efforts". Covin and Miles (1999:50) describe corporate entrepreneurship as "the presence of innovation plus the presence of the objective of rejuvenating or purposefully redefining organizations, markets, or industries in order to create or sustain competitive superiority". Kuratko et al. (2005:700) suggest that corporate entrepreneurship represents a set of behaviors "requiring organizational sanctions and resource commitments for the purpose of developing different types of value-creating innovations".

Although there are plenty of definitions, dimensions and measures of corporate entrepreneurship, the four dimensions are the most common ones in corporate entrepreneurship literature (Antoncic and Hisrich, 2001): new business venturing, innovativeness, self-renewal and proactiveness. New business venturing dimension refers to find a new market, a new product or, in other words, creating a new business. It also includes the independent or autonomic actions of individuals or teams (Lumpkin and Dess, 1996). Innovativeness dimension is the core of corporate entrepreneurship which refers to develop new products and new services by using new technology or by the art of design. It also includes new production methods and procedures (Covin and Slevin, 1991; Knight, 1997; Zahra, 1993). Self-renewal dimension refers to the change of production style, strategy, business plan, processes and sometimes to a change of the whole organization (Zahra, 1993; Covin and Miles, 1999). Finally, proactiveness dimension refers to the aggressiveness of a company's competition style relative to competitors. It is about taking risks, taking initiative in the market and competitive aggressiveness (Lumpkin and Dess, 1996; Covin and Slevin, 1991; Covin and Slevin, 1986). Proactiveness also includes boldness and adventurous characteristics of top managers (Antoncic and Hisrich, 2001).

2.2. Environmental Conditions and Corporate Entrepreneurship

The relationship between environment and corporate entrepreneurship has been researched several times in the literature.

As can be guessed easily, there is consensus that external environment highly effects corporate entrepreneurship. (Zahra, 1993; Miller, 1983, 1987; Russel and Russel, 1992; Slevin and Covin, 1989; Veciana, 1996).

Empirical evidence confirms that some of the external environment variables push the firm toward innovative, proactive, and risk-taking behavior, while others restrict corporate entrepreneurship. For example, environmental dynamism is positively related to corporate entrepreneurship (Covin and Slevin, 1991; Zahra, 1991). Environmental dynamism refers to the “unpredictability of customers and competitors, rates of change in market trends, industry innovation and R&D” (Miller, 1987), and in some cases it refers to challenges in high-tech environments (Khandwalla, 1987) which are only hospitable for entrepreneurial firms (Miller and Friesen, 1982). It also means that the competitive structure of industry influences corporate entrepreneurship (Güth and Ginsberg, 1990). Zahra (1993), studying the influence of environment on corporate entrepreneurship, argued that environmental hostility and dynamism were positively associated with corporate venture initiatives. Antoncic and Hisrich (2001, 2004) also suggest that environmental dynamism, rapidly changing technical conditions, growth markets and demand for new products lead to increased corporate entrepreneurship activities.

When findings of these researches are taken into consideration, it appears that the environmental conditions play an important role in influencing corporate entrepreneurship. Therefore, our research model focuses on the environmental conditions and aims to examine this research question: How do firms that compete in different environmental conditions vary in the corporate entrepreneurship activities? In an attempt to examine this question, our research model addresses dynamism, uncertainty and munificence dimensions of environmental conditions (Hart and Banbury, 1994; Özdemirci, 2011), and we formulate the following hypothesis:

H₁: There is a strong relationship between environmental conditions and corporate entrepreneurship.

2.3. Organizational Culture and Corporate Entrepreneurship

Entrepreneurship is a spirit which can only live in appropriate conditions. Therefore, the entrepreneurial behavior of the employees is strongly affected by organizational beliefs and values (Antoncic and Hisrich, 2001; Guth and Ginsberg, 1990; Zahra, 1991). Entrepreneurship can be considered as a way of living rooted in an organization's culture. It is a process rather than an event. Over time, an organization develops an orientation towards entrepreneurship that becomes embedded in its culture (Shahin, Beheshtin, 2011). In an entrepreneurial company, innovative behaviors are encouraged by the culturally derived norms and beliefs (Russell and Russell, 1992). Morris et al. (1994) propose that the level of individualism within an organization will be an important influence upon corporate entrepreneurship. They find support for the argument that there will be relatively low levels of entrepreneurship at the extremes of the individualism–collectivism continuum, and that organizational entrepreneurship will be highest at moderate levels of individualism. Zahra et al. (2004) found similar results in a study relating the organizational cultures of family firms to their entrepreneurial performance. Chandler et al. (2000) also found that successful implementation of HRM influences creativity and innovation by creating a supportive culture. They found that perceived management support and organizational reward systems promote an innovation supportive culture. Chandler et al. (2000) Morris et al. (2008) cited the vital elements of entrepreneurship which underlines the culture-HRM relationship: empowering employees; hands-on management; freedom to make mistakes; commitment and personal responsibility and emphasis on the future.

In our research model, the Competing Values Framework (Cameron and Quinn, 1999) is used to describe the organizational culture types. The main advantages of the Competing Values Framework is that the value dimensions proposed are theoretically derived from general organization theory so that findings can be interpreted in a larger nomological network. The Competing Values Framework has also been one of the most popular and influential value frameworks for studying organizational culture value effects and well-documented measures exist (Ogaard et al., 2005). Cameron and Quinn (1999) have proposed a classification comprising the four forms now widely used for culture audit and comparison purposes: (1) A Clan Culture, which is typical for an organization that concentrates on internal maintenance with flexibility, concern for people, and human relations. The commitment of organizational members is ensured through participation, and organizational cohesiveness and personal satisfaction are rated higher than financial and market share objectives (Desphande et al., 1993).

Effectiveness criteria include the development of human potential and member commitment (Denison and Spreitzer 1991). (2) A Hierarchy Culture, when it focuses on internal maintenance and strives for stability and control through clear task setting and enforcement of strict rules.

Motivating factors include security, order, rules and regulation, whereas effectiveness criteria in hierarchies include control, stability and efficiency (Denison and Spreitzer 1991). (3) An Adhocracy Culture, where the organization concentrates on external positioning with a high degree of flexibility and individuality that is supported by an open system that promotes the willingness to act. Hence in this culture emphasis is on entrepreneurship, creativity and adaptability. Effectiveness criteria include growth, the development of new markets and resource acquisition (Denison and Spreitzer 1991). (4) A Market Culture, working towards clear and rational goals that are achieved through high productivity and economical operation. Cultural values such as goal achievement, productivity and efficiency are emphasized, reflecting the external orientation and value for governance systems. Motivating factors include competition and successful achievement of predetermined ends, whereas effectiveness criteria in such structures include planning productivity and efficiency (Denison and Spreitzer 1991).

In this context, we suggest that these different culture types can have different effects on corporate entrepreneurial activities and formulate following hypothesis:

H₂: There is a strong relationship between organizational culture and corporate entrepreneurship.

2.4. Corporate Entrepreneurship as a Mediator

A large part of the corporate entrepreneurship research (Covin and Slevin, 1986; Covin, 1991; Naman and Slevin, 1993; Zahra, 1991, 1993; Zahra and Covin, 1995; Lumpkin and Dess 1996; Wiklund 1999; Antoncic and Hisrich, 2000, 2001; Wiklund and Shepherd, 2005) examined direct impacts of corporate entrepreneurship activities and orientations on organizational performance. The literature on corporate entrepreneurship and organizational performance has shown that corporate entrepreneurship dimensions such as proactiveness, risk-taking, innovations and competitive aggressiveness etc. significantly and positively influence the organizational performance of the companies being investigated. However, research on indirect and interaction effects of other corporate entrepreneurship-related factors and their influences on organizational performance has been minimal (Antoncic and Hisrich, 2003; Antoncic and Zorn, 2004; Özdemirci, 2011). In particular, the indirect effects of corporate entrepreneurship antecedents, such as environmental conditions and organizational culture, on organizational performance have not been given sufficient attention. In this context, this study provides a mediation model in which environmental conditions and organizational culture affect organizational performance through corporate entrepreneurship. We suggest that environmental conditions and organizational culture can be most properly viewed as important antecedents for stimulating corporate entrepreneurship and subsequent improvement in organizational performance.

Environmental conditions, corporate entrepreneurship and organizational performance

In terms of influencing corporate entrepreneurship, the external environment is an important determinant (Miller, 1983; Khandwalla, 1987; Covin and Slevin, 1991; Zahra, 1993a; Zahra and Covin, 1995; Dess et al., 1997). Certain environmental characteristics, such as dynamism, technological opportunities, industry growth, and demand for new products may cause firms to engage in entrepreneurial behavior (Antoncic and Hisrich, 2004). Since corporate entrepreneurship is predicted to induce organizational performance, these environmental characteristics (as important antecedents of corporate entrepreneurship) may also have an important indirect influence on organizational performance. On the other hand, in the relevant literature, there is little doubt that environments profoundly shape and influence organizational actions and, in turn, their performances. Thus, we suggest that organizational performance will be indirectly (with the mediation of corporate entrepreneurship) positively influenced by environmental conditions and formulate the following hypothesis:

H₃: Corporate entrepreneurship mediates the effects of environmental conditions on organizational performance.

Organizational culture, corporate entrepreneurship and organizational performance

Organizational culture has long been regarded as an important influence on an organizational performance (Deal and Kennedy, 1982; Peters and Waterman, 1982; Schein, 1992; Wilkins and Ouchi, 1983). The claim that organizational culture is linked to performance is founded on the perceived role that culture can play in generating competitive advantage and lead to superior organizational performance. For example, a number of empirical findings support a positive relationship between clan, adhocracy and market cultures and organizational performance (Cameron and Freeman 1991; Paulin et al., 2000; Sousa-Poza et al., 2001; Parker et al. 2003).

Likewise, a negative relationship between hierarchical values and organizational performance has regularly been observed (Cameron and Freeman 1991; Deshpandé et al., 1993; Moorman et al., 1993; Paulin et al., 2000).

Organizational culture is an important source of sustained competitive advantage as it possesses the characteristics of a strategic asset, namely scarcity, inimitability, value creating and non-tradeability (Barney, 1986). Furthermore, organizational culture is thought to be an influential factor in the promotion of corporate entrepreneurship (Antoncic and Hisrich, 2001; Guth and Ginsberg, 1990; Zahra, 1991, Russell and Russell, 1992). Since corporate entrepreneurship is assumed as a direct antecedent of organizational performance, we suggest that the organizational culture (as important antecedents of corporate entrepreneurship) may have an important indirect influence on organizational performance and formulate the following hypothesis:

H₄: Corporate entrepreneurship mediates the effects of organizational culture on organizational performance.

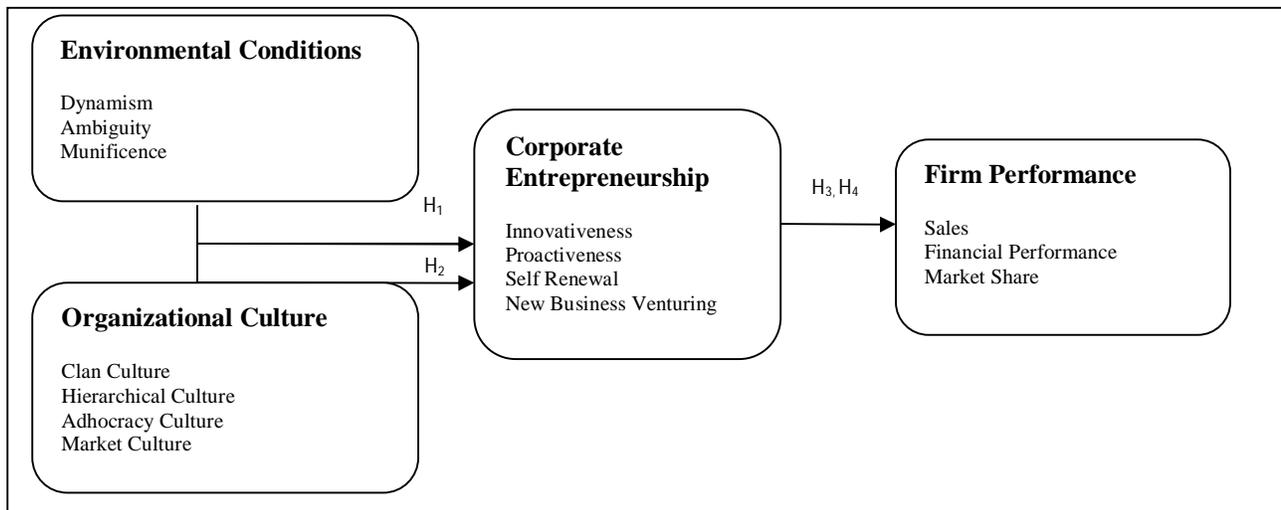


Figure 1: Research Model

In our research model, firstly, the effect of environmental conditions and organizational culture on corporate entrepreneurship (H₁ and H₂) will be analyzed. Then, in order to investigate the mediator effect of corporate entrepreneurship, the direct and indirect effects of environmental conditions and organizational culture on organizational performance will be examined (H₃ and H₄). It should be taken into consideration that the organizational performance mentioned in this research model is perceived performance.

3. Methodology

3.1 Sample, Data Collection and Measures

The type of the research is hypothetic research. Data collection method is survey. The questionnaires are translated into Turkish by a professional translator, and then translated back into English by a different translator. The two versions are compared to ensure accuracy. The universe of this work is middle level and big scale enterprises in Istanbul which have more than 50 employees. Samples are selected from Istanbul Chamber of Industry database randomly. Face-to-face or online surveys are conducted with three respondents per enterprise – one junior administrative officer, one middle level manager and one top level manager.

Mean averages for each company are used in data analysis. 597 surveys from 203 companies are returned, and 561 of these surveys, which were properly filled out and included all three levels of managers, from 187 companies are approved. 52,4% of the firms are middle scaled companies with workers between 50 and 250 and the rest of the firms are big scaled with more than 250 workers. In total, 58,8% of the respondents are/were male. The respondents' age is mostly between 30 and 39, and nearly all of the respondents are graduates or hold higher degrees.

Table 1: Frequencies of Firms and Respondents

	f	%
Sample size (number of firms)	187	
Distribution of firms by size (number of full-time employees)		
50-99	53	28,34%
100-249	45	24,06%
250-499	64	34,22%
500 or more	25	13,37%
Demographics of Respondents*		
Sex		
Female	231	41,18%
Male	330	58,82%
Age		
20-29	134	23,89%
30-39	197	35,11%
40-49	132	23,53%
50 Or More	98	17,47%
Education		
Primary	12	2,14%
High School	18	3,21%
Graduate	399	71,12%
Postgraduate	126	22,46%
Doctorate	6	1,07%
Income Per Month		
1001-2000 TL (560-1120\$)	101	18,00%
2001-3000 TL (1120-1680\$)	155	27,63%
3001-4000 TL (1680-2240\$)	125	22,28%
4001-5000 TL (2240-2800\$)	71	12,66%
5001-6000 TL (2800-3360\$)	49	8,73%
6000 TL or more (3360-3920\$)	60	10,70%

* Survey is applied on three respondents per a firm

3.2 Measures

Including the Corporate Entrepreneurship, Environmental Conditions, Corporate Culture and Firm Performance measures, which are shown in Table 2, the survey consists of 58 questions.

Table 2: Measures

Measure	Developers	Item
Corporate Entrepreneurship	Antoncic and Hisrich (2003); Özdemirci (2011)	16
Environmental Conditions	Hart and Banbury (1994); Özdemirci (2011)	9
Corporate Culture	Cameron and Quinn (2011)	24
Firm Performance (Perceived)	-	3

3.3 Factor Analysis and Reliabilities

After the factor analysis, 3 factors appeared in Corporate Entrepreneurship Measure which can be labeled “Innovativeness”, “New Business Venturing and Self Renewal” and “Proactiveness”; 3 factors in Environment Measure which can be labeled “Ambiguity”, “Munificence” and “Dynamism” and 4 factors in Organizational Culture Measure which can be labeled “Market”, “Adhocracy”, “Hierarchy” and “Clan”.

All of the measures, except for corporate entrepreneurship were identical with the original measure after the factor analysis. In corporate entrepreneurship measure, new business venturing and self renewal dimensions are conjoined in one dimension.

Table 3: The Results of Factor and Reliability Analysis

Factor Name	Items	Factor Loadings	Factor Extraction (%)	Reliability Analysis (Cronbach's Alpha)
Innovativeness	CE1 Openness for employee's ideas	,793	42,650	,843
	CE3 Incentives for analytical solutions of employees	,774		
	CE2 Authorization of employees	,759		
	CE6 Flexible organizational structure	,702		
	CE4 Supporting new ideas and projects	,681		
	CE7 Rewarding ideas for innovation	,549		
	CE16 Pursuing new businesses in new industries	,857		
New Business Venturing – Self Renewal	CE15 Broadening business lines in current industry	,803	13,105	,850
	CE14 Applying competitor based strategies	,687		
	CE13 Aggressive and competitive behaviors	,660		
	CE12 Changing competitive strategy	,628		
Proactiveness	CE11 Adventurous characteristics of top managers	,866	9,652	,843
	CE10 Risk taking in uncertain conditions	,858		
	CE9 Tendency to apply risky projects	,668		
		TOTAL	65,406	
		Kaizer Meyer Olkin Measure of Sampling Adequacy	,831	
		Bartlett Test of Sphericity	Chi-Square	1474,173
			df	91
			Sig.	,000

Environmental Conditions

Factor Name	Items	Factor Loadings	Factor Extraction (%)	Reliability Analysis (Cronbach's Alpha)
Market	CC14 Practical and aggressive	,822	44,486	,911
	CC15 Challenging and competitive	,815		
	CC13 Result oriented	,754		
	CC16 Focus on success and reaching goals	,753		
	CC17 Passion of market success	,750		
	CC18 Focus on winning	,689		
Adhocracy	CC7 Dynamic and entrepreneur		14,167	,906
	CC9 Supporting characteristic, entrepreneur, risk taking individuals	,898		
	CC8 Regarding entrepreneurship, innovativeness and risk taking	,818		
	CC10 Commitment on development	,754		
	CC11 Focus on gaining new resources and new opportunities	,737		
Hierarchy	CC22 Formal rules and policies		8,399	,869
	CC23 Durability and stability	,737		
	CC19 Control oriented with formal procedures	,853		
	CC21 Employee safeness, obeying rules and stability	,743		
	CC20 Coordinating, organizing and productivity oriented	,717		
	CC24 Obedience on deadlines, trustable distribution, cost efficient production	,681		
Clan	CC1 Employee oriented, participative, look like a family	,648	6,139	,906
	CC4 Loyalty, trust and commitment	,601		
	CC2 Supportive, encouraging, improving	,845		
	CC3 Team work, consensus, participation	,765		
		TOTAL	73,191	
		Kaizer Meyer Olkin Measure of Sampling Adequacy	,882	
		Bartlett Test of Sphericity	Chi-Square	3164,899
			df	210
			Sig.	,000

Factor Name	Items	Factor Loadings	Factor (%)	Extraction	Reliability Analysis (Cronbach's Alpha)
Ambiguity	EC7 New competition unpredictable	,892	47,476		,881
	EC6 Difficult to anticipate change	,874			
	EC8 Unforeseen threats	,843			
Munificence	EC2 12 month business outlook good	,922	22,699		,827
	EC1 Market will grow	,904			
Dynamism	EC4 Changing social values	,920	13,081		,764
	EC3 Changing customer preferences	,773			
TOTAL			83,256		
Kaizer Meyer Olkin Measure of Sampling Adequacy			,724		
Bartlett Test of Sphericity		Chi-Square	650,246		
		df	21		
		Sig.	,000		

4. Results

4.1 Correlations

Correlation tests between the factors are shown in Table 4. It contains the intercorrelations among the factors used in the study. The correlation matrix shows that the four dimensions of corporate entrepreneurship are strongly intercorrelated, and also that the four dimensions of corporate culture are strongly intercorrelated, which means that an exact demarcation between these cultures is not always possible. As expected, there are lots of significant correlations between corporate culture and corporate entrepreneurship. We take a closer look at the misleading and real ones in the regression test.

Table 4: Correlation Tests

	Mean	S.D.	1	2	3	4	5	6	7	8	9	10	11	12	13
1. NBV - Self Renewal	3,28	0,91	1												
2. Innovativeness	3,25	0,90	,463**	1											
3. Proactiveness	3,17	0,99	,517**	,499**	1										
4. Market	3,52	0,96	,598**	,489**	,411**	1									
5. Adhocracy	2,82	0,92	,426**	,621**	,528**	,468**	1								
6. Hierarchy	3,38	0,84	,458**	,362**	,296**	,614**	,377**	1							
7. Clan	3,11	1,08	,287**	,588**	,300**	,406**	,653**	,415**	1						
8. Ambiguity	3,27	1,01	,101	,092	,018	,244**	,148*	,110	,142	1					
9. Munificence	4,02	1,03	,238**	,141	-,029	,425**	,261**	,347**	,293**	,173*	1				
10. Dynamism	3,46	1,11	,164*	,174*	,013	,172*	,282**	,326**	,169*	,521**	,252**	1			
11. Sales	3,48	1,14	,466**	,347**	,187*	,538**	,356**	,545**	,371**	,189**	,470**	,220**	1		
12. Financial Perf.	3,53	1,10	,347**	,249**	,049	,476**	,292**	,610**	,352**	,167*	,401**	,265**	,791**	1	
13. Market Share	3,43	1,20	,598**	,380**	,227**	,484**	,306**	,546**	,347**	,173*	,326**	,148*	,782**	,681**	1

Sample Size=187 *p<0,05, **p<0,01

4.2 Stepwise Hierarchical Regression Tests for H₁ and H₂

The results from the stepwise hierarchical regression tests in Table 5 show that the strongest effects of corporate culture on corporate entrepreneurship are the positive effect of market culture on new business venturing-self renewal and the positive effect of adhocracy culture on innovativeness and proactiveness. While market culture has a secondary effect on proactiveness, the other secondary effects are adhocracy on new business venturing-self renewal and clan on innovativeness. The market and adhocracy culture affects all the dimensions of corporate entrepreneurship.

In the last step, it is seen that innovativeness and proactiveness are negatively affected by munificence. Concerning H₁ hypothesis, the study results indicate that the munificence dimension of environmental conditions has a negative effect on innovativeness and proactiveness dimensions of corporate entrepreneurship. These results clearly expose that corporate entrepreneurship emerges in tough conditions: in hostile and dynamic environments which are not generous. This indicates a good view of the nature of corporate entrepreneurship.

In terms of H₂ hypothesis, our results indicate that market culture and adhocracy culture have positive and strong effects on all corporate entrepreneurship dimensions. Clan culture only affects innovativeness, and hierarchy culture has no significant effect on corporate entrepreneurship. Hence, it is possible to suggest that adhocracy and market cultures enhance corporate entrepreneurship more than clan and hierarchy cultures.

According to Competing Values Framework these culture types create value by pursuing external opportunities such as acquisitions, identifying future trends, pursuing innovative ideas, and competing for market share and growth. Therefore, businesses that have market or adhocracy culture need to improve their corporate entrepreneurship activities in order to take advantage of external opportunities.

In particular, market culture emphasizes a focus on satisfying customer and key shareholder demands, competing aggressively to expand market share and rapidly responding to the demands of the market place. Hence, it is very important to discover and pursuit of new opportunities through innovation and venturing for business with market culture. The very strong effect of market culture on new business venturing-self renewal dimension of corporate entrepreneurship can be explained by the measurement of success in this culture by market share and market penetration. It is also important to defeat competitors and gain the market leader role in market culture, which is about proactiveness.

Adhocracy culture, as expected, also affects corporate entrepreneurship positively. This culture facilitates and enhances innovativeness by encouraging individual initiative, risk-taking and freedom. In adhocracy culture, the key criteria for success are to be first with new and unique ideas, products and services. For businesses that have an adhocracy culture, strategic emphasis is on looking for new opportunities, creating its own future and being an industry leader. Hence, these businesses represent an aggressive posture relative to competitors.

In terms of clan culture, our results show that clan culture has only positive effects on innovativeness. Clan culture, with its emphasis on teamwork, participation, cooperation, openness, human development, shared goals and mutual trust, supports to enhance innovativeness. There are no significant effects of clan culture on new business venturing-self renewal and proactiveness. According to Competing Values Framework, clan culture emphasizes long-term development (low velocity) and focuses on sustainability and qualitative improvement. Measurement criteria in clan culture are more likely to be subjective or qualitative. Therefore, businesses with clan culture do not prefer to pursue aggressive strategies.

Finally, according to the findings of this test, hierarchy culture has no effect on corporate entrepreneurship. Because the characteristics of hierarchy culture such as regulation, standardization and control of co-worker behavior, specialization, performance orientation, authority scopes, impersonality and the respect towards formal positions do not support corporate entrepreneurship.

Table 5: The Effect of Environmental Conditions and Corporate Culture on Corporate Entrepreneurship

Dependent: Innovativeness	B	S.E.	Beta	Dependent: NBV - Self Renewal	B	S.E.	Beta	Dependent: Proactiveness	B	S.E.	Beta
Model 1 (Constant)	1,562	0,153		Model 1 (Constant)	1,296	0,203		Model 1 (Constant)	1,56	0,2	
Adhocracy	0,557	0,052	,621**	Market	0,564	0,056	,598**	Adhocracy	0,572	0,068	,528**
R ² = 0,382				R ² = 0,354				R ² = 0,275			
Model 2 (Constant)	1,333	0,155		Model 2 (Constant)	1,063	0,215		Model 2 (Constant)	1,101	0,248	
Adhocracy	0,37	0,065	,413**	Market	0,481	0,062	,510**	Adhocracy	0,466	0,075	,430**
Clan	0,243	0,055	,319**	Adhocracy	0,186	0,065	,187**	Market	0,215	0,071	,209**
R ² = 0,438				R ² = 0,378				R ² = 0,306			
Model 3 (Constant)	0,964	0,182						Model 3 (Constant)	1,732	0,277	
Adhocracy	0,301	0,066	,336**					Adhocracy	0,49	0,072	,452**
Clan	0,214	0,054	,280**					Market	0,328	0,073	,319**
Market	0,116	0,052	,218**					Munificence	-0,273	0,062	-,283**
R ² = 0,472								R ² = 0,368			
Model 4 (Constant)	1,232	0,208									
Adhocracy	0,3	0,065	,334**								
Clan	0,231	0,054	,303**								
Market	0,233	0,054	,274**								
Munificence	-0,121	0,047	-,151*								
R ² = 0,487											

Sample Size=187; *p<0,05, **p<0,01

4.3 Hierarchical Regression Tests for H3 and H4

Results from hierarchical regression tests in Table 6 show that hierarchy culture directly and positively affects sales, financial performance and market share which means that it is the best working culture type in the Turkey market. On the other hand, these results may be caused by the mechanical organizational structure choice of successful firms.

When we look at the effects of environment on firm performance, as expected, munificence has a positive effect on sales and financial performance while dynamism negatively affects market share. Dynamic markets always harbor dangers for new competitions. Beside the direct effects of environment on firm performance, proactiveness is a mediator between munificence and financial performance. It demonstrates the indirect negative effect of munificence on financial performance which is carried by proactiveness. This is the only fact that approves H₃.

There is an indirect effect of market culture on sales which is performed by new business venturing-self renewal. This is the only fact that approves H₄. New business venturing-self renewal is a mediator between market culture and sales. On the other hand, new business venturing-self renewal positively and strongly affects market share, while proactiveness has a negative effect on financial performance and market share. This may also be caused by the proactive attempts of the firms which lose their market share.

Table 6: Analysis of the Research Model

	Dependent Variable: Sales			Dependent Variable: Financial Performance			Dependent Variable: Market Share		
	Model 1	Model 2	Model 3	Model 1	Model 2	Model 3	Model 1	Model 2	Model 3
Ambiguity	0,077	0,068	0,085	0,019	0,042	0,045	0,115	0,126	0,164*
Munificence	0,44**	0,252**	0,243**	0,356**	0,173**	0,113	0,303**	0,106	0,106
Dynamism	0,07	-0,033	-0,060	0,166*	0,032	-0,003	0,012	-0,122	-0,169*
Market		0,187*	0,092		0,087	0,099		0,131	-0,102
Adhocracy		0,05	0,038		-0,042	0,065		0,028	-0,040
Hierarchy		0,303**	0,289**		0,460**	0,468**		0,413**	0,370**
Clan		0,059	0,045		0,091	0,081		0,076	0,063
NBV-Self Renewal			0,217**			0,124			0,495**
Innovativeness			0,070			-0,012			0,132
Proactiveness			-0,110			-0,244**			-0,158*
Model R ²	0,237	0,429	0,459	0,190	0,427	0,461	0,120	0,362	0,511
R ² Change	0,237**	0,193**	0,030*	0,190**	0,237**	0,034*	0,120**	0,242**	0,149**
F Change	18,914	15,119	3,253	14,278	18,502	3,688	8,354	16,975	17,822

Sample Size=187; Standardized Coefficients are given, *p<0,05, **p<0,01

3. Conclusion

This survey, in which 187 companies participated, indicates a very clear picture of culture, environment and corporate entrepreneurship relationship. Market culture and adhocracy culture have positive and strong effects on all corporate entrepreneurship dimensions. The measurement of success in market culture is by market share and market penetration. It is also important to defeat competitors and gain the market leader role in market culture which is about proactiveness. Also, in adhocracy culture, key criteria for success are being first with new and unique ideas, products and services. For businesses that have an adhocracy culture, strategic emphasis is on looking for new opportunities, creating its own future and being an industry leader. Hence, these businesses represent an aggressive posture relative to competitors. Clan culture only affects innovativeness with its emphasis on teamwork, participation, cooperation, openness, human development, shared goals and mutual trust.

There is no significant effect of clan culture on new business venturing-self renewal and proactiveness. Clan culture emphasizes long-term development (low velocity) and focuses on sustainability and qualitative improvement. Measurement criteria in clan culture are more likely to be subjective or qualitative. Therefore, businesses with clan culture do not prefer to pursue aggressive strategies. Finally, according to the findings of this study, hierarchy culture has no effect on corporate entrepreneurship.

Because the characteristics of hierarchy culture such as regulation, standardization and control of co-worker behavior, specialization, performance orientation, authority scopes, impersonality and the respect towards formal positions do not support corporate entrepreneurship.

So it is possible to suggest that adhocracy and market cultures enhance corporate entrepreneurship more than clan and hierarchy cultures. According to Competing Values Framework, these culture types create value by pursuing external opportunities such as acquisitions, identifying future trends, pursuing innovative ideas and competing for market share and growth. Therefore, businesses that have market or adhocracy culture need to improve corporate entrepreneurship activities in order to take advantage of external opportunities.

It is also seen that innovativeness and proactiveness are negatively affected by munificence. These results clearly expose that corporate entrepreneurship emerge in tough conditions: in hostile and dynamic environments which are not generous. This indicates a good view of the nature of corporate entrepreneurship.

When we look at the effects of environment on firm performance, as expected, munificence has a positive effect on sales and financial performance while dynamism negatively affect market share. Dynamic markets always feature dangers for new competitions.

The final findings of this research show that hierarchy culture directly and positively effects sales, financial performance and market share which means that it is the best working culture type in the Turkey market.

These results are in parallel with Hofstede's (2001) work. On the other hand, these results may be caused by the mechanical organizational structure choice of successful firms.

When we look at the mediating effect of corporate entrepreneurship between environment-culture and performance, we see (1) a negative and indirect effect of munificence on financial performance which is performed by proactiveness, and (2) a positive and indirect effect of market culture on sales which is performed by new business venturing-self renewal. It means that the nature of corporate entrepreneurship is more likely to be a mediator. However, new business venturing-self renewal directly, positively and strongly affects market share while proactiveness has a negative effect on financial performance and market share. This may be caused by the proactive attempts of firms which have financial problems or/and which lose their market share. Further researches may focus on this dilemma.

References

- Antoncic, B. and Hisrich, R.D. (2001). Intrapreneurship: Construct Refinement and Cross-cultural Validation, *Journal of Business Venturing*, 16(5): 495–527.
- Antoncic, B. and Hisrich, R.D. (2003). Clarifying the Intrapreneurship Concept. *Journal of Small Business and Enterprise Development*, Vol.10, No.1, p. 7–24.
- Antoncic, B., and Hisrich, R.D. (2004). Corporate entrepreneurship contingencies and organizational wealth creation. *Journal of Management Development*, 23(6), 518-550.
- Antoncic, B., and Zorn, O. 2004. The mediating role of corporate entrepreneurship in the organizational support-performance relationship: An empirical examination. *Managing Global Transitions*, 2(1), 5-14.
- Barney, J. B. (1986). Organizational culture: Can it be a source of sustained competitive advantage? *Academy of Management Review*, 11(3), 656–665.
- Cameron K.S. and Freeman S.J. (1991). Cultural congruence, strength and type: relationships to effectiveness. In: *Research in Organizational Change and Development* (eds R.W Woodman & W.A. Pasmore), Vol. 5, pp. 23–58. JAI Press Inc.: Greenwich, CT.
- Cameron, K.S. and Quinn, R.E. (1999). *Diagnosing and Changing Organisational Culture: Based on the Competing Values Framework*. Reading MA; Addison-Wesley Publishing
- Chandler, G. N., Keller, C., & Lyon, D. W. (2000). Unraveling the determinants and consequences of an innovation supportive culture. *Entrepreneurship Theory and Practice*, 25(1), 59–76.
- Covin J. and Slevin D. (1989). Corporate entrepreneurship and performance. *Strategic Management Journal*, 10, 75-87.
- Covin J. and Slevin D. (1991). A conceptual model of entrepreneurship as a firm behavior. *Entrepreneurship Theory and Practice*, vol. 16, no. 1, pp. 25-36.
- Covin, J.G. and D.P. Slevin. (1988). The Influence of Organization Structure on the Utility of an Entrepreneurial Top Management Style. *Journal of Management Studies* 25 (3): pp. 217-259.
- Covin, J.G. and Miles, M.P. (1999). Corporate Entrepreneurship and the Pursuit of Competitive Advantage. *Entrepreneurship: Theory and Practice*, 23(4): 47–63.
- Deal T.E. and Kennedy A.A. (1982) *Corporate Cultures*. Reading, MA: Addison-Wesley.

- Denison D.R., Spreitzer G.M. (1991). Organizational culture and development: a competing values approach. In: Research in Organizational Change and Development (eds RW Woodman & WA Pasmore), Vol. 5, pp. 1–21. JAI Press Inc.: Greenwich, CT.
- Deshpandé, R., Farley, J. U., and Webster, F. E. (1993). Corporate Culture, Customer Orientation, and Innovativeness in Japanese Firms: A Quadrad Analysis. *Journal of Marketing*, 57, January, 23-37.
- Guth, W. and Ginsberg, A. (1990). Guest editor's introduction: corporate entrepreneurship. *Strategic Management Journal*, Vol. 11, no. 13, pp. 5-13.
- Hart S. and Banbury C. (1994). How strategy-making processes can make a difference. *Strategic Management Journal*, 15, 251-269.
- Hayton J.C. (2005). Promoting corporate entrepreneurship through human resource management practices: A review of empirical research, *Human Resource Management Review*, 15, 21–41.
- Hornsby J.S., Naffziger, D.W., Kuratko, D.F., and Montagno, R.V. (1993). An integrative model of corporate entrepreneurship process. *Entrepreneurship Theory and Practice*, Winter, pp. 29-37.
- Hofstede, Geert, (2001). “Difference and Danger: Cultural Profiles of Nations and Limits to Tolerance”, Ed: Maryan H. Albrecht, *International HRM, Managing Diversity in the Workplace*, Blackwell Publishing, USA.
- Hornsby, J.S., Kuratko, D.F. and Montagno, R.V. (1992). An Interactive Model of the Corporate Entrepreneurship Process. *Entrepreneurship: Theory and Practice*, vol. 17- 2: 29-37.
- Ireland, R.D., Kuratko, D.F., Morris, M.H. (2006). A health audit for corporate entrepreneurship: innovation at all levels – part 1. *Journal of Business Strategy*, 27(1), 10-17.
- Kanter, R. (1985). Supporting innovation and venture development in established companies. *Journal of Business Venturing* 1(1): 47-60.
- Khandwalla, P.N. (1987), “Generators of pioneering-innovative management: some Indian evidence”, *Organization Studies*, Vol. 8 No. 1, pp. 39-59.
- Knight, G.A. (1997). Cross-cultural reliability and validity of a scale to measure firm entrepreneurial orientation. *Journal of Business Venturing*. 12(3):213–225.
- Kuratko, D.F., Ireland, R.D., Covin, J.G., Hornsby, J.S. (2005). A model of middle-level managers’ entrepreneurial behaviour. *Entrepreneurship Theory and Practice* 29 (6), 699-716.
- Kuratko, D.F., Montango, R.V. and Hornsby, J.S. (1990). Developing intrapreneurial assessment instrument for an effective corporate entrepreneurial environment. *Strategic Management Journal*, vol. 11, pp. 49-58.
- Lumpkin, G. T. and Dess, G. G. (1996). ‘Clarifying the entrepreneurial orientation construction and linking it to performance. *Academy of Management Review*, 21, 135–72.
- Miller, D. (1983). The Correlates of Entrepreneurship in Three Types of Firms, *Management Science*, 29, 7, 770-791.
- Miller, D. (1987). The structural and environmental correlates of business strategy. *Strategic Management Journal*, 8, 55-76.
- Miller, D. and Friesen, P. H. (1983). Strategy-making and environment: the third link. *Strategic Management Journal*, 4, 221–35.
- Miller, D. and Friesen, P.H. (1982). Innovation in conservative and entrepreneurial firms: two models of strategic momentum. *Strategic Management Journal*, vol. 3, no. 1, pp. 1-25.
- Moorman C., Deshpandé R., Zaltman G. (1993). Factors affecting trust in market research relationships. *Journal of Marketing* 57:81–101.
- Morris M.H., Davis, D.L. and Allen, J.W. (1994). Fostering corporate entrepreneurship: cultural comparisons of the importance of individualism versus collectivism." *Strategic Management Journal*, vol. 25, no. 1: 65-89.
- Morris, M.H., Kuratko, D.F., Covin, J.G. (2008), *Corporate Entrepreneurship & Innovation, Entrepreneurial Development within Organizations*, Thomson South-Western, Second Edition.
- Naman, J.L. and Slevin, D.P. (1993). Entrepreneurship and the Concept of Fit: A Model and Empirical Tests, *Strategic Management Journal*, 14: 137–53.
- Ogaard T., Larsen S. and Marnburg E., (2005), Organizational culture and performance – evidence from the fast food restaurant industry, *Food Service Technology*, 5, pp. 23–34
- Özdemirci, A. (2011). Corporate Entrepreneurship and Strategy Process: A Performance Based Research on Istanbul Market, *The Proceedings of 7th International Strategic Management Conference, Procedia - Social and Behavioral Sciences Volume 24, 2011, Pages 611–626.*
- Özdemirci, A., (2011), *Stratejik Liderlik ve Örgütsel Uyumlanma*, İstanbul: Beta.

- Parker C.P., Baltes B.B., Young S.A., Huff J.W., Altmann R.A., et al. (2003). Relationships between psychological climate perceptions and work outcomes: a meta-analytic review. *Journal of Organizational Behavior* 24:389–416.
- Paulin M., Fergusson R.J., Payaud M. (2000). Effectiveness of relational and transactional cultures in commercial banking: putting client-value into the competing values model. *International Journal of Bank Marketing* 18:328–37.
- Peters T.J. and Waterman R.H. (1982) *In Search of Excellence: Lessons from America's Best-Run Companies*. New York: Harper & Row.
- Russell R. D. and Russell C. J. (1992). Examination of the Effects of Organisational Norms, Organisational Structure and Environmental Uncertainty on Entrepreneurial Strategy". *Journal of Management*, Vol.18. No.4, 639-656.
- Schein E.H. (1992) *Organizational Culture and Leadership*, 2nd edn. San Francisco, CA: Jossey-Bass.
- Shahin A. and Beheshtin B. (2011). The Relationship between Organizational Behavior and Corporate Entrepreneurship: An Empirical Study in Iran Industries. 6th International Management Conference.
- Sousa-Poza A., Nystrom H., Wiebe H. (2001). A cross-cultural study of corporate culture on TQM in three countries. *International Journal of Quality and Reliability Management* 18:744–61.
- Stevenson, H.H. and Jarillo, J.C. (1990) 'A Paradigm of Entrepreneurship: Entrepreneurial Management', *Strategic Management Journal*, 11: 17–27.
- Wicklund, J. (1999). The sustainability of entrepreneurial orientation-performance relationship. *Entrepreneurship, Theory & Practice* 24(1): 37-47.
- Wiklund, J. and Shepherd, D. (2005). Entrepreneurial orientation and small business performance: a configurational approach'. *Journal of Business Venturing*, 20, 71–91.
- Wilkins A.L. and Ouchi WG (1983) Efficient cultures: Exploring the relationship between culture and organizational performance. *Administrative Science Quarterly* 28(3): 468–481.
- Zahra S.A. (1991). "Predictions and financial outcomes of corporate entrepreneurship: an explanatory study. *Journal of Business Venturing*, vol. 6, no. 4, pp. 259-285.
- Zahra S.A. and Covin, J.G. (1995). Contextual influences on the corporate entrepreneurship-performance relationship: a longitudinal analysis. *Journal of Business Venturing*, vol. 10, no. 1, pp. 43-58.
- Zahra S.A. (1993a). A conceptual model of entrepreneurship as firm behavior: a critique and extension. *Entrepreneurship Theory and Practice*, vol. 17, no. 4, pp. 5-21.
- Zahra, S. A., Hayton, J. C., and Salvato, C. (2004). Entrepreneurship in family vs. non-family firms: A resource-based analysis of the effect of organizational culture. *Entrepreneurship Theory and Practice*, 28(4), 363–381.
- Zahra, S.A. (1995). Corporate entrepreneurship and financial performance: the management of leverage buyouts. *Journal of Business Venturing*, vol. 10, no. 3, pp. 225-247.
- Zahra, S.A. (1986). A canonical analysis of corporate entrepreneurship: antecedents and impact on performance. *Proceedings of National Academy of Management*, vol. 46, pp. 71-75.
- Zahra, S.A. (1993b). Environment, corporate entrepreneurship, and financial performance: a taxonomic approach. *Journal of Business Venturing*,. Vol. 8, no. 4, pp. 319-340.
- Zahra, S.A., Jennings, D.F. and Kuratko, D.F. (1999). The Antecedents and consequences of firm-level entrepreneurship: The State of the Field," *Entrepreneurship*