

The Effects of the Structure of the Board of Directors on the Performance of Small to Medium Scale Enterprises

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Abstract

On the subject of the effects of the Board of Directors on the performance of the company, written articles have generally been limited to listed companies. The effects of the Board of Directors and their respective structure on the performance of the company consist of a subject matter that has been frequently researched in the literature by means of various different methods. In this particular study, the existence of the Board of Directors in SME's and, if present, the effects of these in the performance of the company have been researched. In this context, a field research has been conducted with the search model by means of a simple random sampling. In addition, a poll has been performed on a one on one basis comprising a total of 703 voluntary companies that have a status of **Small and Medium Sized Enterprises** (SME) from several cities around Turkey, of which 204 operate in manufacturing, 347 in service and 152 both in manufacturing and service. The resulting data has been put together and analyzed. On the other hand, the poll that has been applied to the companies is composed of four sections, which consist of the complementary statistics, the decision making and resource generating capacity of the board of directors, the authority of the board of directors over the management processes and, lastly, the performance of the company.

As a result of the study, it has been observed that the companies with a board of directors in SME's demonstrate a higher performance when compared to the companies without a board of directors. Furthermore, the education levels of the members that take part in a board of directors have a positive effect on the performance, whereas the companies with a board of directors that have elected their chief executive officer have a positive effect on the performance of the company which is significantly higher than that of the board of directors where the president is nominated in accordance with the amount of shares that a member holds. Moreover, it has been proven that the structure and characteristics of a board of directors affect the performance of the company in a positive manner.

Keywords: small to medium scale enterprises, board of directors, cooperate governance, firm performance

1. Introduction and Literature

More than 95% of the total number of businesses in member countries of the OECD (Organization for Economic Co-Operation and Development) consists of SME's (Small to Medium Scale Enterprises). In these countries, SME's make up more than 60% of employment and continue to create new business areas (OECD, 2000). Similarly, Small to Medium Scale Businesses form 99,8% of the total ventures, 75,8% of employment, 54,5% of wages and fees, 63,3% of turnover, 53,2% of factor cost and 54,2% of the added value (FMKD), as well as 53,2% of the gross investment concerning tangible goods (TÜİK, 2014). Approximately 94% of the SME's in Turkey are micro businesses that employ less than 10 employees and this corresponds to around 3,7 persons with regard to the average scale magnitude of the SME's (DIE, 2003).

When the ownership structures of the businesses worldwide are broadly investigated, it is observed that an average of 80% of these businesses constitutes family businesses. As for approaching this matter in regard to the countries, it has been noted that 90% of the businesses in the United States of America, 85% of the businesses in

Europe and 95% of the businesses in Turkey are in the family business status. With respect to the family businesses, the fact that the directors will make decisions to the benefit of the business owners and that the shareholder interests will be neglected is one of the main issues with the agencies. Various mechanisms have been developed with the purpose of protecting the interests of the business owners, as well as lowering the agency cost. One of the most well-known mechanisms is the Agency Theory (Jensen and Meckling, 1976), which aims to protect the interests of the business owners and the shareholding directors that have a representing statue, as well as to maximize their income. Hermalin and Weisbach, (2001), together with Jensen, (1993), have proven that the Agency Theory plays an important role in the resolution of these issues. Along with similar mechanisms related to the resolution of issues, these are called Corporate Governance in their broadest sense.

The World Bank (1994) has identified the corporate governance as a system that helps people in modern life to attain an objective and coordinates the management of any institution. OECD (2004) has further described the corporate governance as a system that administers and controls the operating activities. On the other hand, administration rules, as a result of corporate governance serve as the mechanism that protects the relationships and commitments that arise as a result of the practice of law and operations between the business and capital owners, as well as the relationships and commitments originating from the covenants and agreements between the director and the employees (Williamson, 1985).

Besides the issues that are present within the scope of governance, subjects such as financial resource related problems, government amendments, employee costs, pricing and marketing strategies are issues that SME's generally get involved in (Miller et al., 2002). In this regard, issues such as the demographic structure of the board of directors (education, experience, age... etc.), resource generation and authority over decision making processes directly affect the performance of the company (Kasim et al., 2013; Samra & Fredrick, 2000; Bhagat and Jefferis, 2002; Elsayed, 2007; Hopkins & Hopkins, 1997; Murray, 1989).

In addition, it is possible to mention a factor such as the ratio of external members of the board of directors (not actively holding a position in the company) with regard to the structure of the board of directors. The description used in the literature as a criterion for the independency of the board of directors is the percentage rate of the external members (Goergen & Renneboog, 2001; Klein, 2002). The reason to adopt such a description is the fact that the internal members are far from objectivity and independency (Elloumi & Gueyie, 2001). Johnson et al., (1996), state that external members are more effective compared to internal members when it comes to auditing the company administration, and base this assessment to the fact that either they are top managers or that they are independent from the company. However, since this subject pertains to the principles of auditing and transparency, it has not been included in the analysis of this study in great detail, even though the subject took place among survey questions.

Macus (2008) has proven that the structure and characteristics of a board of directors directly affects the performance of the company. Companies with sufficient structuring and interaction are in a more advantageous position concerning their performance. In this case, establishing a board of directors and their current structure plays a significant role with regard to the companies. Klapper and Love (2004) in their studies which have focused directly on the effects of a board of directors in a company have revealed that the qualities of a board of directors and its structure have a significant effect on the performance of the company. In these studies, they not only have expressed the qualities of the board of directors but have also emphasized the importance of the internal processes of the board of directors. They have proven the importance of the internal processes of a board of directors on the negligence of the directors in relation to their duties. Pettigrew, (1992), has stated that the attitudes of a board of directors are the main subject that should be focused on. Additionally, they have described that these attitudes concern the company as a whole as well.

As a result of the studies conducted, it has been established that the operation processes and the decision making brevity of a board of directors have a direct effect on the performance of the company. It is beneficial to the company that the board of directors can make quick decisions, especially concerning recurring issues, and to provide advantage to the company by making extensive and strategic decisions (Baum & Wally, 1993; Ancona et al., 2001; Hopkins & Hopkins, 1997; Pearce et al., 1987; Bracker & Pearson, 1986; Eisenhardt, 1989; Judge & Miller, 1991). However, there are studies that defend that the ability of a board of directors to make strategic and quick decisions has no effect on the performance of the company (McKiernan & Morris, 1994; Gable & Topol, 1987; Kallman & Shapiro, 1978; Fulmer & Rue, 1973). In addition to this, it can also be said that the existence of a board of directors in a company affects the transparency in business practices, along with auditing and quick decision making, thus influencing the performance of the company (Kasim et al., 2013; Bhagat & Jefferis, 2002). There are existing studies that defend that the existence of a board of directors affects the decision making speed of the companies, as well as studies that defend otherwise. It is safe to mention that there are various factors

underlying the emergence of such opposite opinions, such as research samples, research models, company structures, etc.

The inclusion of women members in a board of directors has recently become one of the most discussed topics. It has been a significant governmental policy to include women actively in business life in recent years. Nevertheless, the number of studies that research the effects of a board of directors with women members on the performance of the company is limited (Liu et al., 2014; Nekhili & Gatfaoui 2013; Teigen & Engelstad, 2012; Shamsul et al., 2015; Mahadeo et al., 2012; Galbreath, 2011). This study aims to make a contribution to the literature with regard to the investigation of the performance of companies that have a board of directors with women members.

Firstly, the information concerning research models and hypothesis has been included in the study. In later sections, descriptive statistics have been provided for the purpose of presenting a general profile of the companies that have participated in the poll. Finally, the relation and difference between the existence, structure and characteristics of a board of directors and the performance of the company have been studied by means of employing correlation analysis, regression analysis, t-test and one-way analysis of variance.

2. Research Model and Hypotheses

While the effects of the structure of a board of directors on the business performance in the SME's have been investigated within the scope of this study, they have been subjected to the effects of the main factors such as demographic characteristics, decision making and resource generating capacity and, authority over the administrative processes, as well as their sub factors. The model that forms the basis of the poll measures has been provided below in Figure 1.

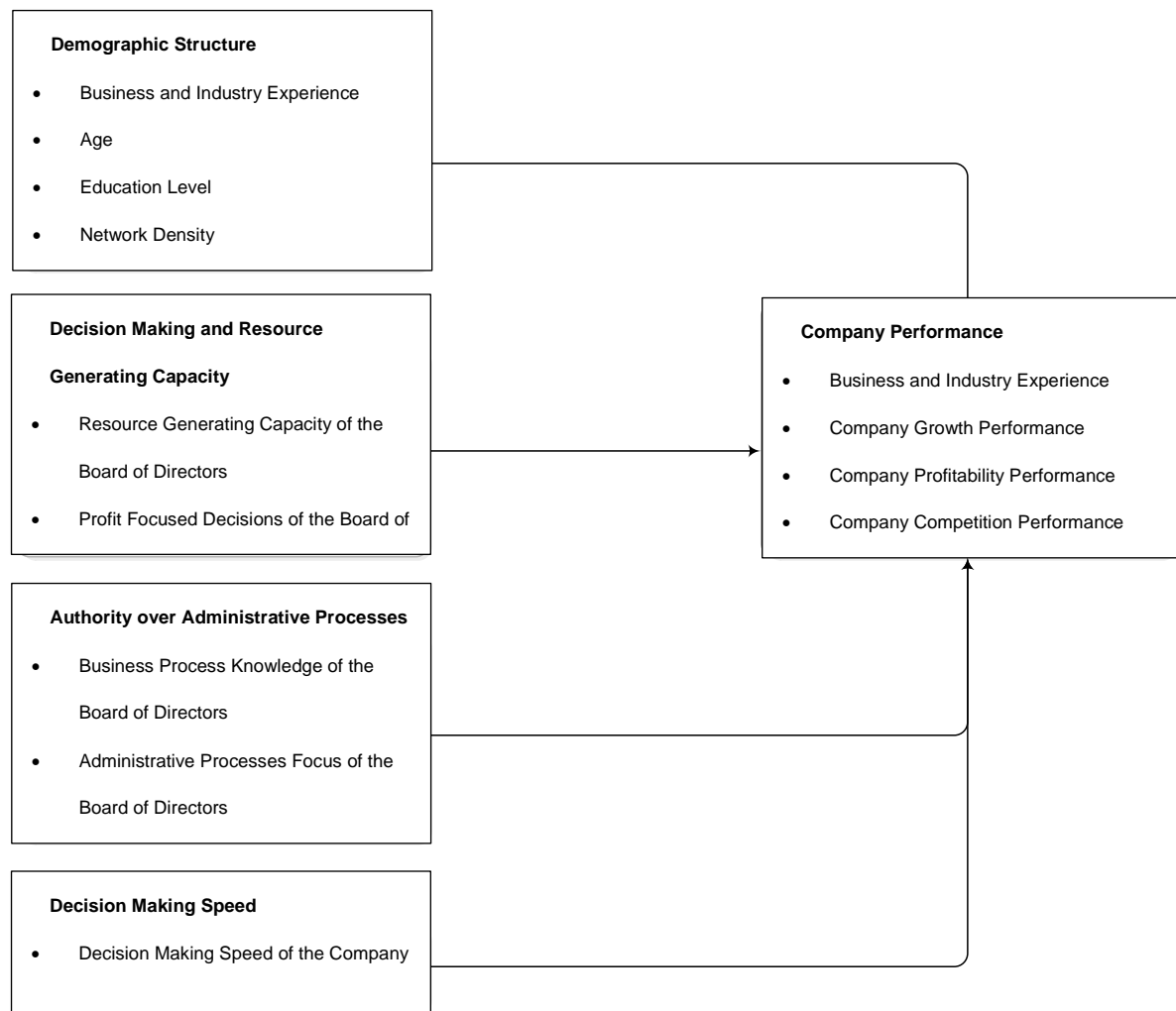


Figure 1. Research model

According to the model presented above, the analysis have been conducted by taking into account that the factors such as the resource generating capacity and authority over the administrative processes, as well as the briefness of making decisions of the board of directors, which are thought to affect the performances of SME's. The research model has been developed with this in consideration. The factors that are considered to have an effect on performance are the factors that are established in relation to the questions in the poll and obtained as a result of the factor analysis; furthermore, the results of this analysis have been referenced in the following sections of the study.

A brief explanation of the factors present in the research model.

2.1 Demographic Structure

It is known in the literature that issues such as the number of members in the board of directors, as well as their education level, age and industry-specific experience have an effect on the performance of the company (Mahaedo et al., 2012; Chen, 2014). This study employs basic information, which includes average age and experience of the members of the board of directors, their education levels and the number of women members. In addition, it has been directed to the participants whether the members in the board of directors have any social connections (associations and foundations, sports clubs, chambers, agencies, etc.) as a social network concentration.

2.2 Profit Focused Decisions of the Board of Directors

- ✓ Whether the decisions made by the board of directors are solely for the purpose of increasing the profitability of the company or not;

- ✓ Whether the board of directors makes decisions to participate in activities that are not related to the mission of the company for the purpose of increasing the profitability of the company or not;
- ✓ Whether the pressures regarding the maximization of the premium that the shareholders will benefit from at the end of the year has any effect on the decisions of the board of directors or not.

2.3 Resource Generating Capacity of the Board of Directors

- ✓ **Efficiency of the personal guaranties of the board of directors! members in using credits before banks.**
- ✓ The capacity to meet the need of the company for capital by means of personal wealth of the members of the board of directors.
- ✓ The ability of the members of the board of directors to provide the material resources that the company needs in the event of a crisis by means of personal merit/sources/environment.
- ✓ The capacity of the members of the board of directors to supply goods, raw materials and etc. when the need arises from the suppliers with a running account by means of making use of their bilateral relationships.
- ✓ The members of the board of directors having connections and bilateral relationships to find foreign investors.
- ✓ The members of the board of directors having the relationships and knowledge to benefit their companies from incentives (these include TUBITAK, TEYDEB, KOSGEB, SAN-TEZ, BACKING FROM THE MINISTRY OF FOOD, AGRICULTURE AND LIVESTOCK, TTGV, TGSD, TURQUALITY, EU funds, etc.).
- ✓ Having bilateral relationships that will support the company in achieving success in public and private sector tenders.
- ✓ The capacity of the members of the board of directors to get an advance from the clients in the event of need.

2.4 Development Focused Decisions of the Board of Directors

- ✓ Approval of the budget and the strategic plan by the board of directors
- ✓ Whether the decisions made by the board of directors are development and deepening oriented with regard to the industry that the company is a part of or not
- ✓ Whether the board of directors makes specific decisions concerning the industry-specific, occupational, administrative and personal development of the company employees and directors or not.
- ✓ Whether the board of directors makes a decision not to distribute the profit to secure the company growth or not

2.5 Business and Process Knowledge of the Board of Directors

- ✓ The authority of the members of the board of directors over the business processes
- ✓ The knowledge levels of the members of the board of directors in relation to clients, suppliers, rivals, industry and market, critical personnel in the company, machinery and equipment used in the company.
- ✓ Crisis management competence of the members of the board of directors to manage the company at a time of crisis
- ✓ Whether the members of the board of directors have the necessary qualification to provide guidance to the operational units when needed or not

2.6 Administrative Processes Orientation of the Board of Directors

- ✓ Supervision and auditing of yearly internal budgets and strategic plan studies by the board of directors
- ✓ Paying attention to the development and continuity of the company instead of the profitability in the course of the decision making processes
- ✓ Whether the decisions made by the board of directors are monitored in the company or not

2.7 Growth Performance

- ✓ Success level from a financial point of view

- ✓ Average yearly increase in sales
- ✓ Increase in the number of employees and clients
- ✓ General profitability level

2.8 Competition Performance

- ✓ Increase in the financial success with respect to the number of new products introduced in the market
- ✓ General position in the competition environment

2.9 Profitability Performance

- ✓ Net profitability in proportion to the equity capital
- ✓ Net profitability before taxation in proportion to all the current sources
- ✓ Net income obtained from the main activities

The sub headings described above have been listed as a result of the main factors. These questions have been directed to the participant based on a 5 point likert scale.

Firstly, by basing the study on the research model, it will be researched whether the existence of a board of directors, the demographic structure and the described factors have any effect on the performance of the company. Furthermore, especially the effects of factors such as the number of women members in the board of directors, education levels, meeting preparation time and meeting frequency will be researched by means of employing relation and difference tests.

3. Data and Descriptive Statistics

The poll scale used in the study has been applied to 703 companies that have been randomly chosen from different regions in Turkey, which operate in various different industries. The data has been analyzed by means of the SPSS 21TM program. As it has been mentioned above, the opinions of the participants have been generally measured with the 5 interval likert scale.

Table. 1 consists of the area of activity and turnover information concerning the companies in question. Upon closer inspection of the table, it is clear that the largest area of activity belongs to the service industry. 28% of the companies that have participated in the poll consist of companies that operate in the international market. Approximately half of the companies have a turnover of less than 5 (five) million Turkish Liras. On the other hand, companies with an annual turnover of more than 40 (forty) million Turkish Liras make up 11% of the participants.

Table 1. Company information regarding industry and turnover

	Demography	Number	Ratio (%)
Area of Activity of the Company	Manufacturing	204	29,0%
	Service	347	49,4%
	Manufacturing / Service	152	21,6%
	Regional	282	40,1%
Boundaries of the Area of Activity of the Company	National	223	31,7%
	International / Global	194	27,6%
	No Answer	4	0,6%
	Below 5 Million	350	49,8%
Turnover of the Company for the Year of 2013 (Million Turkish Liras)	5-10	162	23,0%
	10-15	42	6,0%
	15-20	15	2,1%
	20-25	25	3,6%
	25-30	5	0,7%
	30-35	6	0,9%
	35-40	6	0,9%
	Above 40 Million	79	11,2%
	No Answer	13	1,8%

Table number 2 consists of the information relative to the structures of the board of directors with regard to the

participating companies. It can be stated that 71% of the participating companies have a board of directors that make the decisions as to the whole of the company. The number of members in these boards generally varies between 1 and 5. Furthermore, it has been observed that the proportional distribution of members who are a part of the board of directors and also a partner of the company similarly varies between 1 and 5.

Table 2. Structure of the board of directors

The Structure of the Board of Directors		Number	Ratio (%)
Is there a board of directors in your company that makes the decisions in relation to the integrity of the company?	Yes	501	71,3%
	No	202	28,7%
	1-5 Members	440	62,6%
	6-10 Members	53	7,5%
How many members are there in your board of directors?	More than 10 Members	8	1,1%
	No Board / No Answer	202	28,7%
	None	14	2,0%
	1-5 Members	454	64,4%
How many of the members of the board of directors are also company partner/shareholder?	6-10 Members	21	3,0%
	12 Members	2	0,3%
	No Board / No Answer*	212	30,2%
	None	270	38,4%
How many members of the board of directors are board members, even if they do not work in the company or are not shareholders?	1-5 Members	103	14,7%
	6 or more members	7	1,0%
	No Board / No Answer*	323	45,9%

Note. * The Table indicates the total number of companies that do not have a board of directors or did not answer the related question.

Table 3 includes information relative to the number of women members in the boards of directors of the companies. Upon inspection of the table, it is observed that the majority of the boards in the participating companies do not have women members.

Table 3. Number of women members in the boards of directors

How Many Women Members are there in Boards of Directors?		
	Number	Ratio(%)
None	373	53%
1 Member	82	12%
2 Members	36	5%
3 Members	10	1%
No Board / No Answer	202	29%
Total	703	100%

Table 4 demonstrates the education level of the members in the Boards of Directors. It can be observed that majority of the members forming a Board of Directors are either High-School graduates or Undergraduates.

Table 4. Education level of the members in the boards of directors in the SME's

Education Level of the Members of the Board of Directors	Number	Ratio(%)
Elementary	160	13%
Middle-School	167	14%
High-School	281	23%
Undergraduate/Associate' Degree	416	34%
Postgraduate/Doctorate	186	15%

Table number 5 consists of the information with regard to the answers given as to the experience level of the members of the Board of Directors.

Table 5. Age and experience level of the members of the boards of directors

Experience	Duration	Number	Ratio (%)
The average industry experience of the members of the Board of Directors	1-5 Years	42	8,4%
	6-10 Years	92	18,4%
	11-15 Years	109	21,8%
	16-20 Years	105	21,0%
	21-25 Years	61	12,2%
	26 Years and Above	92	18,4%
The average term of office of the members of the Board of Directors	1-5 Years	82	16,4%
	6-10 Years	121	24,2%
	11-15 Years	113	22,6%
	16-20 Years	92	18,4%
	21-25 Years	34	6,8%
	26 Years and Above	59	11,8%
The average age of the members of the Board of Directors	20-24	1	0,2%
	25-29	16	3,2%
	30-34	34	6,8%
	35-39	76	15,2%
	40-44	114	22,8%
	45-49	127	25,4%
	50-54	87	17,4%
	55 and above	45	9,0%

It has been observed that the majority of the members in a board of directors have an average industry experience of 6 to 25 years. Similarly, when the term of office of the members is taken into consideration, the majority hold an office for the duration of between 6 to 25 years. On the other hand, the average age group of the members in the participating companies that form a board of directors is of 40-50 years. On the whole, the structures of the boards of directors of the participating companies consist of high industry and business experience, are above middle and have been in the board for more than at least 5 years.

The correlation coefficient that examines the relationship between the factors concerning the basic functions of the board of directors and the performance criteria has been provided in Table 6.

Table 6. Structure of the boards of directors and performance correlation table

	Meeting Frequency	Preparation Duration	Meeting Duration	Training Score	Experience of the Board of Directors	Social Network Density	Resource Generating Capacity	Business Process Knowledge	Administrative Processes Orientation	Profit Focused Decisions	Development Focused Decisions	Company Growth Performance	Company Competition Performance	Company Profitability Performance	Company Decision Making Speed
Preparation Duration	-,307**	1													
Meeting Duration	,769**	-0,072	1												
Training Score ¹	,252*	-0,092	,331**	1											
Experience of the Board of Directors	-0,06	0,081	-0,006	-0,075	1										
Social Network Density	-,195**	0,073	-0,094	0,095	,199**	1									
Resource Generating Capacity	0,035	-,097*	0,088	-0,045	0,082	,157*	1								
Business Process Knowledge	0,049	-0,087	0,034	0,031	,153**	0,116	,394**	1							
Administrative Processes Orientation	0,05	-0,08	-0,018	0,111	,131**	-0,057	,272**	,557**	1						
Profit Focused Decisions	-0,081	0,016	-0,026	-,189*	-,125**	0,075	,401**	,098*	,142**	1					
Development Focused Decisions	0,003	-0,093	0,032	0,022	,133**	,243**	,378**	,550**	,463**	,223**	1				
Company Growth	0,057	,127**	,191**	,268**	-0,006	0,036	,242**	,156**	,150**	,205**	,139**	1			

Performance															
Company Competition	0,099	,125**	,192**	0,142	-0,011	0,022	,234**	,157**	,186**	,138**	,143**	,753**	1		
Performance															
Company Profitability	0,006	,108*	,177**	,250**	-0,002	0,116	,242**	0,078	0,072	,198**	,155**	,738**	,669**	1	
Performance															
Company Decision	-,113*	,247**	-0,065	-0,181	,245**	,168**	-0,054	0,013	0,073	-0,067	-0,012	-0,027	-0,02	-0,057	1
Making Speed															

Note. *0,05 **0,01 significant correlation coefficients

¹Training Score: (Education Duration x Number of People) / Number of Board of Directors Members

Upon closer inspection of the table, it has been observed that the increase educational level is parallel to the profitability and growth performance. While the experience of the board of directors has a direct relation with the decision making speed, the social network density has an effect on the development focused decisions on the company. It is also noted that the resource generating capabilities of a board of directors have a completely positive relation with the performance indicators. Meeting preparation time and meeting duration length have a positive effect on the company performance as well. While the meeting preparation time has a direct relation with the decision making speed, it can be said that boards that frequently convene have a tendency to slow down in this regard.

4. Empirical Results

In this part of the study, difference tests have been performed as to the relation of the factors provided in the research model part, with each other and the hypothesis. As it is known, if multiple groups concerning the difference between the environments are in question, variance analyses should be employed (Anderson, 1958). Therefore, independent sampling t-tests and one-way analysis of variance have been employed in the course of the practice of the analyses. Table number 7 indicates the results in relation to the existence of the board of directors and the averages of the performance factors.

Table 7. The existence of the board of directors and the averages of the performance factors

Performance	Is There a Board of Directors in Your Company	Mean	Standard Deviation
Growth Performance of the Company	Yes	3,46	0,58
	No	3,18	0,70
Competition Performance of the Company	Yes	3,50	0,55
	No	3,20	0,69
Profitability Performance of the Company	Yes	3,40	0,70
	No	3,03	0,79
Decision Making Speed of the Company²	Yes	42,43	37,70
	No	37,86	37,75

Decision Making Speed of the Company:

- I. Purchase decision speed:** You have to make a decision whether the timing is right to make an investment regarding the acquisition of a profitable and strong company in your industry. How long would it take you as a company to make such a decision? (in days)
- II. New product production decision speed:** You have to make a decision regarding the development of a new product and whether it would be put on the market or not. How long would it take you as a company to make such a decision? (in days)
- III. Technology application decision:** You have to make a decision regarding whether you would make use of a new software in your company or not. How long would it take you as a company to make such a decision? (in days)

The average of the results given to these questions has been calculated.

With regard to the information presented in the table, it can be observed that the averages of the companies with a board of directors have scored higher on all of the performance indicators. To test whether the difference between these indicators has any significance, independent sampling t-test has been employed. The results of this

test have been provided in Table. 9. Table.9 consists of the results of the independent sampling t-tests, which have been used to determine whether the effects of the existence of a board of directors on the performance indicators have any significant statistical difference. According to the table, it is noted that the existence of a board of directors indeed poses a significant difference between the performance indicators. When the mean values in Table number 8 have been inspected, it can be affirmed that this difference has caused the mean of the indicators in question belonging to the companies with a board of directors to be higher. We can conclude that the existence of a board of directors does not only affect the decision making speed of a company.

Table 8. Test statistics value obtained as a result of examining the difference between the performance indicators

Performance	t-statistics	Sig.
Growth Performance of the Company	5,05	0,00*
Competition Performance of the Company	5,48	0,00*
Profitability Performance of the Company	6,09	0,00*
Decision Making Speed of the Company	1,44	0,15

Note. * Show rejected hypothesis ($H_0: \mu_1 = \mu_2$) under 5% significant

H₁₁: The existence of a board of directors in companies is effective on the growth performance of the companies

H₂₁: The existence of a board of directors in companies is effective on the competition performance of the companies

H₃₁: The existence of a board of directors in companies is effective on the profitability performance of the companies

H₄₁: The existence of a board of directors in companies is effective on the decision making speed of the companies

When based upon the above mentioned hypothesis, it can be concluded that the existence of a board of directors in a company directly affects the growth, competition and profitability performance of a company.

Table number 10 includes the mean obtained from the performance indicators with regard to the position of a chairman of the board of directors. When further examined, the appointment of the chairman of the board by means of voting provides the best average in relation to the growth performance. In addition, it can be deduced that the appointment of a new chairman of the board by means of voting has the most positive effect on the growth performance of a company. The appointment of a chairman of the board by means of voting can be observed to positively contribute to the profitability of the company, as well.

On the other hand, the appointment of a chairman of the board through voting has yielded the lowest mean, in regards to the decision making speed of the company. It can be concluded, from the table, that the oldest individual becoming a member of the board through kinship, even though they do not have the biggest share, is the most appropriate position in terms of the decision making speed of the company.

Table 9. Performance indicator mean table according to the position of the chairman of the board in the board of directors

Performance Indicator	Position of the Chairman of the Board in the Board of Directors	Mean
Growth Performance of the Company	Is the biggest shareholder	3,40
	Is the oldest member due to kinship, even though not the biggest shareholder	3,50
	Is the agreed upon member, even though not the biggest shareholder	3,65
	Appointed by voting	3,67
	Members of the board of directors take turns as the Chairman of the Board	3,56
Profitability Performance of the Company	Is the biggest shareholder	3,33
	Is the oldest member due to kinship, even though not the biggest shareholder	3,62
	Is the agreed upon member, even though not the biggest shareholder	3,57
	Appointed by voting	3,63

Decision Making Speed of the Company	Members of the board of directors take turns as the Chairman of the Board	3,43
	Is the biggest shareholder	41,17
	Is the oldest member due to kinship, even though not the biggest shareholder	28,65
	Is the agreed upon member, even though not the biggest shareholder	36,41
	Appointed by voting	55,10
	Members of the board of directors take turns as the Chairman of the Board	46,19

Results of the one-way analysis of variance, which has been applied to test whether the performance indicators of the position of the chairman of a board of directors have any statistically significant meaning, have been given in detail in Table number 10.

Table 10. Results of the analysis that compared the performance indicators according to the position of the chairman of the board of directors

Performance Indicators	F-statistics	Sig.
Company Growth Performance	2,82	0,03*
Company Competition Performance	1,75	0,14
Company Profitability Performance	2,63	0,03*
Company Decision Making Performance	1,95	0,10

According to Table number 10, the position of the chairman of the board in the board of directors has an effect on the company growth performance, profitability performance and company decision making speed. When taken into account with Table number 9, it can be concluded that appointing a chairman to the board of directors by means of an election has a positive effect on the company growth and profitability performance.

Table number 11 presents the details of the relation between the performance indicators concerning the number of women members in a board of directors.

Table 11. Number of women members in a board of directors

Performance Indicators	F-statistics	Sig.
Company Growth Performance	0,92	0,43
Company Competition Performance	1,11	0,34
Company Profitability Performance	1,27	0,29
Company Decision Making Performance	5,55	0,00*

Note. * Show rejected hypothesis ($H_0: \mu_1 = \mu_2$) under 5% significant

Performance indicators of companies with no women members in their board of directors and companies with 1, 2 and 3³ women members in their board of directors.

$H_0: \mu_1 = \mu_2 \dots \mu_n$

The above hypothesis has been analyzed with a one-way analysis of variance and it has been concluded that the number of women members only has an effect on the decision making speed of a company.

Table 12. Performance indicator averages according to the number of women members

Performance Indicator	Number of Women Members	Mean
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	None	3,46
	1	3,42
Company Growth Performance	2	3,59
	3	3,34
	None	3,48
	1	3,56
Company Competition Performance	2	3,60
	3	3,33
	None	3,42
	1	3,28
Company Profitability Performance	2	3,54
	3	3,37
	None	39,01
	1	51,22
Company Decision Making Performance	2	61,96
	3	34,50

The highest number women members in a board of directors from among the participating companies is 3.

Table 12 lists the performance averages in accordance with the number of women members. From the table, it can be concluded that the companies with 3 women members in their board of directors have a higher level decision making response. With regard to the other performances, since no significant difference could be deduced regarding the remaining performances (see Table 11) it would not make sense to conduct a comparison.

Meanwhile, the results of the factor analysis that have been performed for sub factors have been provided in Table number 13. When a factor analysis has been performed in relation to the factors in question, it has been observed that these factors have been grouped under 4 factors. These results form the basis of the research model that has been described previously.

Table 13. Results of the factor analysis

Factors		Components			
		1	2	3	4
Demographic Structure	Experience of the Board of Directors				0,65
	Social Network Density of the Board of Directors				0,69
Decision Making and Resource Generating Capacity	Resource Generating Capacity of the Board of Directors		0,63		
	Profit Focused Decisions of the Board of Directors		0,64		
	Development Focused Decisions of the Board of Directors		0,69		
Authority Over Administrative Processes	Business Process Knowledge of the Board of Directors			0,73	
	Administrative Processes Focus of the Board of Directors			0,85	
Performance	Company Growth Performance	0,89			
	Company Competition Performance	0,88			
	Company Profitability Performance	0,84			

Upper factors have been established in relation to Table number 13 and these upper factors have been employed to perform a few regression analyses. Table number 14 includes the results of the performance of the main factors with the regression model.

Table 14. Results of the regression analysis based on the main factors

Non-Standardized	Standardized	t-statistics	Sig.
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	Coefficient		Coefficient	
	B	Standard Error	Beta	
Constant	1,94	0,299		6,489
Decision Making and Resource Generating Capacity	0,284	0,052	0,254	5,425
Authority Over Administrative Processes	0,1	0,075	0,063	1,343

Note. * Coefficient is significant at the 0.05 level (two sided)

Upon inspection of the table, it can be observed that the decision making and resource generating factors affect the performance. Furthermore, as a result of the F testing, which evaluates the model significance for the regression model in question, the value for the test statistics (Probability value: 0,00) has been noted to be of 22,00. Therefore;

H_0 : Regression equation is insignificant.

It has been established that the model, of which the hypothesis has been reject with a %95 level,

Meanwhile, Table number 15 includes the regression analysis results for the sub factors that have been provided in the research model with the upper performance factors.

Table 15. Regression analysis results for the sub factors with performance indicators

Model	Non-Standardized Coefficient		Standardized Coefficient		
	B	Standard Error	Beta	t-statistics	P.
Constant	0,00	1,09		0,00	1,00
Training Score	0,07	0,02	0,32	2,79	0,007*
Meeting Frequency	-0,01	0,01	-0,28	-1,60	0,12
Meeting Preparation Duration	0,00	0,02	0,01	0,07	0,95
Total Meeting Duration	0,00	0,00	0,13	0,85	0,40
Experience of the Board of Directors	-0,04	0,05	-0,09	-0,78	0,44
Social Network Density of the Board of Directors	-0,05	0,20	-0,03	-0,23	0,82
Resource Generating Capacity of the Board of Directors	0,31	0,14	0,24	2,19	0,032*
Business Process Knowledge of the Board of Directors	-0,12	0,25	-0,06	-0,48	0,63
Administrative Process Focus of the Board of Directors	0,16	0,21	0,10	0,76	0,45
Profit Focused Decisions of the Board of Directors	0,19	0,08	0,27	2,45	0,017*
Development Focused Decisions of the Board of Directors	0,19	0,14	0,16	1,37	0,17

Note. * Coefficient is significant at the 0.05 level (two sided)

According to the table, the elements that have an effect on the performance indicators are education, resource generating capacity and profit focused decisions. The result of the F testing, which evaluates the model significance for the regression model in question, the value for the test statistics (Probability value: 0,009) has been noted to be of 2.57. Therefore;

H_0 : Regression equation is invalid.

It has been established that the model of which the hypothesis has been rejected with a 95% level.

Following the establishment of the main factors, the relation between the main factors outside the scope of the performance with other sub factors has been researched by means of a correlation analysis. The results are provided in Tables number 16 and 17.

Table 16. Correlation table of authority over administrative processes and sub factor

Sub Factors	Authority over Administrative Processes
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Training Score	0,09
Meeting Frequency	0,06
Meeting Preparation Duration	-0,09
Total Meeting Duration	0,01
Experience of the Board of Directors	0,16*
Social Network Density of the Board of Directors	0,03
Resource Generating Capacity of the Board of Directors	0,37*
Profit Focused Decisions of the Board of Directors	0,13*
Development Focused Decisions of the Board of Directors	0,57*

Note. * Correlation Coefficient is significant at the 0.05 level (two sided)

Pursuant to Table number 16, it has been observed that the authority over administrative processes factor is affected by the experience of the board of directors, resource generating capacity, profit and development focused decisions.

Table 17. Correlation analysis table of decision making and resource generating with sub factors

Sub Factors	Decision Making and Resource Generating Capacity
Training Score	-0,14
Meeting Frequency	-0,04
Meeting Preparation Duration	-0,05
Total Meeting Duration	0,03
Experience of the Board of Directors	-0,01
Social Network Density of the Board of Directors	,19*
Business Process Knowledge of the Board of Directors	,37*
Administrative Process Focus of the Board of Directors	,33*

Note. * Correlation Coefficient is significant at the 0.05 level (two sided)

According to Table number 17, it has been concluded that the decision making and resource generating capacities are positively affected by the social network density, business and process knowledge and, lastly, the administrative process focus factors.

5. Conclusion

For the purpose of this study, it will be beneficial that the results of the conducted analyses are detailed in an overall Table below and will be studied under a couple of headings later on.

Table 18. Researched hypotheses and acceptance situations

Hypothesis	Applied Analysis	Conclusion
Decision making and resource generating capabilities have an effect on the performance of the company	Regression Analysis	Can't rejected
Authority over administrative processes has an effect on the performance of the company	Regression Analysis	Can't rejected
The existence of a board of directors in a company has an effect on the company growth performance	Independent sample T-Test	Can't rejected
The existence of a board of directors in a company has an effect on the company competition performance	Independent sample T-Test	Can't rejected
The existence of a board of directors in a company has an effect on the company profitability performance	Independent sample T-Test	Can't rejected
The existence of a board of directors in a company has an effect on the company decision making speed	Independent Sampling T-Test	Rejected
The position of the chairman of the board of directors has an effect on the company performance	One-Way Analysis of Variance	Can't rejected
The existence of women members in the board of directors has an effect on the company performance	One-Way Analysis of Variance	Rejected

According to Table number 18, it has been observed that the resource generating capacity and authority over the administrative processes have an effect on the performance of the company. It is safe to mention that the

existence of an active board of directors causes a significant difference on the profitability, growth and competition performance of a company. However, it is not possible to claim that the existence of a board of directors has any effect on the decision making speed of a company. Even though the analyses have concluded that the position of a chairman of the board of directors has an effect on the performance of the company, the existence of women members in a board does not pose any significant statistical difference on the performance.

5.1 Demographic Structure

There are many empirical studies available in the literature that point to the effects of the demographic structure on the performance of the company (Yermack, 1996; Lehn & Co. 2009; Adams & Co. 2010). As a result of the study, it has been observed that the increase in the education levels of the members in a board of directors results in the increase of the performance of the company; thus, in this regard, this study bears similarities to the other studies in the literature. Similarly, as the relations of the members of the board of members with external environment and social connections strengthen, it results in the increase of development focused decisions and company performance. Furthermore, the existence of experienced members in a board of directors has a positive effect on the decision making speed of the company. Additionally, it has been observed that the existence of women members in a board also effects the decision making speed of a company. On the other hand, no significant relation between the number of women members and the performance of the company has been found. However, Liu et al., (2014) claim otherwise that the existence of women members indeed has an effect on the performance of the company. Thus, this study contains opposite findings in this regard but concludes similar findings with Liu et al. (2014) in relation to the administrative processes and decision making speeds.

The fact that the chairman of the board of directors is appointed by means of an election proves the best average with regard to the company growth performance. In other words, it has been established as a result of the studies that appointing a chairman of the board of directors by means of an election proves the most favorable effect on the company growth performance. However, this has proved that the election of a chairman demonstrated the lowest average with regard to the decision making speed of a company. The analyses have concluded that the eldest members chosen as chairmen due to their family relations, even though they are not the biggest shareholders, proves the most favorable position for the company decision making speed.

5.2 The Existence of a Board of Directors

The analyses have concluded that the existence of an active board of directors in SME's has a positive effect on the performance of the company. In this regard, it is safe to affirm that the existence of a board of directors in SME's has an increasing effect of the company growth, competition and profitability performance. However, there has been no statistically significant difference between companies with a board and companies without one, with respect to their decision making speed. Thus, similar to the study conducted by Macus, (2008), this study has concluded that the existence of an active board of directors in a company has an effect on the performance of the company as well.

5.3 Decision Making and Resource Generating Capacity

When the main factor of giving resource and generating resource has been analyzed with the main factor of performance by means of a correlation analysis, a significant, albeit small, relation of 0,28 has been observed. Pursuant to the studies of Bharadwaj, (2000), it has been concluded that the resource generating capabilities of a board of directors (financial resource human resources, etc.) has proved effective on the performance of the company. Hence, this study shows similarities to that of the findings that Bharadwaj has concluded. In these circumstances, it is safe to claim that the increase in the decision making and resource generating capabilities of the board of directors have a positive effect on the company. With regard to the analysis conducted with sub factors, it has been observed that the decision making and resource generating capabilities of a board of directors are affected by the social network density, business process knowledge and the focus on administrative processes factors.

5.4 Authority over the Administrative Processes

The influence level of this factor, which consists of the business and process knowledge of a board of directors and the notions of focus on the administrative processes to the company performance has been observed to be of 0,164. Although not very high, it is safe to claim that the authority over the administrative processes factor has an effect on the performance of the company. Daily et al. (1976) have proved that the competence of the members of a board of directors with regard to business and process knowledge has an effect on the performance of the company. The findings obtained as a result of this study are of a nature that supports this claim. The sub factors that constitute the upper factors of authority over administrative processes have been noted to be affected

by the experience of the board of directors, the resource generating capacity, the profit focused and the development focused decisions as a result of the correlation analyses. In these circumstances, it is safe to present the following Figure 2.

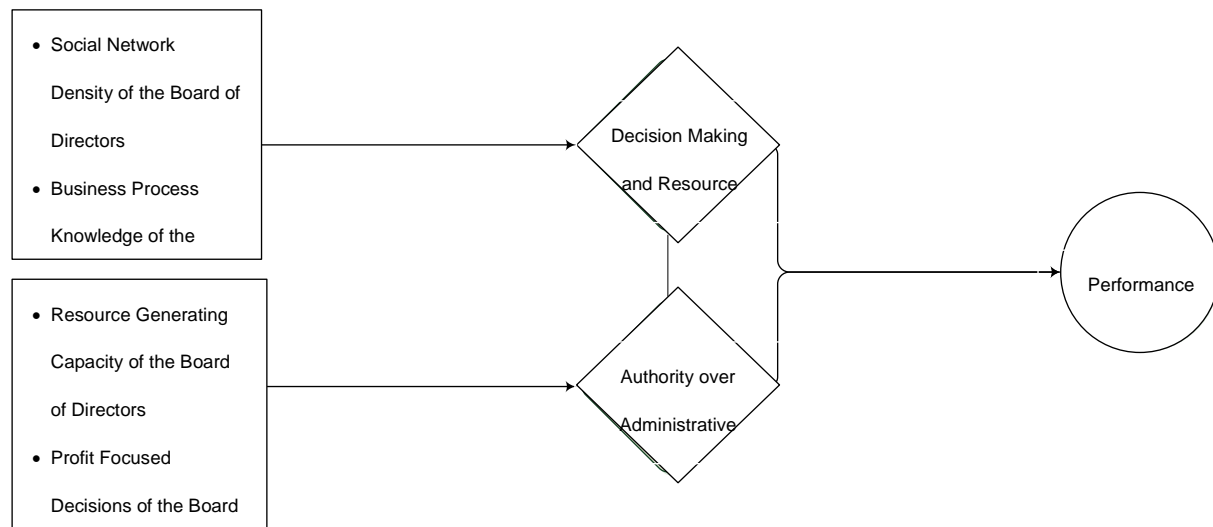


Figure 2. Interactions

Furthermore, when a model that consists of the influence level is drawn based on the previous regression analysis for the model described above, an equation similar to the equation in number 1 is observed;

$$\text{Performance} = 1,94 + 0,25 \times \text{Resource Generating Capacity} + 0,06 \times \text{Authority over Administrative Processes} \quad (1)$$

Finally, as a result of the multiple average comparison tests for Turkey in accordance with the turnover and area of activity, it has been observed that the increase of the turnover in companies has a positive relation with the performance and, moreover, that the companies operating in both manufacturing and production areas have higher performance indicators compared to the companies in other areas.

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