

# THE RELATIONSHIP BETWEEN DIVERSIFIED BOARD OF DIRECTORS, AUDITOR SELECTION, CORPORATE GOVERNANCE AND SUSTAINABILITY: AN APPLICATION ON BORSA ISTANBUL COMPANIES\*

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## ABSTRACT

Even though much progress has been made in women's rights in the past century, there is still room for improvement, as today women are not justifiably represented in the board of directors in publicly held corporations. The purpose of this study is to show that having a diversified board of directors has a statistically meaningful relationship with the auditor choice, corporate governance, and corporate sustainability applications of publicly held corporations. To measure the level of good corporate governance, the corporate governance grades in compliance reports are taken into account, and corporate sustainability is measured as successful if Borsa Istanbul includes the corporation in the sustainability index. As the research method, the author statistically compares the independent auditor choice of these corporations and Board structure.

**Keywords:** Glass Ceiling, Independent Auditor, Sustainability Index


**JEL Classification:** M42, M14, G34

## ÇEŞİTLENDİRİLMİŞ YÖNETİM KURULUNUN DENETÇİ SEÇİMİ, KURUMSAL YÖNETİM VE SÜRDÜRÜLEBİLİRLİK İLE İLİŞKİSİ: BİST100 ŞİRKETLERİ ÜZERİNE BİR UYGULAMA

### ÖZ

Geçtiğimiz yüzyılda kadın haklarında büyük ilerleme kaydedilmesine rağmen, bugün hâlâ iyileştirme yapılmasına ihtiyaç duyulmaktadır; halka açık şirketlerdeki kadınlar yönetim kurulunda yeterli oranda temsil edilmemektedirler. Bu çalışmanın amacı, çeşitlendirilmiş bir yönetim kurulunun olmasının halka açık şirketlerin denetçi seçimi, kurumsal yönetim ve kurumsal sürdürülebilirlik uygulamaları ile istatistiksel olarak anlamlı bir ilişkiye sahip olduğunu göstermektir. Uygunluk raporlarında yayınlanan kurumsal yönetim notları dikkate alınmakta ve firmalar eğer Borsa İstanbul'un sürdürülebilirlik endeksinde yer alıyorsa kurumsal

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sürdürülebilirlik alanında başarılı olarak ölçülmektedir. Araştırma yöntemi olarak yazar bu şirketlerin bağımsız denetçi seçimini ve kurul yapısını istatistiksel olarak karşılaştırmıştır.

**Anahtar Kelimeler:** Cam Tavan, Bağımsız Denetçi, Sürdürülebilirlik Endeksi

**JEL Sınıflandırması:** M42, M14, G34

## 1. INTRODUCTION

Today it is a universally acknowledged fact that corporations target to increase shareholder value. Increasing revenue and growing business lines are rationale for enterprises. However, companies cannot maintain a spurt of growth for a long time, and after a while, many companies lose momentum and fail to continue their operations. Every year, entrepreneurs establish many companies, but only a handful of companies can get the opportunity to grow. Embracing sustainability principles not only enable corporations to increase their longevity, but serve the society in many areas, such as creating a positive working environment and transparent management. These terms go hand in hand with the corporate governance notion, as sustainability promotes the inclusion of minorities, protection of human rights and ethical as well as social values. Implementation of sustainability concepts in corporations can foster better corporate governance performance.

Shareholders are more interested in the economic viability of corporations, and today's critical concepts like corporate governance. The mounting expectation causes corporations to respond by embracing corporate sustainability principles. United Nations (2014, 9) defines corporate sustainability as "a company's delivery of long-term value in financial, environmental, social and ethical terms." Ten core principles make up sustainability and Principle 6: "The elimination of discrimination in respect of employment and occupation" (United Nations 2014, 11) makes up the core concept of this study. The empowerment of women is important because diversity is an essential contributor to the decision-making process in organizations. According to Lagerberg (2015), companies with women involved in the Board of Directors, perform significantly better when compared to companies with men-only Board of Directors. Not to mention an opportunity cost as high as \$655 billion (for 1050 companies as calculated by Grant Thornton). The inclusion of women in management ranks and representation in Boards are unfortunately an issue at hand, even though we are well into the 21st century, however balanced representation on boards is key to better corporate sustainability implementation (Al-Shaer and Zaman 2016).

Following the footsteps of these researchers, the author will statistically compare the board structures of Borsa Istanbul (BIST) 100 companies and their sustainability grades in this paper. The companies BIST includes in the sustainability index are deemed to have high grades. Other companies will be deemed to have low grades, and the author will compare the board structures of these

companies including the number of women on the Board of Directors, and analysis will also cover the Corporate Governance Rating of these companies. The article consists of a literature review that covers the glass ceiling problem and its relation to corporate governance, data and methodology, findings and discussion.

## **2. LITERATURE REVIEW**

Corporations need to integrate the minimum amount of production factors to maximum effect. However, this recipe is often not enough to achieve the ultimate goal of maximizing shareholder wealth because maximizing shareholder wealth is not a static goal. In other words, it is a dynamic goal that managers need to reach every accounting term. Providing a peak in profit margin in a single term does not serve the corporation for achieving its ultimate goal. Corporations have to embrace sustainability principles to actualize maximizing shareholder wealth.

Corporate sustainability has become a popular concept in the 2010s when all major corporations started bringing up this concept in their annual reports. However, the basis of corporate sustainability notion is sustainable development. The definition of sustainable development is “development that meets the needs of the present without compromising the ability of future generations to meet their own needs” (IISD 2020). Stakeholder theory can be used in explaining the corporate sustainability notion. Stakeholders are the parties that have direct or indirect interests in the firm and stakeholder theory states that a firm should be concerned about creating value for all stakeholders instead of just focusing on shareholders (Freeman et al. 2010). Stakeholder theory is also concerned about ethics and sustainability management in corporations, which is an answer to increased fraudulent activities in recent years. Moreover, stakeholder theory was developed as an answer to the ethics problem in capitalism and the mindset of management (Freeman et al. 2010). There are three versions of normative stakeholder theory. The first version is moderate in approaching stakeholders by advising the firm to treat stakeholders with respect, the second version is intermediate and advises incorporation of some interests of stakeholders in management, and the final version of the normative stakeholder theory advises the participation of all stakeholders in the decision-making process (Hendry 2001). Today’s corporate governance principles incorporate the intermediate approach to stakeholder theory by assuring informing of all stakeholders, however not all stakeholders are made part of the decision – making process.

Corporate sustainability is a concept that is also derived from sustainable development or in other words, the adaptation of sustainable development concept to business. Corporate sustainability, securing long-term cash flow in corporations by paying attention to and creating value by taking

environmental, social and ethical issues into account as well as embracing the long-reaching financial goals, is an alternative paradigm to the classical growth model for corporations.

This reasonably new perspective in management involves not only the longevity of corporations; it also changes the outlook in the macroeconomic level. In theory, in an economy where all corporations' aim is becoming sustainable, economic development will increase significantly. Corporate sustainability is the ultimate goal of today's organization and there is no alternative to sustainable business development. However, the solely economic driven requirements of the past cannot achieve this goal. A different approach in management is necessary if corporations want to last. According to Schwarz and Bisschop (2014), the balance between economic, social and environmental dimensions of business will provide sustainable development for the organizations of the future.

Corporate sustainability notion has become quite relevant today, because of three reasons, according to Lageweg (2014). The first reason is the increased awareness of the public towards environmental issues. Furthermore, public opinion can be easily formed and conveyed via social media platforms like Facebook and Twitter. Thus, corporations need to be careful in protecting their image in the public eye. For whatever reason, if there is a rift between potential customers and the firm word gets out quite quickly, forming public opinion. Online communities for environmental protection are also significantly active and use the power of people to force action in corporations and governments. "Care2.com" and "change.org" websites are a couple of examples to such networks. The second reason, personal leadership explains the mentality of today's people. Psychologically individualization is the sociological trend that causes people to participate in such online platforms because people feel responsible on a personal level and this causes each individual to act on these impulses. The final dimension according to Lageweg (2014) is economy.

Three dimensions of corporate sustainability are the basis of the latest approaches to this notion. (Van der Byl and Slawinski 2015). These dimensions are the environmental, social and economic façades of corporate sustainability (Vildasen and Havenvid 2018). The approaches toward corporate sustainability tensions include win-win, where it is possible to avoid the tension by compromising between the elements of corporate sustainability; trade-off, where preferring one element of corporate sustainability to other works; integrative, where changing the managerial mindset towards environmental and social from economic and paradox. These tensions are thoroughly investigated and not rejected (Van der Byl and Slawinski 2015).

Since sustainability has become a focal point in business, Borsa Istanbul has developed an index to measure the sustainability of listed companies in 2014, and it is called the Sustainability Index. This index aims to increase the awareness towards the sustainability of corporations and claims the attention of all stakeholders. International sustainability criteria such as "environmental awareness,

biodiversity, climate change practices, board practice, countering bribery, human rights practices, supply chain audit, health safety, corporate loans, and retail banking practices” are used as a basis for the development of this index (BIST, 2015). Ethical Investment Research Services Limited (EIRIS) is responsible for measuring the performances of companies in BIST50 as mandatory and the remaining companies from BIST100 voluntarily.

### **2.1. The Glass Ceiling Problem**

Today the world is changed significantly after the industrial revolution, especially concerning women’s rights, many improvements happened, and today women are accepted as legally equal parties with men. However, in practice, women are still an underrepresented part of the world population. In the workplace, “the glass ceiling” notion defines this discrimination problem.

Universal Declaration of Human Rights lays the legal foundation for the case against the glass ceiling and gender discrimination in the workplace. Article 23 of the Declaration clearly states that “everyone, without any discrimination, has the right to equal pay for equal work” (United Nations 1948). However, not all countries have Article 23 embedded in their constitution. Some of the countries that do not have nondiscrimination clause surprisingly include Belgium, Poland, and Romania as well as the United Arab Emirates, Indonesia and Kiribati somewhat expectedly (Worldbank, 2018). This data reflects the gender discrimination problem that starts with the lack of fundamental rights for women. If constitutions do not recognize women as equal contributors to society, it would be an absurd case to make for gender discrimination in the workplace.

To ensure the application of the Universal Declaration of Human Rights, International Covenant on Economic, Social and Cultural Rights is brought into effect as of January 3, 1976. Article 7 repeats the equal pay for equal work mantra (Kaplan 2017).

In addition to voting for Universal Declaration of Human Rights, Turkey also signed the agreement of the Convention on the Elimination of All Forms of Discrimination against Women (CEDAW) in 1979. This Convention ensures the application of equality principles by countries.

These numbers clearly state the levels of underrepresentation of women in the parliaments all over the world, since women make up approximately 49.6% of the world population (Countrymeters 2019).

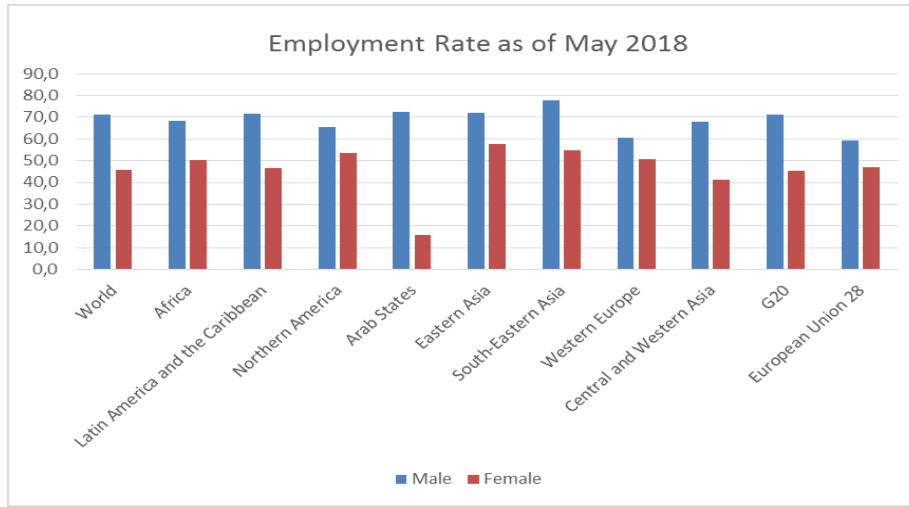
71.3 % of the male population is employed, whereas 45.8% of women are a part of the workforce in the world as of May 2018 (Worldbank 2018). Table 1 presents the numbers that belong to these data below, including a bar-chart (Figure 1) that compares male employment with female employment in geographical regions in the world, and the lowest number of female employment belongs to the Arab States with 72.5% male and 15.7 % female. The highest number belongs to the Western Europe region. The difference in Western Europe is that these countries are among the first industrialized

countries where women contribute to the workforce by 50%. To sum up, Europe and Northern America are the regions where women contribution to the workforce is at its highest.

**Table 1. Employment Rate Percentage to Whole Population According to Geographic Regions**

Region	Male (%)	Female (%)
World	71,3	45,8
Africa	68,5	50,4
Latin America and the Caribbean	71,7	46,5
Northern America	65,3	53,7
Arab States	72,5	15,7
Eastern Asia	71,9	57,8
South-Eastern Asia	77,9	54,9
Western Europe	60,4	50,6
Central and Western Asia	67,8	41,1
G20	71,4	45,5
European Union 28	59,2	47,1

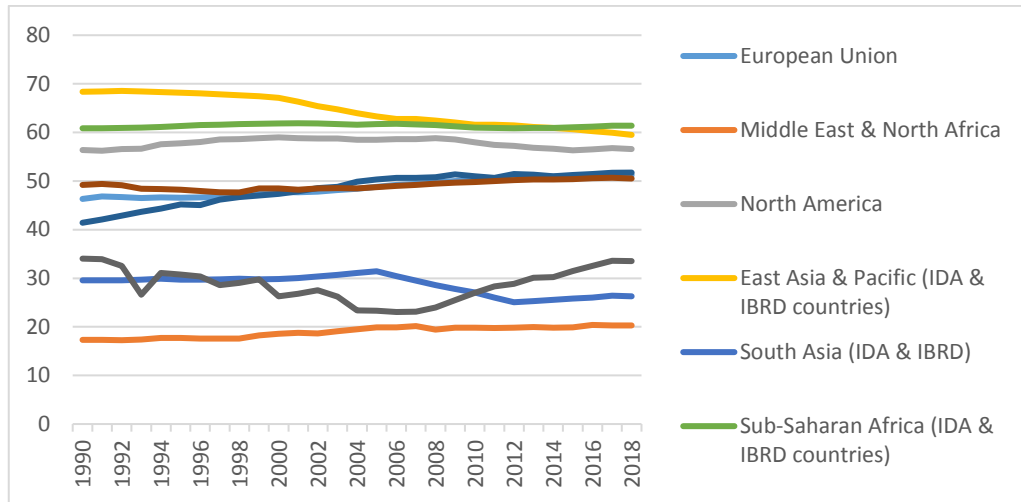
**Source:** Data Adapted from (Worldbank 2018)



**Figure 1. Employment Rate of Male and Female Population across Regions in 2018**

**Source:** Data Adapted from (Worldbank 2018)

Figure 2 represents the labor force participation rate of women according to regions, below. Turkey has roughly 30% participation, which is below expectations, meanwhile, the highest number belongs to East Asia and Pacific with 60% and Europe is about %50.



**Figure 2. Labor Force Participation Rate According to Geographic Regions**

**Source:** Data Adapted from (Worldbank 2018)

According to World Bank database firms with female participation in ownership percentage is only noticeable in the Latin America region, presented in Figure 3 below.



**Figure 3. Firms with Female Participation in Ownership (% of firms)**

**Source:** Figure from (Worldbank 2018)

Figure 4 represents similar numbers below, which gives firms with a top female manager. The Latin America region is quite high when compared to the rest of the World.

The vehement numbers in graphs presented above depict the existence of the glass ceiling problem. Even though many countries accept equality between genders legally except for some radicals, In reality, it is quite hard to follow whether corporations observe this principle in real-life situations. If

there is a juridical case it is quite likely to be resolved by regulations; however, the low number of women employment and female participation in top management notwithstanding the almost absurd representation level in parliaments indicate a mentality problem underneath the surface.

Gender inequality has many attributes that are important to the economy. According to Bertrand (2018), three main points make the glass ceiling problem important for the global economy. Firstly, it is an issue of rights and fairness. As long as corporations deny equal pay for equal work; this problem will continue to exist. It is merely an issue of legal struggle; even though gender equality is a universal concept, even in the Western Europe countries that take this issue significantly into account, there is still an ongoing problem. Women are underrepresented in national parliaments; women contribute to the workforce is lower than men and women are not equally present in the Board of Directors. The reason behind this situation is the discrimination and underdeveloped views about women's role in society. Secondly, having women in the Board of Directors would increase the economic profitability of corporations. Unequal representation of women in the Board of Directors will cause a discrepancy in achieving economic growth goals for countries. Finally, having women in the Board of Directors enhances productivity.



**Figure 4. Firms with Female Top Manager (% of Firms)**

Source: Figure from (Worldbank 2018)

According to the European Commission, 23.3% of Board members in publicly held corporations in the European Union (EU) were women in 2016 (Jourová, 2016). This number is the result of an 8-year campaign for gender equality. EU actively promotes gender equality in the following areas: equal pay, gender balance in decision-making positions, equal economic independence and gender-based violence. EU also supports gender equality beyond its borders (European Commission, 2018).



The foundation of gender discrimination problem has many façades; however, it all comes down to the so-called gender roles and stereotypes. EU is fighting this problem by placing it on its political strategies and promoting solutions by increasing awareness.

## **2.2. Corporate Governance and The Glass Ceiling**

Good corporate governance is a way of management that aims to promote transparent administration by inducing inclusion of shareholders and stakeholders and increasing accountability of top management and BOD. According to Merino and Manzaneque (2016, 2), there are four main functions of BOD. These are “control, service activities, strategic decisions and policy support and resources acquirer”.

The control function of BOD defines its responsibility in managing the company, supervising the activities and making sure that employees meet compliance requirements by regulatory authorities. Service activities involve corporate sustainability; how the firm approaches and takes action towards environmental, social and economic issues. The board is also responsible for determining the foundations for the management ‘regime’ with activities such as designating essential strategies and defining policies for the company. The final duty of the BOD is to provide and allocate resources for the company.

According to OECD’s Corporate Governance Principles, creating wealth for stakeholders is critical in the sense that, all stakeholders and corporations depend on each other to secure a well-working economy, with its markets and contributors in every level. The first and foremost agenda of companies is to ensure the flow of capital towards them. Corporations need to take into account the issues of stakeholders, who in turn, provide the cash flow (OECD 2015).

Some of the concerns of stakeholders include contemporary issues of public such as problems concerning the overall state of the economy such as inflation, unemployment and gender equality in the workplace as well as other social and environmental issues like global warming. Since gender equality in the workplace directly involves corporations their policies and cultures, corporate governance principles promote recognition of this problem and applying diligence for resolution.

Diversity in BOD composition is an increasing trend, according to Merino and Manzaneque (2016). One façade of this concept is the inclusion of women in BODs. Gender equality also takes up an important place in academic literature since it is a very topical issue. Gender equality is an essential notion because it prevents waste of talent by employing women without discrimination by gender but solely on competency. Gender equality in workplace calls for diverse boards in corporations, which provide corporations management capable of different points of view for its problems. There are many

achievements of diverse boards. Francour et al. (2008) show that corporations with diverse boards have up to 6 per cent higher returns.

According to Hussain et al. (2018), stakeholder theory can explain the inclusion of women in the Board of Directors. Stakeholder theory takes into account any party that is affected by the business in analyzing value creation, ethics and managerial mindset problems (Parmar et al. 2010). Moreover, agency problems can be solved by finding an optimal composition for the board of directors (Bathala and Rao 1995).

Nadeem et al. (2017) point out that there is a “significant positive relationship between women’s representation on boards and corporate sustainability practices.” Galbreath (2011) also states that there is a gender-related influence on corporate sustainability practices. Meanwhile, Grosser (2009) implies a corporate social responsibility as a tool to promote gender equality. In addition to this, Seto-Pamies (2015) argues that women directors increase the social responsibility performance of companies. Such articles strongly suggest a diverse workplace environment reflected in the Board of Directors dramatically contributes to corporate sustainability performance by creating added value.

The latest trend in corporate governance that helps better management is to have independent members in BOD. Independent members help with monitoring the management and providing an independent point of view. Ng and Sears (2017) report that firm ownership affects the inclusion of women in corporations and women inclusion is higher where there is a female CEO.

### **2.3 Hypothesis Development**

Gender diversity in business and women studies are a popular subject in literature. However, the majority of women related studies are concerned with the financial performance of the firms. For instance, Atilgan (2017) investigated the relationship between BOD size, the ratio of women members, the ratio of independent members and financial performance and found an insignificant negative relationship. Erkol (2020), has not detected any relation related to gender difference and conservatism in management in manufacturing sector firms. Similarly, Ataunal and Aybars (2014) failed to find an effect of women BOD members concerning financial performance. However, Karayel and Doğan (2014) detected a positive effect of gender diversification in BOD on return on assets for BIST100 firms. There is a gap in Turkish literature concerning any other area with gender diversification.

As can be seen from the examples provided above the literature findings in this area is somewhat inconsistent. Moreover, there are a few articles that investigate the relationship between the presence of women on the board of directors and corporate governance performance of the firm. For example, Carter, Simkins and Simpson, (2003) link the presence of women in BOD to better corporate governance performance and financial performance. Other research papers concur the relationship

between board gender diversity and corporate governance, such as Velte (2018); Kang, Cheng and Gray (2007). Moreover, corporate social responsibility and gender diversity in BOD is linked in literature as well (Harjoto, Laksmana and Lee 2015).

Five hypotheses below are developed by the researcher to measure the relationship between the Board structure and corporate governance, corporate sustainability, and auditor choice. As agency theory suggests, agency problems in firms can be solved by reaching an optimal board composition. Therefore, the researcher starts with the assumption of a gender-diverse board is closer to an 'optimal board idea' and argues that such a firm will have better corporate sustainability performance compared to other firms that are managed by a board that is further away from the 'optimal board idea'. Better board composition is expected to be linked to better applications of sustainable management. The researcher suggests that the application of stakeholder theory's and agency theory's solution to management problems are linked in nature, therefore the hypotheses are reflected to measure this relation.

Furthermore, Big4 auditing firms are found to be more reliable due to their quality work and their audit processes and audit reports are found to be compliant to CMB regulations. The majority of clients in capital markets belong to Big4 audit firms and their sanction frequency is significantly smaller when compared to other enterprises. This finding is an important indicator of audit firm reliability (Aslan 2017). Moreover, Big4 auditors are found to have enhanced audit quality compared to non-Big4 auditors (Lee and Lee 2013; Wilson 2015). As a continuation, in this paper, the relationship between auditor choice and gender diversification in BOD will be investigated as well.

H<sub>1</sub>: There is a statistically significant difference between the corporate sustainability attitude of corporations with women members in the board of directors and all-male board of directors.

H<sub>2</sub>: There is a statistically significant difference between the percentage of women in the board of directors in companies that are audited by Big4 auditors and companies that are audited by other auditors.

H<sub>3</sub>: There is a statistically significant difference between the corporate governance ratings of companies selected to the Borsa Istanbul's sustainability index and companies that are not selected.

H<sub>4</sub>: There is a statistically significant difference between the corporate governance ratings of companies audited by Big4 companies and companies that are audited by other auditors.

H<sub>5</sub>: There is a statistically significant difference between the independent auditor choice (Big4 or not) of companies selected to the Borsa Istanbul's sustainability index and companies that are not selected.

### 3. DATA AND METHODOLOGY

The author statistically compares the board structures of BIST100 companies and their sustainability grades in this study. The companies that the Borsa Istanbul includes in the sustainability index are deemed to have high grades. Other companies will be considered to have low grades, and the analysis also includes the board structures of these companies including the number of women on the Board of Directors, and the Corporate Governance Rating and independent auditor choice of these companies.

There are 513 companies whose stocks are traded in the Borsa Istanbul. However, in this paper, the focus is on BIST100 companies, because BIST100 companies are assumed to be equivalent in size and asset structure, which brings the comparison of these companies to an even ground. The author acquired data from Public Disclosure Platform as of July 2018. However, only the data of 98 companies were available. Thus, the remaining two companies were excluded from the analyses. There are five variables in total, and definitions of these variables are below:

**Women Presence in Board of Directors:** Author constructed this variable as a dummy variable, where “0” represents no women in BOD, and “1” represents the presence of any women member in BOD regardless of number.

**Percentage of Women Presence in Board of Directors:** The percentage of women members in the Board of Directors is a scale variable. The number of women members in the Board of Directors is divided by the number of total Board of Directors members.

**Corporate Governance Rating:** According to Capital Markets Board’s (CMB, 2007) Communiqué Serial VIII No 51 called Rating Activities in Capital Market and Principles Regarding Rating Agencies, publicly held corporations may engage in rating activities provided by rating agencies. Rating agencies decide on the corporate governance rating by evaluating the company’s performance in compliance with the four tiers of corporate governance principles: Shareholders, public disclosure and transparency, stakeholders and board of directors. The rating has to be between 1 and 10 and announced to the public (Article 6: 401). This rating shows how well the company has integrated the corporate governance principles into its culture and activities as a scale variable.

**Selection to Sustainability Index:** This is a nominal and a dummy variable. If BIST includes the company in the index, it takes the value of “1”, and if it is not, it is “0”. Borsa Istanbul’s selecting the company is evaluated as successful in integrating sustainable development activities into its culture. According to Borsa Istanbul, the Sustainability Index created in November 2014 provides a benchmark for companies with high corporate sustainable development among corporations listed in Borsa Istanbul (2018a). Assessment criteria for selecting the companies that will be included in the

index. Firm policies and activities concerning “environment, biodiversity, climate change, the structure of management, countering bribery, human rights, supply chain, health, and safety” are taken into account from sources made public like “annual fiscal reports and sustainability reports, websites, carbon disclosure reports” (Borsa Istanbul 2018b). This information is merged into a company profile and evaluated by the Borsa Istanbul’s criteria for selection to index.

**Independent Auditor Choice:** The nature of the independent auditor is also deemed critical in evaluating the quality of public information and culture. This variable is also categorical, where “1” indicates that the independent auditor is a Big4 firm and “0” the opposite.

#### 4. FINDINGS

The three scale variables are tested for significant differences between the companies included in the sustainability index and companies not included in the sustainability index with the Mann Whitney U Test. Categorical variables ownership structure and independent auditor choice are tested for significant differences with Chi-Square and Cramer’s V Tests in SPSS 18.

The author first presents descriptive statistics to explain the foundations and characteristics of the data. The second step concerns Mann Whitney U, Chi-Square and Cramer’s V results.

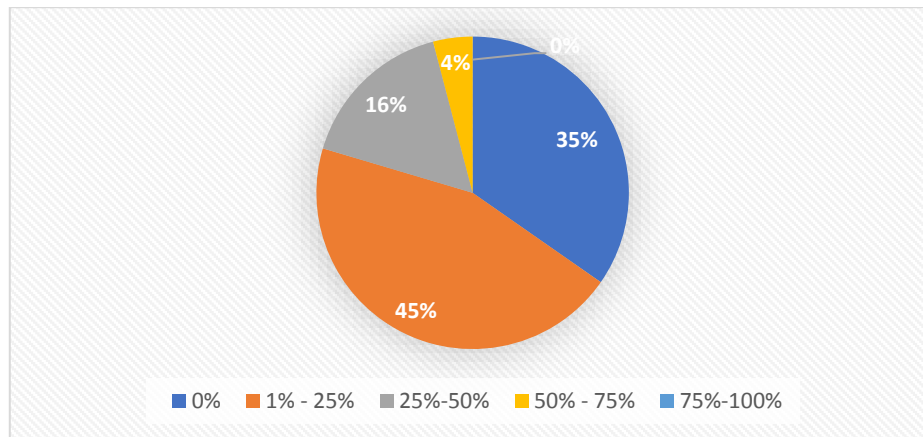
The mean of women members of BIST100 companies is equal to 0,65. This number indicates that more than half of the companies have women members or at least one female member in their board of directors. However, the standard deviation of this variable is quite high with 0,478. Distribution of the presence of women is moderately skewed to the left, and it is highly platykurtic. The percentage of women has a mean of approximately 0,14, which indicates roughly 14 % of women on the board of directors. Distribution of this variable is highly skewed to the right and moderately leptokurtic. Graph 4 presents the allocation of BIST100 firms according to the percentage of women on the board of directors. According to Graph 3, 35% of companies do not have any women BOD members, while 45% of the companies have women members between 1% and 25%. 16% of the companies have women BOD members between 25% and 50%. Only 4% of the companies have over 50% of women BOD members.

Moreover, corporate governance rating has an average value of 3 and a very high standard deviation of 4. It is moderately skewed to the right and highly platykurtic. BIST includes less than half the companies in the Sustainability Index. Distribution of this variable has a high standard deviation of 0,492. It is slightly skewed to the right and highly platykurtic. Auditor choice has an average of 0,81 indicating that Big4 auditors audit the majority of BIST100 companies. However, there is a high

standard deviation of approximately 0,4. The distribution of auditor choice is highly skewed to the left and moderately leptokurtic. Table 2 shows the results from the descriptive analysis below.

**Table 2. Descriptive Statistics**

Variables	N	Me an	Std. Deviation	Skewness		Kurtosis	
				Statisti c	Std. Error	Statist ic	Std. Error
%of Women in BOD	98	,1394	,13936	,985	,244	,530	,483
Women in BOD (Y/N)	98	,6531	,47844	-,653	,244	-1,607	,483
Big4 or not	98	,8061	,39737	-1,573	,244	,483	,483
Included in SI or not	98	,3980	,49199	,423	,244	-1,859	,483
Corporate Governance Rating	98	3,0405	4,39231	,756	,244	-1,452	,483



**Figure 5. Firm Allocation According to Percentage of Women in BOD**

H<sub>1</sub>: There is a statistically significant difference between the corporate sustainability attitude of corporations with women members in the board of directors and all-male board of directors.

For H<sub>1</sub> test results show a 0,016 p-value for Chi-square and 0,017 for Mann-Whitney U tests both being smaller than 0,05 confirm that there is a statistically significant difference in companies' sustainability attitudes between companies that have women on the board of directors. Therefore, the null hypothesis is rejected. Companies with diverse boards embrace the corporate sustainability concept and reflect these principles in their activities. Moreover, the higher the number of women on board of directors, the better the corporate sustainability. In Table 4, the significance value for the "percentage of women" indicates a strong relationship below 10%.

H<sub>2</sub>: There is a statistically significant difference between the percentage of women in the board of directors in companies that are audited by Big4 auditors and companies that are audited by other auditors.

Significance value in Table 4 is equal to 0,945, which indicates no relationship at all. Therefore, it is not possible to reject the null hypothesis.

H<sub>3</sub>: There is a statistically significant difference between the corporate governance ratings of companies selected to the Borsa Istanbul's sustainability index and companies that are not selected.

There is a statistically significant difference in the corporate governance ratings of companies selected to the sustainability index of Borsa Istanbul and companies that are not selected. Therefore, the null hypothesis is rejected. Majority of companies that do not have a rating are not included in the sustainability index of Borsa Istanbul.

H<sub>4</sub>: There is a statistically significant difference between the corporate governance ratings of companies audited by Big4 companies and companies that are audited by other auditors.

Table 4 indicates that there is a strong relationship between the corporate governance ratings of companies and their auditor choice. Companies that prefer Big4 auditors and request quality audits also have high corporate governance grades. Therefore, the null hypothesis is rejected. There is a statistically significant difference between the corporate governance ratings of companies audited by Big4 auditors and companies audited by other auditors.

H<sub>5</sub>: There is a statistically significant difference between the independent auditor choice (Big4 or not) of companies selected to the Borsa Istanbul's sustainability index and companies that are not selected.

There is a statistically significant difference between the independent auditor choice of the companies selected to the sustainability index of Borsa Istanbul and companies that are not selected for H<sub>5</sub> according to Table 5. Therefore, the null hypothesis is rejected. A tiny portion of companies selected to the index is not audited by Big4 auditor firms.

**Table 3. One Sample Chi-square Test of all Variables**

	<b>Is the company included in the sustainability index</b>	<b>Is the auditor a Big4 firm</b>	<b>Are there women in BOD</b>	<b>Percentage of women presence in BODs</b>	<b>Corporate governance rating</b>
Asymp. Sig.	,043	,000	,002	,000	,000

**Table 4. Mann-Whitney U Test Results (Sig.)**

	<b>Included in SI or not</b>	<b>Is the auditor a Big4 firm</b>	<b>Corporate governance rating</b>
<b>Are there women in BOD</b>	,017		
<b>Percentage of women presence in BODs</b>	,085	,945	
<b>Is the auditor a Big4 firm</b>			,014
<b>Included in SI or not</b>			,000

**Table 5. Chi-Square Test Results**

	<b>Asymp. Sig (2 sided)</b>
<b>Included in SI or not</b>	,016
<b>Big4 or not</b>	,004

## 5. DISCUSSION

The framework of this article is formed by showing the relationship between Stakeholder Theory and Agency Theory. The researcher argues that application of Stakeholder Theory's and Agency Theory's advice on improving management problems by creating a gender-diverse board composition is linked to better corporate governance and sustainability performance.

The role of women in the board of directors is a rather under-researched area and in Turkish literature, the relationship between board structure and financial performance is what makes up the majority of women related business studies generally. Moreover, the research results concerning this area are found to be inconsistent. Although there is limited research between board diversity and corporate governance and sustainability, there are a handful of examples that support the findings of this paper.

Concerning Corporate Social Responsibility, the presence of women in BOD is positively linked to better performance according to Zhang, Zue and Ding (2013). Furthermore, Post, Rahman and McQuillen (2014) argue that the presence of women in BOD contributes to positive corporate environmental performance. Other researches concerning board diversity and corporate governance, sustainable management, and audit back these findings (Carter, Simkins and Simpson, 2003; Velte, 2018).



Findings of this research indicate a parallel outcome with the literature review. Having a gender-diverse board does have a relationship to corporate governance performance as well as corporate sustainability performance. Gender-diverse boards are not linked to auditor choice, however, companies with high sustainability performance prefer to be audited by Big4 auditors.

Although these articles have a significant place in literature, the researcher could not detect any other work in Turkish literature concerning the role of gender diversified BOD. Moreover, there are no articles that concern the gender diversity in BOD, corporate governance and corporate sustainability or auditor choice in Turkish and a limited number of papers in English. Therefore, this article has a unique place in literature to investigate the role of gender diversified BOD and how including women in BOD can have a positive relationship with the decisions of corporate sustainability and corporate governance. Moreover, improved corporate governance and sustainability applications is expected to affect the accounting policies in a positive manner, as a result usage of aggressive accounting techniques will be diminished and financial performances is expected to be improved as decision-making processes are incorporated with different perceptions from a diversified BOD. In addition to this, compliance with policies and procedures are expected to be improved as corporate governance performance is closely related to control environment and tone at the top in the company.

Even though this paper contributes to the literature by presenting new findings of the presence of women in boards there are some limitations such as the scope. Not all companies listed in Borsa Istanbul are taken into account and therefore the study is limited due to lack of data available. Furthermore, the subject can be developed by taking corporate sustainability dimensions into account in future studies.

## **6. CONCLUSION**

Top management in organizations has to found good governance upon a fixed mindset that will help the organization to achieve its ultimate goal, which is providing continuous cash flow to its shareholders. Corporations can accomplish this aim by embracing the concept of corporate sustainability.

Corporate sustainability is a way of management that takes the environment of the company into account. Corporations are as isolated hubs for production, and they exist as part of a system that has social and environmental effects, which in turn impacts the organization's employees, managers and most important of all, its potential clients. Therefore, organizations that want to reach longevity have to integrate corporate sustainability and improve their relations with stakeholders, according to the stakeholder theory. One façade of this theory involves a diversified Board of Directors.

This paper aims to investigate the relationship between the corporate governance indicators with the corporate sustainability attitudes of corporations, limited to the existence of female board members and independent auditor choice. Board diversity is a topic that is extensively researched, however, the relationship between gender diversity in firms and corporate governance, corporate sustainability and auditor choice is overlooked. With these research new findings concerning this area is added to the literature. Moreover, this article points out the importance of incorporating women into board structure and its relation to better corporate governance applications, which is closely related to accounting practices and ethics in BIST100 firms. Corporate governance is a key element in preventing the control environment in corporations, advocates sustainable management and prevents usage of aggressive accounting techniques.

Analyses results indicate that companies that having functional corporate governance implications are linked with good corporate sustainability performance. Moreover, companies with good corporate governance grades and that are in the sustainability index of BIST is also linked to choosing Big 4 auditors, which indicates that the financial reports of such companies are more reliable than other companies. In addition to this, the presence of women in the Board of Directors has a statistically meaningful relationship with the sustainability of the firm. Thus, having women in the Board of Directors is related to the corporate governance and corporate sustainability performance of the company.

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