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THE EFFECT OF BOARD GENDER DIVERSITY OF FIRM PERFORMANCE:EVIDENCE FROM EUROPE

Christos Barmpagiannis

INTERNATIONAL HELLENIC UNIVERSITY
SCHOOL OF HUMANITIES, SOCIAL SCIENCES AND ECONOMICS

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Student Name: Christos Barmpagiannis

SID: 1102200004
Supervisor: Dr. Antonis Chantziaras

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Abstract

This study aims to shed light into the impact of board characteristics (i.e., gender and ethnic diversity, independence, board size and CEO duality) on firm performance (capture by Tobin's Q and ROA). Using empirical data from 2,507 corporations located in 22 European Union countries and for the period spanning from 2000 to 2017, we demonstrate interesting associations. Although we evidence a positive effect of female directors on firm financial and market performances, the average share of female in the boards of directors remains low, as it is only 11%. Also our findings indicate that there is no significant relation between board diversity and CEO duality on firm performance. Additionally, we evidence that ethnic diversity is more widespread as compared to gender diversity on the boardroom, since 19% of directors have a different ethnic background than the country of corporate headquarters. The effectiveness on the firm performance although was not significant and appeared to have a negative prospect as concern financial performance and negative in terms of market performance. Board size has been also proved to have no effect on firm performance.

Keywords: Financial Performance, Tobin's Q, ROA, board gender diversity, board independence, CEO duality, board size, board ethnic diversity

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Preface

Effectiveness of corporate governance is a topic which has attracted the interest of numerous parties, including practitioners, academics, and the general public. It raised many questions regarding the effectiveness of members, whether the data is properly represented and what factors are the ones that can influence the results, presenting a different picture on the balance sheets than the one that is in fact. The sharp decline and dissolution of many high-profile companies has made the need for a more accurate portrayal of financial assets urgent, and it has emerged that a different direction may need to be taken in the way boards are formed.

The current research discuss the corporate governess administration and how it is affected by different factors and how they influence the financial policy of a company and shape the decisions of the board of directors. Some factors discussed in this study are mainly concern size of the board, Chief executive officer's integrity and duality and ethnic diversity. Another factor that is examined considers the independency of the directors of the board affects financial data and whether this helps to better and more accurately portray them.

Special mention and research is made on gender diversity in boards. Especially for the position of women in them and if we have reached the point where equality within the companies is a real scenario. We also observe whether the change that has taken place has a positive impact on the economic policy and the course of the companies. The position and influence of women is a major issue both in society and in business and decision-making centers.

Contents

1. Introduction

The issue of corporate governance has assumed considerable significance in the recent past. A constant research has examined effectiveness, diversity and overall structure of corporate governance and all came up in some important conclusions. Mainly ended up that corporate governance is influenced by many kinds of factors, many of which are completely different from each other but are important in the decision of the company. The results also show that if corporate governance becomes less effective, it has a direct impact on the financial performance of companies (Sanjai Bhagat and Brian Bolton 2007). The board of directors has the main responsibility for the decisions of the company, its financial results and in general its short-term and long-term course (Vinish Kathuria and Shridhar Dash,1999).

The success of the board of directors and their effectiveness depends from various reasons and factors, most of them depending from the board members of an enterprise. The qualifications and experience, their possible involvement in the ownership and the shares that may holding, the payroll system used and potential bonuses that can be earned are some reasons that shape the policy and afterwards the decisions. They choose the Manager Consultant of the company and through their regular meetings, ensure that his decisions and role is effective for the present and the future of the company. In addition, they oversee financial performance and monitor compliance regulatory requirements whose set for the company.

The failure of many high profile companies are began to raise questions about corporate governance and the policies pursued by the people who make the decisions are correct or there should be a change of direction in choices that until a few years ago seemed impossible to implement. Scandals that triggered this change in policy are Enron (2001), Volkswagen (2015) and Lehman brothers (2008). Diversity and different views at the board of directors, it is estimated that it can offer companies a range of benefits, including additional knowledge and new ideas to manage and solve problems, plan and place better ones products and at last strengthening strategic planning. Females are meticulous and act as better monitoring devices in the firm, they are more risk averse and try to examine things more thoroughly when it comes to decision-making and strategic planning

Corporate governance and board of directors has been a constant controversy both in European countries and on a global scale and mainly concerns the position of women in companies and in particular in boards of directors and greatly influenced the reputation and reputation of the companies, the more it is stated that there is an urgent need for diversity, both between the two genders and other parameters such as age and nationality. More specifically, the impact of corporate governance was explored through various characteristics such as board size, director, independence, gender, age, education and citizenship board members. The results showed that there was no relationship between the size of the company's board of directors and the participants views on the company's performance, while it was obvious that the diversity that exists in the the company's board of directors the higher the overall performance of the company.

The question that needs to be addressed in the context of companies with diversity comes from the basic fact that, just as society and business are different, so it makes sense to have a board that is governed by diversity and if the board is different, then there is a benefit from this diversity. In particular, with globalization at its peak and the migration of people to work becoming something very common the diversity that exists in today's society is sure to have been transferred to companies and therefore it is implies to boards of directors and management.

The question that arises, however, is whether this diversity can work in the best interests of the business and help make decisions that will lead to better results and financial efficiency, or will create a gap of opinion within the boards that will make decision-making difficult and the process will be very time consuming and at the same time a costly procedure.

2. Literature review and hypothesis development

2.1 Board gender diversity

2.1.1 Women's role from the beginning until today.

From the beginning of humanity and until the middle of the last century the role of woman was considered clearly auxiliary. Even constitutional rights that have been registered and defended the equality of the sexes until a few decades ago were considered outrageous for the perceptions of that time. However, they gradually established themselves as equal members of society and began to take leadership positions in both business and government. Now we have reached to a point where a lot of research is being published which demonstrates the need for women in decision-making centers and that this benefits the financial performance of companies.

Over the last decade, gender difference within the geographical point has become the main focus of attention and efforts are created to alter that. The women still be aloof from jobs, despite constant qualifications as men in matters of education and in spite of the laws that forbid them discrimination within the geographical point, within the company world, men still have priority and dominate the physique of corporations

Evidence abounds not only that women lag behind men in getting top leadership positions in organizations but also that women's hierarchical advancement has experienced a general slowing trend (Catalyst, 2014a, 2014b.,) When companies do have women in leadership positions, their proposals and decisions are often met with skepticism and insecurity. Some questions that arise when a woman occupies a managerial position are whether she will be able to meet the requirements, whether she will be able to impose and gain the respect of people who are in the same positions of power or are lower in the hierarchy.

A rising strand (Post and Byron 2005) of analysis, has investigated whether or not the gender of board members additionally plays a role in board effectiveness. Studies show that the presence of women in a position of responsibility and especially in law enforcement councils can bring beneficial results to the goals of companies. Their different perspectives can play a very important role in making better decisions, as there will be a greater variety of ideas than there is in the typical councils that consist mainly of male gender.

2.1.2 The participation of women and their role in business

Over the last decade, gender inequality in the workplace has become the focus of attention and efforts are made to change that. The women continue to be removed from jobs, despite the same qualifications as men in matters of education and in spite of the laws which forbid them discrimination in the workplace. In the corporate world, men still have priority and dominate the board of directors of companies (GMI Rating, 2012)

In any case, there are moreover thinks about that appear no or indeed negative impact of gender diversity on firm execution. For case, Rose (2007) finds no relationship between gender differing qualities of the board and firm execution for Danish corporations. So also, by centering on CEO orientation as a degree of differences, Wolfers (2006) finds no relationship between differing qualities and firm execution. Campbell and Minguez-Vera (2007) also affirms no critical affiliation between female board nearness and firm esteem.

2.1.3 Board gender diversity and firm performance

According to research by Corporate Women Directors International (CWDI), the female representation on the board of directors of the Companies around the world remain unequal. From the data that collected its shown that more companies use to have women on the board of directors at much higher rate than before. The global financial crisis has given a boost to growth the rate of women inside corporate boards of director's around the world, mainly due to the urgent need of the companies for a change in their financial data and monetary course and this was the first decisive step for the emergence of women through the symbols as the results showed that they can do it as well as men and even better in some cases, to the surprise of many.

As this research tries to highlight the importance that women have in business management it is worth mentioning that according to a study (RenÈe B. Adamsa,c, Daniel Ferreira,2008) female attend more meetings and are more likely to be assigned to monitoring-related committees than men, according to our data on board inputs. Women could boost the board's monitoring intensity if they actively engage in board and monitoring committee sessions.

Various studies that have taken place (Brammer et al., 2007), (Wools, 2007) highlight the need for greater female representation on company boards. Most of the empirical studies on gender diversity and the effect on firm performance they all have in common three variables to measure performance, namely, the percentage of female representation on the board of directors, firm size and ROA or Tobin' Q to measure the performance. For instance, Carter et al. (2003), Campbell and Minguez-Vera (2008), Martin-Ugedo and Minguez-Vera (2014), Ngyuen, Locke, and Reddy (2015) found relationship between gender diversity and firm performance positive. Terjesen, Sealy, and Singh (2009) documented that gender diversity on boards of directos leads to efficient corporate governance. As it was mentioned previous to these study gender diversity helps to monitoring the board of directors and the CEO in more efficient way and helps for better internal cohesion. Kxan and Vieto (2016) found that is a risk reduction through gender diversity, as women by nature they are inclined not to take so many risks and want to have better control of developments.

On the opposite direction there was researches like Adams and Ferreira (2009) according to their studies and research, adopting gender quotas could reduce shareholder value in companies with solid governance because it could lead to over-monitoring. Gender diversity, according to Wellalage and Locke (2013), reduces business performance and increases agency costs. In the analysis of Post and Byron (2016) the columnist conclude that there is no significant and observable difference in corporate performance from female's participation in the board of directors.

According to this researches and with the upcoming empirical model we want to examine if there is a difference in firm performance from gender diversity. We will create one variable named as FEMDIR, which will take two different measures, Diversity number 1 there is no female representation in the board of directors and diversity number 2 there is female representation among the board of directors. These are dummy variables that will take the value 1 based on the representation of the gender diversity.

H1: There is a significant efficiency in firm performance from the representation of female directors, higher than the efficiency in firm performance from the nonexistence of female representation and this leads to better firm performance.

2.2 Board independence

Corporate boards focus mainly on good management and entrepreneurship and on improving corporate governance. The authorities of each country and especially the shareholders have requested greater external representation and have a specific plan for how the boards should be structured. In fact, many investors require the main board member to be made up of outside partners, as it is a way to ensure that they are not misled on the altar of personal interests. The fact that there are many external partners in a company somehow ensures its transparency and makes it more trustworthy and transparent, with the consequence that it has better results in investor trust (Denis and McConnell, 2003).

The board of dire plays a polar role within the governance of wide control companies. It is usually acknowledged that the legal and written agreement setting as well because the structure and activities of the board of administrators have a non-negligible impact on the agency prices to that company’s area unit exposed (Maka,, Yuanto Kusnadi, 2005). A minimum of in theory, the board of directors is one in every of the foremost necessary company governance mechanisms ensuring that managers pursue the interests of shareholders. Independent outside directors are members of a firm's board of directors who are unaffiliated with the company itself. In contrast to insiders, outside directors are thought to be more objective and bring a different perspective to the management of a firm. Also, as an outsiders directors it is more possible to put the best interest for the shareholders of the company and not the personal interest.

A research by Berghe and Baelden (2005) inspected the issue of autonomy as an imperative calculate in guaranteeing board adequacy through the observing and vital parts of the chiefs. The extreme figure for the board freedom is by procuring sufficient numbers of the free executives on board. They expressed that the director’s capacity, readiness and board environment might lead to the autonomous state of mind of each chief.

Ararat, Orbay and Yurtoglu (2010) on their research on the board independence in controlled firms in Turkey found there was no significant impact of the board’s independence in firm performance. Sharifah Faatihah Syed,Abdul Halima , Julizaerma (2015) in their study claimed that the greater is the presentence of independent directors the more positive has to be the effect on firm performance. In their research the negative or the absence of connection of board independence and firm performance mean that the results were altered. There is also a good interaction when business managers hold shares, since their main purpose is to secure income, so it is an effective tool to promote the ambitions of all investors (Bhagat and Bolton, 2008).

Board members have been shown many times that they cannot be completely reliable. This happens because in many cases if these members have shares in their name or if they are employees but a large part of their salary is related to goal achievement and performance bonuses. The immediate profit that the members of the board of directors can have, therefore, can often lead to false data and misleading balance sheets as we have seen happen several times in the past.The problem is that the capital market may not notice it in time until it is quite late as we seen in some case of financial abuse and the problems that are created in the market are quite large as the reliability of a company falls sharply. For this reason, independent auditors are at least a necessary tool for a company to ensure its credibility, as well as the market to find itself facing sudden problems.

H2: Board independence will be associated (positively or negatively) to firm financial and market performance.

2.3 Board size and firm performance

The number of directors on the board also plays a major role on the performance and the capital decisions of the companies. Shridhar Dash (1999) suggests that increasing the size of the board of directors makes the board less effective because there is a gap and a lack of reflection, coordination and creates a sharp lag in the lack of decisions. These problems usually outweigh the pluralism of views and ideas that in some cases can lead to more creative decisions. What research has shown is that as the size of the board grows, the meetings begin to become more and more dysfunctional and are consumed by many different issues that arise as a result of the many people that exist. This almost always leads to a dysfunction and constipation, if I can allow the expression, in the correct critique of the problems and in the correct solution.

The size of the board of directors is a very important factor for the course of a company as it affects both its short-term and long-term plans. Many times a large number of consultants can cause great hindrance in business processes and greatly slow down the pace of decision making. The information is confusing to all members at a much slower pace than can be allowed and the huge diversity of views and ideas can delay making a decision even if it is the right one in the end. Although, it has been observed through research that small-scale boards of directors replace the managing director much faster than those consisting of a large number of directors. This behavior may be justified by the justification that in small boards one or two people may have the largest shareholder and in essence be the ones who make the decisions. So the company depends to a large extent on them and the profits they have in each balance sheet.

On the other hand, in massive firms, the CEO nearly always determines the agenda and therefore the information given to the board. Further, several issues arise from the actual fact that neither the managers nor the non-manager board members own substantial share of their corporations' equity. An outsized possession pattern of the board, in fact, signifies that the selections of the board members have an impact not solely on remote shareholders' wealth however their own wealth as well. However, in massive companies, the board members area unit unlikely to have important fractions of the equity. According to researches and published work a size of board of director recommended to be not more than 8 people. After that number the board can meet its monitoring goals and cannot control fully the financial policy, as the members are not fully aware of the data that it presented to them in the meeting due to lack of information and communication.

Lehn (2004) at his research about the board size and firm performance came to the conclusion that board characteristics have no significant role in the determination of firm policy and performance.

H3: The size of the board will be associated (positively or negatively) to firm financial and market performance.

2.4 Board ethnic diversity and firm performance

First diversity will have an effect on economic decisions by directly getting into individual preferences. According to empirical perspective early work on social identity theory (Westphal & Milton, 2000) has established that patterns of intergroup behavior may be understood considering that people might attribute positive utility to the wellbeing of members of their own group and negative utility to it of members of difference clusters.

According to the research of Paul M. Guest (2019) the impact of ethnic diversity in firm performance cannot be expressed with certainty. It expressed its value cause on bringing divergent thinking in the board but his empirical model shows that the overall effect was hard to determine. Adams and Ferreira (2009) point out that diverse leads to better monitoring of the decision, transactions and in the formulation of economic policy of the board of directors. It was addressed that the contradicting sees that the nearness of statistic minorities on sheets is often viewed favorably by corporate partners but the academic writing is more critical approximately the degree to which statistic minority chiefs can successfully influence bunch choices (Milton and Westhal, 2000). They advance recommend that a central finding of the writing is that statistic differences lower social cohesion between bunches which the social obstructions decrease the likelihood that minority will impact gather choices. Dave A. Carter (2010) suggests that there is not a significant relationship between ethnic diversity on board and firm performance, he discover that diversity has a diverse positive impact as concern opportunities and market performance and negative as concern financial performance. The conclusion from the researches of Paul M. Guest (2019) and Dave A Carter come to the same conclusion, that ethnic diversity, which is exist in larger scale that gender diversity does not have a direct impact on firms.

Although this diversity can lead to new ideas, different views on issues that have occupied the companies for a long time and may even lead to better decision-making on major issues. But what is necessary is that there is no absolute parity between the members as you notice in many companies the employees who come from different countries from the ones they work for are not treated with respect and they are not given the opportunity to develop within them.

H4: Board ethnic diversity will be associated (positively or negatively) to firm financial and market performance.

2.5 CEO duality and firm performance

The chief officer (CEO) plays an important role within the operation of a firm and overall an organization. It oversees management and is entrusted with the responsibility of watching and direction the company’s resources and operation.The duality of the CEO refers to the possibility of an individual to serve at the same time as a CEO and Chairman of the Board. This fact has been the focus of much research by both academic and professional researchers. The reason the positions of chairman and CEO are more often ruled combined is that this gives a single central point for company authority. (Anderson, 1986).

The board of directors is set up to oversee and control executives such as the chief executive officer on behalf of the shareholders. A CEO benefits the company if he works closely with the board to create value. However, when the CEO holds both positions at the same time, this usually leads to an over-concentration of positions on his part and a monopoly of the discussions in the dormitory boards based on his own agenda. This means that it can largely guide the decisions that are made.

Within the context of company governance, the central issue typically mentioned is whether or not the chair of the board of directors and business executive positions ought to be command by totally different persons or by one person. This shows a deep concern that a scarcity of freelance leadership creates an issue for bards to retort to failure in high management. During this regard, additionally argue that concentration of call management and call management in one individual hinders boards' effectiveness in observation high management. It's argued that there's conflict of interest and better agency prices once a similar person occupies two positions and this results in the suggestion that the two positions ought to be occupied by two persons.

Pi and Timme (1993) research about CEO duality and firm performance in the banking industry point out that there a negative impact from this duality in terms of economic policy and performance. Baliga, Moyer, and Rao (1996) claimed that there is no evidence connecting the CEO duality and firm performance. Daily and Dalton (1997) confirm this review in their own research and they claimed that there is no significant difference in performance from the duality or non duality of the CEO and the chariman. On the other hand, it is claimed that there is a positive impact of this duality in the research of Dahya and Travlos (2000). An empirical study by Brian K. Boyd(2015) indicates that there that no safe conclusions can be drawn and it can be accurately shown whether duality of the CEO has a positive or negative impact on the performance of a company.

H5: CEO duality will be associated (positively or negatively) to firm financial and market performance.

3. Research methods

3.1 Empirical model

The selection and examination of the up following variables has been due to previous researches, like Chia-Wei Chen, J. Barry Lin, Bingsheng Yi (2008) who are examine the size and CEO variables and their role in firm performance and Joana Marinova, Janneke Plantenga & Chantal Remery (2016) research about gender diversity and firm performance: evidence from Dutch and Danish boardrooms. Variables also divergent due to lack of data. To investigate the impact of board gender diversity we use Tobin's Q and Return on assets (ROA) as measurements of market and financial performance, respectively, denoted by PERFORMANCE in the model below. To test our hypothesis, we use the following model:

$$
\begin{aligned}
\mathrm{PERFORMANCE}_{i,t} &= \beta_0 + \beta_1 \mathrm{FEMDIR}_{i.t} + \beta_2 \mathrm{NATIONALITYMIX}_{i.t} + \beta_3 \mathrm{BOARDSIZE}_{i,t} \\
&+ \beta_4 \mathrm{INDEPRATIO}_{i,t} + \beta_5 \mathrm{CEODUAL}_{i,t} + \beta_6 \mathrm{SIZE}_{i,t} + \beta_7 \mathrm{LEVERAGE}_{i,t} \\
&+ \beta_8\ \mathrm{MB}_{i,t} + \beta_9 BIG4_{i,t} + \beta_{10} GDPGR_{i,t} + \sum \mathrm{YEAR} + \sum \mathrm{INDUSTRY} \\
&+ \varepsilon
\end{aligned}
$$

FEMDIR is the first dependent variable and represents the proportion of the female directors and the effect of gender diversity on firm performance and the hypothesis that more female representation on the board has a positive impact. NATIONALITYMIX represents the proportion of Directors from different countries at the Annual Report Date selected. From previous studies it was obvious that board size had a major role in the process of decision making (Board gender diversity and firm performance, Sanjukta Brahma 2018), they affect firm performance and there are a fundamental pillar for the performance of the company. INDEPRATIO represents the proportion of independent board members over the total board size. CEODUAL is a dummy variable which can take two different measures, 1 if the chairman is the CEO and 0 otherwise.

SIZE represents the log of total assets at the beginning of the year, firm size is often utilized as an important, fundamental firm characteristic in empirical corporate finance. LEVERAGE is defined as total liabilities at the year-end divided by total assets at the beginning of the year. Leverage is admittedly a negative measure as it has been proven that the higher the percentage is the higher are the possibilities for a firm to be leverage by the markets, while it can act as a medium for moderating managerial opportunism. Market to book ratio, this ratio determines the actual worth of a firm relative to its market value. BIG4 variable is a binary indicator that equals 1 for the existence of a reputable auditor, and 0 otherwise. Reputable auditors are considered the big four, named as PwC, Deloitte and Touché, Ernst and Young and KPMG.

Taking into account the inseparable relationship between a company and its external environment, as well as in the creation of opportunities and investments we will include in our model the annual increase of GDP of the countries from which the same of variables will be drawn for the empirical model. Additionally, we include control year and industry dummies, to control for unobserved year and industry effect. Finally, all continuous variables are winsorized at the 1st and 99th percentiles. All variables are defined in the Appendix.

3.2 Data and sample selection

I begin with entire European firms with common support between BoardEx and DataStream (2000-2017). Out of this firms dropped out 554 firms due to lack of data statistics for the empirical model. Two observations was deleted us those two firms do not meet the criteria per country.

Table 1. Sample selection

Sample selection stages	Number of firms	Number of firm-years
European firms with common support between BoardEx and DataStream(2000-2017)	3.063	26.076
Delete: Observations with lack of data for the empirical model.	554	4.861
Delete: Observations of companies don't meet the two companies per country criteria	2	15
Final sample.	**2.507**	**21.200**

The sample is distributed in many countries of the European Union. Based on the table 2 we can report that the bulk of the data came from United Kingdom at a rate of 40 %. Two more countries that worth to be mentioning are Germany and France participating in the research at a rate of 10% and 15% respectively.

Table 2. Sample distribution

Country distribution of observations.

ISO	No	Country	Firms	Obs	Percent
AT	1	Austria	36	286	1,35
BE	2	Belgium	85	711	3,35
HR	3	Croatia	2	18	0,08
CY	4	Cyprus	19	58	0,27
CZ	5	Czech Republic	5	43	0,20
DK	6	Denmark	50	352	1,66
FI	7	Finland	52	399	1,88
FR	8	France	399	3.153	14,87
DE	9	Germany	280	2.133	10,06
GR	10	Greece	36	280	1,32
HU	11	Hungary	7	33	0,16
IE	12	Ireland	65	476	2,25
IT	13	Italy	124	960	4,53
LU	14	Luxembourg	34	174	0,82
MT	15	Malta	5	21	0,10
NL	16	Netherlands	97	717	3,38
PL	17	Poland	28	165	0,78
PT	18	Portugal	32	278	1,31
RO	19	Romania	3	13	0,06
ES	20	Spain	106	801	3,78
SE	21	Sweden	129	1.102	5,20
GB	22	United Kingdom	913	9.027	42,58
		Total	**2.507**	**21.200**	**100**

4. Results

4.1 Univariate analysis

From the findings of table 3 some useful conclusions are drawn. Overall it conclude that higher percentage of females inside the board of directors has a positive effect in the firms performance as Tobins' Q and ROA are positive. Another conclusion to be drawn it is that there is not high representation of females as the mean of FEMDIR variable is 11%.

In addition to that European union firm's boards It turns out that independence level is at a percentage of 51%and they have 19% ethnic diverse as many of the directors have ethnic background. Statistical analysis shows that the average board size is 9. CEO duality does not have direct positive or negative impact on the firm performance as the percentage of 2% it is imperceptible, this is, after all, the result that was expected as well as the research that has been done on this subject and mentioned above could not draw safe conclusions.

Also firms do not appear high leveraged. High presentences of market to book shows that the firms have enough market opportunities and 74% has indicates that firms has one of the Big 4 on the auditing sector.

Table. 3 Descriptive statistics.

Descriptive statistics.

Variables	N	Min	25th	Mean	Median	75th	Max	StDev
TOBINSQ	21.200	0,105	0,636	1,29	0,895	1,394	8,39	1,289
ROA	21.200	-0,786	0,007	0,021	0,044	0,085	0,348	0,157
FEMDIR	21.200	0	0	0,115	0,091	0,2	0,75	0,129
NATIONALITYMIX	21.200	0	0	0,19	0	0,4	0,9	0,234
BOARDSIZE	21.200	1	6	9,069	8	11	34	4,666
INDEPRATIO	21.200	0	0,333	0,512	0,5	0,667	1	0,232
CEODUAL	21.200	0	0	0,002	0	0	1	0,039
SIZE	21.200	7,741	11,761	13,441	13,488	15,077	19,863	2,511
LEVERAGE	21.200	0	0,058	0,302	0,275	0,476	1,074	0,258
MB	21.200	-3,21	0,89	2,357	1,51	2,73	19,76	2,963
BIG4	21.200	0	0	0,745	1	1	1	0,436
GDPGR	21.200	-0,091	0,009	0,015	0,018	0,025	0,251	0,024

Table 4 present the Pearson correlation coefficients. Inferences suggest no serious problem of multicollinearity, which is also verified by the low values of the mean-variance inflation factors (VIFs), which do not exceed 1.5 across all models and are even lower than the cut-off value of 10 (Studenmund, 2016). We observe that the main variables of interest are significant correlated with the performance measures.

Table 4 reports the Pearson correlation coefficients among the sample variables

Correlation matrix												
Variables	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**
1. TOBINSQ	1,00											
2. ROA	-0.23***	1,00										
3. FEMDIR	-0.01**	0.10***	1,00									
4. NATIONALITYMI	0.05***	-0.04***	0.04***	1,00								
5. BOARDSIZE	-0.17***	0.13***	0.08***	0.16***	1,00							
6. INDEPRATIO	-0.02***	0.04***	0.15***	0.05***	-0.13***	1,00						
7. CEODUAL	0.05***	0.02***	-0.01*	0,00	0,00	0.03***	1,00					
8. SIZE	-0.34***	0.31***	0.21***	0.21***	0.69***	0.06***	0.01*	1,00				
9. LEVERAGE	-0.18***	0,00	0.07***	0.07***	0.35***	-0.08***	0.02***	0.46***	1,00			
10. MB	0.63***	-0.06***	0,01	0.04***	-0.03***	-0.04***	0.06***	-0.11***	-0.01**	1,00		
11. BIG4	-0.10***	0.16***	0.13***	0.11***	0.26***	0.14***	0,01	0.43***	0.17***	0,00	1,00	
16. GDPGR	0.10***	0.04***	0,00	0.03***	-0.04***	0.03***	0.02**	-0.05***	-0.07***	0.10***	0,00	1,00

4.1 Multivariate analysis

Firstly we employ Tobins'Q. Table 5 bellow indicate a positive impact on the effect of gender diversity and the increased percentage of female representation as concern market performance. Nationalitymix have a positive correlation with Tobins'Q measurement. Board size and independent of the board ratio have a positive but unconscious effect on market performance, as for CEODUALITY as well. As female representation has a positive impact on market performance, it is also increases the financial performance as well, as derives from ROA measurement. Although ethnic diversity increases market performance (Tobin's Q), it appears to have a negative impact on firm financial performance. Board size and independent ration have a negative impact on financial performance as it comes from the negatively results of 0.004 and 0.016 respectively. CEO duality increases financial performance as well as market performance but the affect is insignificant.

Hypothesis 1: The higher the percentage of females on the board of directors the positive the performance, this conclusion derived from the fact that TOBINSAQ an ROA are positive. So are first hypothesis being correct.

Hypothesis 2: Board size variable is positive as concerned growth and market opportunities of a firm and negative as concerned operational performance. So, the effect of board size is inconclusive.

Hypothesis 3: Ethnic diversity has a positive impact according to previous research but in this specific model the impact in the firm performance is controversial as we have a positive impact as concerned market performance but a negative impact as concerned financial performance. This leads to the reject of the hypothesis.

Hypothesis 4: CEO duality have positive impact in terms of TOBINQ and ROA but the results and the discrepancy are so imperceptible that no safe conclusion can be drawn for the hypothesis. Significant impact of the CEO duality is rejected.

Hypothesis 5: Independent of the board has exactly the same results in the sample that the model is researched and its effect on corporate performance cannot be clearly deduced, this leads us to the rejection of the hypothesis.

The remaining variables follow the unsafe conclusions, except for leverage which has a negative effect on market and performance terms. This is because high debt can lead to significant financial constraints, and this negatively affects the company's performance (Evgeny Ilyukhin,2017).

Table 5. Main results

Depedendent variable:	(1)	(2)
	TOBINSQ	**ROA**
FEMDIR	0.318***	0.036**
	(2.99)	(2.40)
NATIONALITYMIX	0.317***	-0.052***
	(4.92)	(-5.41)
BOARDSIZE	0.022***	-0.004***
	(5.57)	(-7.86)
INDEPRATIO	0.129**	-0.016*
	(2.10)	(-1.92)
CEODUAL	0.625	0.107
	(1.40)	(1.30)
SIZE	-0.162***	0.030***
	(-10.07)	(15.65)
LEVERAGE	-0.211**	-0.121***
	(-1.97)	(-13.00)
MB	0.248***	-0.000
	(20.46)	(-0.20)
BIG4	0.046	0.011**
	(1.34)	(2.06)
GDPGR	-0.353	0.196**
	(-0.85)	(2.52)
(intercept)	2.772***	-0.314***
	(13.18)	(-12.12)
Year & Industry dummies	Yes	Yes
R^2	0,516	0,206
Adj. R^2	0,515	0,204
Mean VIF	1,510	1,385
Observations	21.200	21.200

5. Conclusions

In the present empirical research, the participation of women in the board of directors was determined and factors that companies, mainly highly capitalized, from all sectors economy. Reference was made to corporate governance and the prevailing corporate governance theories were developed internationally. The role of women in leadership and women in corporate governance. The effect of a company's performance on inclusion of women on their boards.

While the main focus of this study was to examine the impact of the women mainly on the board of directors and in second part the criteria that can change the economic policy of a company and its strategical course. We tend to found a positive and important correlation between the number of females directors on the board and firm performance. Therefore, the impact of gender diversity and firm performance was positive. However, this research has not been measured and included how councils consisting of many representatives and the two sheets will react in different situations.

From the analysis for the size of the board we come to the following results. It is often considered that the size of the board of directors has a decisive role in the development of a correct financial policy by the company. The analysis made in this study suggests that as the involvement of the board increases, it creates more transparency within it but does not always bring the desired results in terms of its development and profitability. This research demonstrates, for example, the negative relationship that can arise between board sizes and profits. Large boards are less effective and suggests that it must be taken seriously into the compile of a board of director’s malfunctions that may result from its excessive size, but overall is not clear if board size and performance are connected negatively or positively.

CEO duality is a topic that has been used as an object in many investigations mainly due to past scandals and the ability of managers to make profits from fake financial data or from embezzlement of a specific policy. From this research shows that there is no real difference and it does not have a significant impact on the finances of a firm and its position in the market. Same results arise in connection with the research for the independence of the board of director’s. Ethnic diversity increases market performance (Tobin’s Q), it appears to have a negative impact on firm financial performance, this leads unconvincing results.

Corporate governance is taken into account necessary for 2 main reasons. Business objective's role is to confirm the boldness of all sides, whereas making certain that firms chargeable for their actions and omissions can defend their interests. This section links this results and conclusions supported the analysis question with the previous analysis listed within the theoretical section of this text. Through numerous company governance mechanisms, executives should be impelled so as to comprehend their own interests by realizing shareowner interests. In alternative words, executives should lean incentives to push shareowner interests. Through this analysis, it's found that motivation is mentioned within the literature, and motivation is split into positive and negative.

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Appendix – Variable definitions

Variable	Definition
MB	Market to Book ratio
LEVERAGE	Total liabilities at the end of the year divided by total assets at the beginning of the year
TOBINSQ	Market capitalization of equity plus total debt divided by total assets
ROA	EBIT to total assets
BIG4	Binary indicator that equals 1 for the existence of a reputable auditor, and 0 otherwise. Reputable auditors are considered the big four, named as PwC, Deloitte and Touché, Ernst and Young and KPMG
SIZE	Log of total assets at the beginning of the year
NATIONALITYMIX	Proportion of Directors from different countries at the Annual Report Date selected
BOARDSIZE	Number of directors in the board
INDEPRATIO	The proportion of independent board members over the total board size
CEODUAL	1 if the CEO is the chairman, and 0 otherwise
FEMDIR	The proportion of female directors at the Annual Report Date selected
GDPGR	GDP growth (annual %)