

*Full Length Research Paper*

# The analysis of the basic dynamics of entrepreneurship in creating competitive advantages: The case of organized industrial zone in Turkey

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**In this study, the effect of entrepreneurship on firm performance, firm performance and growth regardless of sectoral differences from a macro perspective were analyzed in the light of the data gathered from 3034 firms operating in organized industry zones in Turkey. According to the results of the correlation analysis, positively significant relationships between firm performance and dimensions of entrepreneurship, profitability and new business venturing, innovativeness and self-renewal, growth and self-renewal, proactiveness and innovativeness were found. When taking into consideration the research findings, the main effects of new business venturing and innovativeness on firm performance are positively significant, new business venturing had a positive effect on profitability; proactiveness was positively significant on growth. Practical implications and directions for the future research were also discussed in this study.**

**Key words:** Organized industry zones, entrepreneurship, firm performance, business venturing.

## INTRODUCTION

In an economy, production is accomplished with the combination of labor, capital, and natural resources at various rates by economic decision units called entrepreneurs, driven by different technological information. In the transition process from agricultural society to industrial society and from industrial society to information society, it is seen that the most basic production factor has been labor compared to other production factor. In the first age economies, labor as a production factor, was based on slavery and in the middle ages and later it was land owners, that is, farmer entrepreneurs who based foundations for capitalism.

Scientific inventions and their utilisation in production formed the basic dynamic of Industrial Revolution in the 18<sup>th</sup> and 19<sup>th</sup> centuries. The redesign of steam machine by James Watt in 1765 turned this machine into a cost-efficient source of energy. Thirty-five years after Mathew Boulton's, who was the copartner of James Watt, presentation of the machine to the industrialists of the

time as an all-purpose source of energy, Robert Fulton introduced the first steamship in Hudson River in New York and 20 years after this, the first locomotive was manufactured.

In the mid 19th century, steam machine revolved any kind of production completely (Drucker, 1994:33). As it can be understood from these examples, as is expressed by A Smith, one of the pioneers of Economics- in his study titled "An Inquiry into the Nature and Causes of the Wealth of Nations", the most important source of "surplus value" is labor, that is, entrepreneur.

Competitive pressure, increasing day by day as a result of globalization, forces firms to use their sources more efficiently. Therefore, firms show great efforts to adapt easily to technological advancements, developing new products by using new technologies, to reach to new markets and new consumer groups by developing strategic cooperation and to use internal factors better. The firms which can manage this process the best had the chance to improve their competitive edge both in national and international markets. Concordantly, intrapreneurship begins to gain prominence for firms as an alternative solution to realize essential objectives.

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In the literature, there are a limited number of studies, which empirically study the effect of intrapreneurship on firm performance, profitability and growth. Especially, there are almost no empirical studies which study these relations. Therefore, the main aim of this study is to analyze -from a macro perspective - the effect of intrapreneurship on companies/firms performance, profitability and growth in Organized Industry Zones (OIZ) in Turkey, regardless of sectoral differences. There is a need for a development policy whose aims, principles and means are determined to increase competitive edge at national level. In line with the findings, some assessments will be made about intrapreneurship and feasible alternative strategy scenarios will be developed. In the analyses, SPSS (ver. 15.0) statistic package program will be used, after the direction of the relationships between variables is determined via correlation analysis, model tests in line with the aims of the study will be developed by means of regression analysis.

The study is composed of seven sections including the introduction. In the second part of the study, the conceptual framework of the intrapreneurship will be revealed. Under title of literature review, previous studies which have similar aims as ours are examined. In the fourth chapter of the study, after information about the methodology of the study is given, the characteristics of the sample are handled. The results of the analysis are given in the sixth section of the study. In the final part, discussions and conclusion are made under the light of the findings of the study.

## CONCEPTUAL FRAMEWORK OF INTRAPRENEURSHIP

Changes in production relations have revealed paradigmatic changes; and any new case was explained with new concepts. From the 1980s with globalization, developments in the world economies led to many changes in policies of production processes. Again, in this process, as a result of increasing pressure of competition in almost every area, the functions of production factors were called into question again, and new policies at micro and macro level were sought. On the other hand, after the 1990s, as a result of the changes in economic and political conjecture, borders among countries being lifted, changes in technology, significant decrease in communication and shipping costs have accelerated this change process. All these developments, considered at firm level, the point of view to entrepreneur who is to organize existent resources and or to reorganize them has changed.

The concept of entrepreneurship which derived from French word "entreprenre" was first developed by John B. Say and Richard Cantillon in 1755 and became more understandable with the studies of Joseph Schumpeter and the economists in the Australian School. The differences in the assessment of entrepreneurship in time

are attention-grabbing (Murphy et al., 2006).

In economic theory, entrepreneurship is generally explained with four different approaches. The first approach is the determination of the level of profitability moving from income distribution. The second is the market processes based on complete competition in the context of neoclassic approach. The third approach is the entrepreneur vision based on Schumpeter innovationist and in the final approach, entrepreneurship is viewed as decision makers and this is used to explain the relationships between entrepreneur and firm (Arikan, 2004). While entrepreneur is called as manager by Alfred Marshall and John B. Say, it is defined by John S. Mill, Frank Knight and Richard Cantillon as someone who takes risks resulting from the uncertainty of future; by Israel Meir Kirzner, Bruce A. Kirchoff and Harvey Leibenstein, it is defined as someone who creates opportunities in the market; it is defined by John B. Say, Arthur H. Cole and Richard Cantillon as someone who organizes labor and Joseph Schumpeter defines entrepreneurship as economic decision unit which makes profits depending on innovation. With the concepts of "creative destruction" and "dynamic entrepreneur" which were also introduced to the literature by Schumpeter, and which are viewed as the essential components of capitalism, the foundations of innovationist system were laid. The leader and captain of this system is entrepreneur (Kızılkaya, 2005).

Entrepreneurship is thought to be a behavioral concept at individual or organizational level or as a process of emergence. Forming an organization and conducts like innovation and behaviors, differentiating entrepreneurs from non-entrepreneurs mean more than management of the existent sources and operating traditional activities. Considered from this point of view, there occur differences between entrepreneur and owner of a firm. This difference fits snugly into Schumpeter's result-oriented conception targeting at "value creation". Here, entrepreneurship can emerge only when determined objectives are realized.

Intrapreneurship which was first used by Pinchot (1985) is defined as the ability to do entrepreneurial in the literature. Pinchot (1985) defines intrapreneurship as entrepreneurship inside the organization where individuals will champion new ideas from development to complete profitable reality. Intrapreneurship does not only mean creation of new jobs but also means other innovative activities and tendencies like new products development, services, technologies, management tech-niques, strategies and competitive situations. Considered from this point of view, intrapreneurship also means a new business venturing, product/service innovativeness, process innovativeness, self-renewal, risk taking, proactiveness and competing aggressiveness. Besides, terms like corporate entrepreneurship, corporate enterprise and internal corporate entrepreneurship are used in the definition of the concept of intrapreneurship (Zahra,

1991; Zahra and Gravis, 2000; Antoncic and Hisrich 2000, 2001, 2003; Fitzsimmons et al., 2005; Antoncic and Scarlat, 2005; Antoncic, 2007, Holt et al., 2007). Following from these explanations, intrapreneurship in its broadest sense is entrepreneurship in an existent organization. While intrapreneurship is regarded as a spirit of entrepreneurship in an existent organization by doing new things and deviating from traditions to create opportunities, on the other hand it is a process of seeking/creating opportunity regardless of current resources controlled by individuals in an organization. While some researchers ignore small scale companies and focusing only on large scale companies in their studies on intrapreneurship, others regard intrapreneurship as a creation of new job. Generally considered, intrapreneurship is a process going on in an existent organization. Besides, it does not only provide opportunity for creation of new jobs for enterprises but also other innovative activities and tendencies like development of new product, new process, new service, production techniques, strategies and development of competitive situations. Further all these, intrapreneurship is conceptualized with the components based on Schumpeter's innovative understanding. Therefore, intrapreneurship includes the pursuit of creative and new solutions to problems in a company related to marketing of old and new product and services, development and enrichment of new managerial techniques and technologies in order to make organisational functions operational (Antoncic and Hisrich, 2001).

The concept of intrapreneurship is taken in four different dimensions; new business venturing, innovativeness, self-renewal and proactiveness (Antoncic and Hisrich, 2000, 2001).

### **New business venturing**

Firms are attaching importance to the establishment of new companies related with the products and markets in the existent organizations to curb the pressure of increasing competition and to benefit from field economies. Here, if the redefinition of products and services and/or development of new markets enable the foundation of new companies, new business venturing emerges as the most significant characteristic of intrapreneurship. Especially in large scale companies, the formation of autonomous or semi-autonomous units can also be regarded as a dimension of new business venturing. In short, new business venturing dimension for all organizations regardless of their size means the formation of new companies -no matter what extent they are autonomous- related with current market and products.

### **Innovativeness**

Technological change process is composed of three

stages: scientific invention/innovation, the application of scientific innovation and the spread of innovation. Accordingly, innovativeness is an essential criterion of technological change and competitive power. The definition of the concept of innovation -as in the definition of other concepts- varies, depending on the field it is used in. Hansen defines innovation as "a historical and irrevocable process taking place in the method of accomplishment of something" (Demir, 1995). According to another definition, innovation is the application of the research and inventions to new products and the development of the production of old products (Brockhoff, 1985). Mansfield (1985) calls innovation as the application of scientific findings.

According to Schumpeter who made pioneering studies in this field, innovativeness is the benefit gathered from the commercialization of invention and is realized with the entrepreneur developing a strong trust to innovation (Çoban, 2003).

### **Self-renewal**

The third dimension, self-renewal, means developing the strategy again, reorganization and organizational change. Concordantly, it means an organizational transformation through with the innovation in the basic ideas the firms asserted. This situation covers the redefinition of the company, reorganization in terms of innovation and undertaking changes in all systems, new strategic direction and the continuous self-renewal of organization.

### **Proactiveness**

The fourth dimension of intrapreneurship is proactiveness. Proactiveness includes taking initiative to increase competitive power, taking over risk, aggressiveness in creating competitive opportunities and being audacious. Some firms support intrapreneurship to be competitive in their field of operation and to revise competition rules. Proactiveness means that the firms are looking for impressive opportunities rather than showing reaction to their rivals' moves. Therefore, proactiveness of a firm is significantly related with its performance and the first-movers in the market can increase their shares in the market and improve their performance. This situation which is also called time leadership strategically very essential. The firms which can attain a pioneering position in the market - thanks to time leadership - can force other firms in the market to adapt to their conditions. It can be more beneficial to wait before deciding to start competition in the case of process innovation when the risk of uncertainty is high. In such cases, some advantages of being second-mover can emerge.

In cases when the advantages of being the first-mover emerge, every firm has to make an effort to move faster than its rival. The firms which are aware of the advantage

of being the first-mover will need to continuously innovate itself to be better than its rivals. The firms with tendencies are called leaders at birth (Pfähler and Wiese, 1998). Zahra and Garvis (2000) point out that there is a positive relationship between a firm's time of entrance to a market and its share in the market. As a result, proactiveness is considered to be a constructivist strategy in terms of successful firm performance.

## LITERATURE

In a study by Zahra (1991) on 119 industry firms in the Fortune 500, in the years between 1986 and 1989, it was found out that intrapreneurship is closely related with strategies of growth; intrapreneurship activities increased financial and non-financial performances and also decreased its systematic risks.

Zahra and Garvis (2000) analyzed the relationships between international corporate entrepreneurship and firm performance and between profitability and growth and revealed that there is a positive and significant relationship between international corporate entrepreneurship and firm performance, firm profitability and firm growth. Nonetheless, Antoncic and Hisrich (2000), considering the country samples of the US and Slovenia, emphasized the modeling of intrapreneurship in transition economies. According to the research findings, it was found out that in Slovenia, compared to the US, intrapreneurship level and in turn performance (growth and profitability) is quite low. Besides, it was also found out that in transition economies, intrapreneurship creates great opportunities in increasing performance in terms of existent firms.

Antoncic and Hisrich (2001) emphasized the dimensions of intrapreneurship with the help of international comparisons and concluded that the four dimensions of intrapreneurship do not completely suit the situation in every country. Besides, they also determined that intrapreneurship is a significant determiner in terms of pure growth (growth in the number of personnel and total sales) and relative growth (growth in market share compared to its rivals).

Kuratko et al. (2001) found that corporate entrepreneurship activities in a large firm resulted in diversified products and markets, as well as being instrumental to producing impressive financial results.

Hornsby et al. (2002) identified five key factors that influence corporate entrepreneurship to include management support, work discretion and autonomy, rewards and reinforcement, time availability, and organizational boundaries.

The field of corporate entrepreneurship (CE) has developed rapidly since 1983. This increase is largely because the area holds such great promise for firms competing in an environment that is increasingly dynamic, complex and uncertain. CE is positively linked to intangible outcomes, like knowledge, skill development,

and job satisfaction (Ireland et al., 2003). On the other hand, in a study on Australian firms, Fitzsimmons et al. (2004) examined the relationship between intrapreneurship and firm growth and profitability. In the study, industry, company age and its company size were considered as control variables.

According to the findings of the study, while there found a negative relationship between profitability and self-renewal and a positive significant relationship between profitability and organisational support, growth was found to have positive significant relationship to both new business venturing and environmental munificence environmental sensitivity.

Kuratko et al. (2005) suggest that CE represents a set of internal behaviors requiring organizational sanctions and resource commitments for the purpose of developing different types of value-creating innovations.

Besides, in a study by Antoncic and Scarlat (2005), it was found out that strategic consolidations affect intrapreneurship in a positive way and there was a positive relationship with intrapreneurship and firm performance and profitability.

Ireland et al. (2006) argue that the corporate entrepreneurship assessment instrument (CEAI) provides a sound basis for managers to effectively manage, facilitate and improve CE activities. According to Ireland, businesses increasingly rely on CE and innovation to develop and nurture simultaneously today's and tomorrows' competitive advantages. Leading edge businesses see the effective use of CE as a source of competitive advantage and as a path to higher levels of financial and non-financial performance.

Verreynne and Meyer (2007) describe the results of an empirical study conducted with 454 small firms. Analysis of the data indicates that intrapreneurial strategy-making has a significant positive relationship with firm performance, depending on the size of the firm, its organizational structure and the dynamism of the environment. It further shows that differentiation strategies may mediate this relationship.

Menzel (2008) research set out to study how large, established organizations, and their R and D units in particular, can foster intrapreneurship – that is, the ability to harness entrepreneurship inside of their boundaries. Intrapreneurship is founded in the logic of discovering and pursuing entrepreneurial opportunities that lead to the development of radical innovations that feature –in contrast to incremental innovation – a high degree of novelty, address and open up new markets, and engage in risky projects with long-term time horizons until profitability.

Antoncic and Prodan (2008) developed and tested a model of alliance-driven corporate technological entrepreneurship activities that impact on organizational performance. The model was tested on 226 usable responses from mail survey data from a sample of manufacturing firms from Slovenia. They found the relationship between corporate technological entrepreneurship and organizational

performance in terms of growth and profitability and received support (positive and significant coefficients between corporate technological entrepreneurship and performance elements (standardized): absolute growth 0.22, relative growth 0.33, absolute profitability 0.21 and relative profitability 0.19). Benitez-Amado et al. (2010) analyzed the relationships among two types of information technology (IT) resources (technological IT and managerial IT resources), the intrapreneurship culture and firm performance. Analysis show that intrapreneurship culture is a valuable key capability that predicts firm market performance; both technological IT and managerial IT resources have a positive effect on the development of an intrapreneurship culture in the firm, and investment in both technological IT and managerial IT resources influences firm performance positively by means of the capability of intrapreneurship culture.

## METHODOLOGY

### Sample

The sampling consisted of 10,740 companies operating in production industry in OIZ in Turkey (Cansız, 2010). The data for this survey were collected from managers of companies in OIZ in Turkey. Pollster firm was used to distribute questionnaires to 10,740 businesses. After eliminating the questionnaires that were annulled or not returned, we were left with a final sample of 3034 respondents. The response rate was 28.2% (3,034 usable questionnaires), an acceptable response rate for this kind of study (Ozgener, 2008: 621- 631).

### Data collection procedure

In the designed survey, firstly, five-point Likert-type scale survey with 30 items was developed to determine the dimensions of intrapreneurship (1: I certainly disagree, 2: I do not agree, 3: I neither agree nor disagree, 4: I agree, 5: I certainly agree). To measure this variable, we used the five items intrapreneurship scale developed by Zahra and Garvis (2000). In this survey, new business venturing, innovativeness, self-renewal and proactiveness were considered. The reliability of this scale, which is Cronbach's  $\alpha$  (alpha) value, is 0.83. Usually, a value of 0.70 in the Cronbach's alpha is considered adequate in order to ensure reliability of the internal consistency of a questionnaire (Nunnally, 1978).

As to firm performance, a five-point Likert scale with 29 items (1=Very low, 2= Low, 3=Stable, 4=High, 5= Very High), the financial performance scale adopted from some previous studies (Vickery et al., 1993; Fawcett and Clinton, 1996; Yılmaz et al., 2005; Avci et al., 2010) were used. Then, the scale reliability was evaluated by calculating Cronbach's  $\alpha$  (alpha). The coefficient was 0.89 for firm performance. Besides, a five-point Likert scale with 1 item related to profitability and with 5 items related to reveal growth tendencies of firms (1=Never, 2=Little 3=Partially 4=Rather 5=To a Large Extend) was designed. To measure growth and profitability, we used the eight items corporate entrepreneurship scale developed by Antoncic and Prodan (2008). The reliability of this scale, that is, the Cronbach's  $\alpha$  (alpha) value, was 0.96.

### Developing the research model and hypotheses

First of all, descriptive statistics were used for the demographic characteristics of the firms in the sample. After the direction of

relationship among the variables in the data set formed was determined with correlation analysis, the models formed in line with the aim of the study were tested via regression analysis.

In this study, to analyze the relationships between variables, correlation and regression analysis was preferred. In regression analyses the following estimations models were used. In the formation of these models generally, the studies made by Fitzsimmons et al. (2004) were utilized:

Model-I:

$$FP = b_0 + b_1NBV + b_2I + b_3SR + b_4PA + u \quad (1)$$

Model-II:

$$P = b_0 + b_1NBV + b_2I + b_3SR + b_4PA + u \quad (2)$$

Model-III:

$$G = b_0 + b_1NBV + b_2I + b_3SR + b_4PA + u \quad (3)$$

In the stated equations, FP: firm performance, NBV: new business venturing, I: innovativeness, SR: self renewal, PA: proactiveness, P: profitability, G: growth.

The hypotheses developed in this context of these models are as follows:

H<sub>1</sub>: New business venturing will be positively related to firm performance.

H<sub>2</sub>: Innovativeness will be positively related to firm performance.

H<sub>3</sub>: Self-renewal will be positively related to firm performance.

H<sub>4</sub>: Proactiveness will be positively related to firm performance.

H<sub>5</sub>: New business venturing will be positively related to profitability.

H<sub>6</sub>: Innovativeness will be positively related to profitability.

H<sub>7</sub>: Self-renewal will be positively related to profitability.

H<sub>8</sub>: Proactiveness will be positively related to profitability.

H<sub>9</sub>: New business venturing will be positively related to growth.

H<sub>10</sub>: Innovativeness will be positively related to growth.

H<sub>11</sub>: Self-renewal will be positively related to growth.

H<sub>12</sub>: Proactiveness will be positively related to growth.

### Demographic characteristics of sample

In Turkey, OIZ is examined according to recent statistical regional unit classification done in the framework of coherence to European Union, applied at regional level. In this study, the relationship between intrapreneurship and firm performance, profitability and growth are discussed regardless of sectoral differences from a macro perspective.

A total of 3034 firms from 24 production industry sectors participated in the survey used in the scope of the study. Firms' sectoral distribution is shown in Table 1. When the sectoral distribution of the firms are examined, it can be seen that the first three sectors are; 29 NACE coded non-classified machine and equipment (18.3%), 17 NACE coded textile (12.3%) and 27 NACE coded main metal industry (10.4%).

Information about the educational levels of the owners/director of the firms participate the survey is given in Table 2. 23% of the owners and directors of firms had graduated from primary school and 29.4% from high school. 41.2% of the respondents had a bachelor's degree and 4% of them had a master's degree or higher. On the other hand, information about firms' foundation type is given in Table 3.

**Table 1.** Sectoral distribution of the firms.

Sectoral distribution	NACE	Frequency	Percentage
Manufacture of food products and beverages	15	192	6.3
Manufacture of tobacco products	16	1	0.0
Manufacture of textiles	17	373	12.3
Manufacture of wearing apparel; dressing and dyeing of fur	18	74	2.4
Tanning and dressing of leather; manufacture of luggage, handbags, saddlery, harness and footwear	19	80	2.6
Manufacture of wood and of products of wood and cork, except furniture; manufacture of articles of straw and plaiting materials	20	57	1.9
Manufacture of pulp, paper and paper products	21	50	1.6
Publishing, printing and reproduction of recorded media	22	36	1.2
Manufacture of coke, refined petroleum products and nuclear fuel	23	2	0.1
Manufacture of chemicals and chemical products	24	137	4.5
Manufacture of rubber and plastic products	25	260	8.6
Manufacture of other non-metallic mineral products	26	104	3.4
Manufacture of basic metals	27	317	10.4
Manufacture of fabricated metal products, except machinery and equipment	28	231	7.6
Manufacture of machinery and equipment n.e.c.	29	554	18.3
Manufacture of office machinery and computers	30	4	0.1
Manufacture of electrical machinery and apparatus n.e.c.	31	101	3.3
Manufacture of radio, television and communication equipment and apparatus	32	8	0.3
Manufacture of medical, precision and optical instruments, watches and clocks	33	20	0.7
Manufacture of motor vehicles, trailers and semi-trailers	34	110	3.6
Manufacture of other transport equipment	35	4	0.1
Manufacture of furniture; manufacturing n.e.c.	36	310	10.2
Recycling	37	7	0.2
Computer and related activities	72	2	0.1
Total number of firms		3034	100.0

**Table 2.** Information about education levels of the firms owners/directors.

Education	Frequency	Percentage
Primary school	697	23.0
High school	966	31.8
Bachelor's degree	1251	41.2
Master's degree or higher	120	4.0
Total	3034	100.0

84.5% of the firms are new enterprises, 10.9% are taken over from family, 4.1% were taken over from third persons, 0.5% were taken over by workers. The information about the employment structure of firms participate the survey is given in Table 4. 1982 firms employ 1 to 24 workers, 502 firms employ 24 to 49, 255 firms employ 50 to 99 and 219 firms employ more than 100 workers in their firms. 79 firms did not answer the question about the number of employees.

## FINDINGS

Following from the data set obtained, correlation analysis was performed to determine the relationship between firm

performance (FP), profitability (P), growth (G), new business venturing (NBV), innovativeness (I), self-renewal (SR) and proactiveness (PA) variables and to determine the direction of these relationship. In Table 5 intrapreneurship in this study ( $p < 0.01$ ).

Moreover, there is a significant positive relationship between profitability and new business venturing, innovativeness and self renewal ( $p < 0.01$ ). It was found out that there is no significant relationship between profitability and growth and proactiveness. When the coefficient of correlation between growth and other variables is considered, there is no significant relationship

**Table 3.** Information about establishment of firm.

Establishment	Frequency	Frequency %
New enterprise	2564	84.5
Taking over from family	331	10.9
Taking over from the third person	123	4.1
Taking over by workers	16	0.5
Total	3034	100.0

**Table 4.** Number of employees in firms.

Number of workers	Frequency	Percentage
Not-responding	79	3
1-24	1982	65
24-49	502	17
50-99	255	8
100+	216	7
Total	3034	100

**Table 5.** Descriptive statistics and Pearson correlation coefficient (n=3034).

	Mean	Standard deviation	1	2	3	4	5	6
1. FP	3.3519	0.48191						
2. P	3.0979	1.03516	0.570(**)					
3. G	2.9209	1.33413	-0.003	-0.024				
4. NBV	3.5276	0.60329	0.312(**)	0.204(**)	0.026			
5. I	3.5018	0.49933	0.197(**)	0.081(**)	0.054(*)	0.453(**)		
6. SR	3.5498	0.61686	0.166(**)	0.093(**)	0.082(**)	0.400(**)	0.596(**)	
7. PA	3.3648	0.57703	0.090(**)	0.033	0.124(**)	0.191(**)	0.565(**)	0.579(**)

\*\* Correlation is significant at the 0.01 level (2-tailed); \* correlation is significant at the 0.05 level (2-tailed).

between growth and other variables excluding self-renewal, proactiveness and innovativeness. It was also found out that there is a positive relationship between growth and self-renewal at significance level of 1% and there is a significant relationship of between growth and self-renewal and proactiveness at significance level of 5%.

When the variables considered as dimensions of intrapreneurship and the relationship between them are examined, it was found out that there was positive relationship between all of the variables ( $p < 0.01$ ). The highest Pearson correlation coefficient value was 0.596 with innovativeness and self-renewal. Estimation results of the models developed to find out the effect of intrapreneurship on firm performance, profitability and growth are given in Table 6. When F-statistic values are taken into consideration, it was determined that the regression coefficients of the three estimated models were generally significant ( $p < 0.01$ ). Regression analysis

was used to test the hypotheses related to the constructs. To assess the effects of dimensions of intrapreneurship on firm performance, profitability and growth, a three-step procedure was followed.

Table 6 presents the results of the regression analyses for this study. To examine multicollinearity, variance inflation factors (VIFs) for each of the regression equations were calculated. In three models, the maximum VIF within the models was 1.975, which is well below the rule-of-thumb cutoff of 5 (Morrow-Howell, 1994).

Also, the lowest tolerance value was 0.506, which is far from the common cut-off threshold value of 0.10 (Hair et al., 2006). Given that none of the bivariate correlations was greater than 0.80, it can be argued that multicollinearity is not a problem in the regression analyses (Grewal et al., 2004).

Finally, the table value of the critical Durbin-Watson Statistic (d) is 1.46 at the 0.01 level of significance and it was therefore concluded that multicollinearity was not a

**Table 6.** Regression analysis results.

Variable	Model-I <sup>(a)</sup>				Model-II <sup>(b)</sup>				Model-III <sup>(c)</sup>			
	Coefficient	Std. error	t-Statistics	Sig.	Coefficients	Std. error	t-Statistics	Sig.	Coefficients	Std. error	t-Statistics	Sig.
(Constant)	2.475	0.090	27.409	0.000	2.012	0.193	10.446	0.000	1.886	0.248	7.606	0.000
NBV	0.218	0.021	10.254	0.000	0.366	0.046	8.008	0.000	0.037	0.059	0.625	0.532
I	0.099	0.031	3.219	0.001	-0.045	0.067	-0.671	0.503	-0.113	0.086	-1.310	0.190
SR	-0.008	0.025	-0.316	0.752	0.077	0.054	1.723	0.095	0.010	0.070	0.139	0.889
PA	-0.043	0.025	-1.729	0.084	-0.075	0.054	-1.406	0.160	0.368	0.069	5.325	0.000
R square	0.104				0.046				0.021			
Adjusted R square	0.102				0.044				0.019			
Standard error of the estimate	0.44397				1.02951				1.33495			
Durbin-Watson	1.603				1.731				2.060			
F	46.391			0.000	22.346			0.000	10.206			0.000

(a)Dependent variable: FP; (b)dependent variable: P; (c)dependent variable: G.

serious problem for the regression analyses in all models.

Model 1 includes the effect of intrapreneurship on firm performance. The results in Table 6 suggest that the overall model was insignificant (Adj.  $R^2=0.102$ ;  $F = 46,391$ ;  $p < 0.01$ ). That means that only 10.2% of the variance in firm performance was explained by the dimensions of intrapreneurship. As shown in model 1, the regression coefficients representing the main effects of new business venturing ( $\beta= 0.218$ ;  $p < 0.01$ ) and innovativeness ( $\beta= 0.099$ ;  $p < 0.01$ ) on firm performance are positive and significant, providing support for  $H_1$  and  $H_2$ .

However, self-renewal and proactiveness had negative but non-significant effect on firm performance. Hence,  $H_3$  and  $H_4$  were not supported. In model 2, the dimensions of intrapreneurship and profitability were entered in the analysis. Model 2 was statistically significant for profitability (Adj.  $R^2=0.044$ ;  $F= 22,346$ ;  $p<0.01$ ). As shown in model 2, the regression coefficients representing the main effects of new business venturing on

profitability is positive and significant ( $\beta= 0.366$ ;  $p < 0.01$ ). That is, new business venturing had a positive effect on profitability. Thus,  $H_5$  was supported.

However, innovativeness and proactiveness had negative but non-significant effect on profitability. Moreover, self-renewal had a positive but non-significant effect on profitability. Thus,  $H_6$ ,  $H_7$  and  $H_8$  were not supported. Finally, in model 2, the dimensions of intrapreneurship explained 4.6% of the variance in profitability.

Model 3 analyzed the effects of the dimensions of intrapreneurship on growth. The results showed that model 3 was significant (Adj.  $R^2=0.019$ ;  $F=10,206$ ;  $p < 0.01$ ). In this model, the dimensions of intrapreneurship explained 1.9% of the variance in growth. In Model 3, proactiveness was positive and significant on growth ( $\beta = 0.368$ ;  $p < 0.01$ ), providing support for  $H_{12}$ . However, self-renewal and new business venturing had a positive but not statistically significant effect on growth ( $\beta= 0.125$ ;  $p > 0.01$ ). Thus,  $H_9$  and  $H_{11}$  were not overall model was insignificant (Adj.  $R^2 = 0.102$ ;

supported. Furthermore, innovativeness had negative but non-significant effect on growth. That is,  $H_{10}$  was not supported.

## DISCUSSION AND CONCLUSION

Firms, regardless of scale differences, attach importance -besides new products and process development- to new business venturing to decrease increasing competitive pressure and to make use of the advantages of field economy. It is necessary for firms which are to take innovativeness into consideration at every stage of production to develop new strategies and continuously renew themselves. Today, innovativeness and self-renewal have become an important criterion for technological change process and competitive power. Concordantly, being a leader, taking initiative, taking risks, being aggressive in creating competitive are important to increase firms' competitive powers.

It is understood from here that firms are to use

their existent sources more efficiently and to make new openings to reduce the competitive pressure in the sector they operate. Therefore, since the 1980s, intrapreneurship was considered to be a means or strategy in firms' increasing their competitive power. This study seeks to reveal the relationship between intrapreneurship and firm performance, profitability and growth-which are regarded to be determiners of firm's competitive power-were revealed with correlation analysis and regression analysis taking OIZ sample in Turkey into consideration. Although the findings of this study have similarities to the findings of the studies by Zahra (1991), Zahra and Garvis (2000), Antoncic and Hisrich (2000, 2001), Fitzsimmons et al. (2004), Antoncic and Scarlat (2005) and Antoncic and Prodan (2008), they also indicate some determinations which are significantly different from the findings of the other studies on intrapreneurship in the literature.

According to findings of this study, there is a positive significant relationship between firm performance and four dimensions of intrapreneurship. In a similar way, it was also found out that there is a positive significant relationship between profitability and new business venturing, and between innovativeness and self-renewal. Besides, the results of the study pointed out that there is positive significant relationship between growth and self-renewal, and between proactiveness and innovativeness.

In considering the relationships between the intrapreneurship dimensions and firm performance (Table 6), a negative relationship was found between firm performance and self-renewal and proactiveness, while a significant and positive relationship was found between firm performance and new business venturing and innovativeness. The most effective variable on firm performance is new business venturing.

Accordingly, it can be said the most determining factor on the company's performance operating in production industry in OIZ in Turkey is new business venturing. Therefore, the firms in the field study attach importance to intrapreneurship to take advantage of economies of scope and to increase their competitive powers in the framework of firm performance.

The fact that self-renewal and proactiveness have negative effect on firm performance can be interpreted to mean that firms do not make plans for the future and avoid taking risks. A significant positive relationship was found between firm profitability and new business venturing and self-renewal, while a negative relationship was found between innovativeness and proactiveness and firm profitability (Table 6). The variable which is the most effective on profitability is new business venturing. According to this finding, the fact that innovativeness affects profitability in a negative way might indicate that the firms in the field study do not have R and D substructure. On the other hand, that proactiveness affects profitability in a negative way can be interpreted to mean that firms avoid taking risk, which was also

mentioned earlier. However, in a study by Fitzsimmons et al. (2004), it was found out that only self-renewal has a negative effect on profitability.

According to the results of the study, a positive relationship was found between firm growth and new business venturing, self-renewal and proactiveness, while a negative relationship was determined between innovativeness and growth. In a study by Fitzsimmons et al. (2004), it was found out that self-renewal has a negative effect on growth. In this study, just as in another study by Fitzsimmons et al. (2004), it was found out that most effective variable on growth is proactiveness.

In this study, the fact that the coefficient sign of the innovativeness variable turns out to be negative can be interpreted to mean that firms regard innovativeness not as a value component but as an expenditure component. In sum, new business venturing and innovativeness affect firm performance; new business venturing and self-renewal affect profitability; new business venturing, self-renewal and proactiveness affect growth in a positive way according to the findings of the study. Considering the estimation results of the model, it is observed while the results are supporting H<sub>1</sub>, H<sub>2</sub>, H<sub>5</sub> and H<sub>12</sub>, they are not supporting the others.

As with any research, some limitations should be taken into consideration in generalizing the results of this study. First limitation is that participants may have been biased to present positive aspects of their businesses. Second, we developed on a new scale to assess growth and firm performance. The reliability of the scale used at the research has not been proven in many different settings/countries. As with any new measure; further tests in additional samples would help to establish our confidence in it.

The scope of this study includes the basic dynamics of intrapreneurship in creating competitive advantages in Organized Industrial Zone in Turkey. Future research is needed to determine whether strategic posture influence firm performance and growth positively or negatively in different industries.

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