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ISTANBUL AYDIN UNIVERSITY

INSTITUTE OF GRADUATE STUDIES

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MASTER'S THESIS

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Department of Business
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MASTER THESIS ACCEPTANCE AND APPROVAL

DECLARATION

I hereby declare with respect that the study *"The Effects of Corporate Social Responsibility on Financial Performance of Public Companies in Turkey"* which I submitted as a Master thesis, is written without any assistance in violation of scientific ethics and traditions in all the processes from the Project phase to the conclusion of the thesis and that the works I have benefited are from those shown in the Bibliography. (23/10/2020)

Shakhida ZAITOVA

FOREWORD

I would like to express deepest gratitude to my thesis mentor Dr. Cüneyd Ebrar LEVENT, his support and expertise had played a great role in the success of this research.

I would like to dedicate this paper to my daugher Anisa, my mother Dilara and grandmother Madina.

I would like to thank my husband Artur, for his continious support and motivaton.

I would like to thank my father Allan for always being a great example to me, and who is always proud of my achievements.

October, 2020 Shakhida ZAITOVA

THE EFFECTS OF CORPORATE SOCIAL RESPONSIBILITY ON FINANCIAL PERFORMANCE OF PUBLIC COMPANIES IN TURKEY

ABSTRACT

Businesses have responsibilities not only to their owners and shareholders, but also to their employees, customers, suppliers, and the society they belong to. While businesses are trying to continue their activities profitably and efficiently, they also must consider the interests of their stakeholders in their decisions. The concept of corporate social responsibility is not limited to activities such as philanthropy and environmental protection, it envisages the integration of businesses with society and the environment. In this respect, the concepts of corporate social responsibility and corporate governance intersect. In this context, the purpose of this study is to reveal the effect of corporate social responsibility on financial performance of publicly traded companies in Turkey. The research covers 73 non-financial firms included in the BIST 100 Index. The period of the study is between 2015-2019. Panel data analysis method is preferred because the data set includes both time and section dimensions. In the study, firm performance is represented by three different variables, these are return on assets (ROA), Tobin's Q and earning per share (EPS). Six econometric models have been established to determine the impact of corporate social responsibility on firm financial performance. Various control variables have added to the models based on the literature.

The results of the research show that corporate social responsibility does not have a positive effect on firm performance in all 6 models established. The findings reveal that corporate social responsibility does not contribute financially in the short term for Turkish public companies. However, these findings can be interpreted as social responsibility may have an indirect effect on financial performance. Social responsibility is also expected to have both financial and non-financial benefits to companies in the long run at firm level.

Keywords: Corporate Social Responsibility, Corporate Sustainability, Corporate Financial Performance.

TÜRKİYE'DE HALKA AÇIK ŞİRKETLERDE KURUMSAL SOSYAL SORUMLULUĞUN FİNANSAL PERFORMANSA ETKİLERİ

ÖZET

İşletmelerin sadece sahiplerine ve hissedarlarına değil, aynı zamanda çalışanlarına, müşterilerine, tedarikçilerine ve içinde bulundukları topluma karşı da sorumlulukları bulunmaktadır. İşletmeler, bir taraftan faaliyetlerini kârlı ve verimli bir şekilde sürdürmeye çalışırken, diğer taraftan da verdikleri kararlarda paydaşlarının çıkarlarını da dikkate almak zorundadır. Kurumsal sosyal sorumluk kavramı, hayırseverlik ve çevreyi koruma gibi faaliyetlerle sınırlandırılmamakta, işletmelerin toplum ve çevre ile bütünleşmesini öngörmektedir. Bu açıdan kurumsal sosyal sorumluluk ve kurumsal yönetim kavramları kesişmektedir. Bu çalışmanın amacı, kurumsal yönetim uygulamaları da dahil olmak üzere kurumsal sosyal sorumluluk uygulamalarının Türkiye'deki halka açık şirketlerin finansal performansları üzerindeki etkisini tespit etmektir. Araştırma BİST 100 Endeksinde yer alan finans dışı 73 firmayı kapsamaktadır. Araştırmanın zaman periyodu 2015-2019 yılları arasıdır. Veri seti hem zaman hem de kesit boyutlarını içerdiğinden panel veri analizi yöntemi tercih edilmektedir. Araştırmada firma finansal performansını üç farklı değişken temsil etmektedir. Bunlar, aktif karlılık (ROA), Tobin's Q ve hisse başı kardır (HBK). Kurumsal sosyal sorumluluğun firma finansal performansı üzerindeki etkisini belirlemek için altı ekonometrik model oluşturulmuştur. Literatüre uygun olarak modellere çeşitli kontrol değişkenleri eklenmiştir.

Araştırma sonuçları, kurumsal sosyal sorumluluğun kurulan 6 modelin tümünde firma performansı üzerinde olumlu bir etkiye sahip olmadığını göstermektedir. Bulgular, kurumsal sosyal sorumluluğun Türkiye'deki halka açık şirketlere kısa vadede finansal olarak katkı sağlamadığını ortaya koymaktadır. Ancak bu bulgular, sosyal sorumluluğun finansal performans üzerinde dolaylı bir etkisi olabileceği şeklinde yorumlanabilir. Sosyal sorumluluğun, uzun vadede şirket düzeyinde şirketlere hem finansal hem de finansal olmayan faydalarının olması beklenmektedir.

Anahtar Kelimeler : Kurumsal Sosyal Sorumluluk, Kurumsal Sürdürülebilirlik, Kurumsal Finansal Performans.

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ABBREVIATIONS

BIST : Borsa Istanbul

CFP : Corporate Financial Performance

CGI : Corporate Governance Index

CSR : Corporate Social Responsibility

EIRIS : Ethical Investment Research Service

FE : Fixed Effects

OECD : Organization for Economic Co-operation and Development

RE : Random Effects

Model Abbreviations:

CGL : Corporate Governance Index

CSR : Corporate Social Responsibility measured by inclusion in BIST Sustainability Index

EPS : Earnings per Share

FS : Firm Size

GR : Growth Rate

LEV : Firm's Leverage

LY : Listed Years

ROA : Return on Assets

STR : Stakeholder's Rating

TOBIN : Tobin's Q

STR : Stakeholders Rating

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I. INTRODUCTION

The concept of corporate social responsibility is a hot topic of discussion for last several decades. Unethical business practices, fraudulent reporting, and egocentric behaviour of some of the largest companies lead to their bankruptcies affecting the whole economy. In aftermath of such events, investors wanted to have confidence in stocks they are buying, hence demand for company's transparency and ethical business operations was increased and urged by governments.

Corporate social responsibility is a broad term which incorporates important areas such as: economy, environment, compliance, human and animal rights, diversity, interests of stakeholders, education, philanthropy; it is a "social contract" between a corporation and a society it operates within.

Corporate social responsibility is viewed from two perspectives: Shareholder's and Stakeholder's. Shareholder approach advocated by Milton Friedman, who believed that "*The social responsibility of business is to increase its profits"* (Friedman, 1962). Whereas Freeman's Stakeholder Theory states that corporation should fulfil the interests of all stakeholders of a firm. Freeman said: "*If the needs of both shareholders and relevant stakeholders are met, they will in turn maximize the returns of the company"* (Freeman, 1984).

Corporation might question, why is it important to engage in corporate social responsibility activities? First and foremost, it is for a reputation enhancement, investors would more likely invest in a socially responsible company. Moreover, corporate social responsibility and corporate sustainability go hand in hand, which mean that those companies which are responsible are likely to be more successful and live longer. Second, stakeholders that do benefit from corporate social responsibility program of a company, are more likely to remain loyal and give back to the organization. Third, and a debatable reason, which is addressed in this research, is that corporate social responsibility practice increase firm's financial performance.

The purpose of this research is to find the effect of corporate social responsibility on corporate financial performance of Turkish publicly traded companies. Corporate social responsibility - financial performance relationship, has not been studied enough in Turkey. Moreover, there are no studies that combine three phenomena such as corporate social responsibility, corporate sustainability and corporate governance, and analyse whether a company that is engaged in all three has better financial performance than those that do not. In this context, following study is expected to make an important contribution to the literature.

This quantitative research studies the performance of publicly traded companies on Borsa Istanbul platform. BIST 100 index was chosen as a sample for the research, as well as BIST Sustainability Index as an indicator of corporate social responsibility practices. Due to accounting differences, financial institutions and sports companies were excluded. Out of 100 companies, 73 were selected as a sample. The research period is 5 years, from 2015-2019 inclusive. Corporate financial performance is measured by return on assets (ROA), Tobin's Q and earnings per share (EPS), whereas "Corporate Social Responsibility" is measured by the presence of a firm in a BIST Sustainability Index and a Corporate Governance Ratings. The data is controlled by following variables: firm's size, growth rate, listed years, and leverage. Panel data analysis is carried out using EViews version 12 program.

Section 2 of this research focuses on the theoretical background of corporate social responsibility, corporate sustainability and corporate governance; Section 3 focuses on the methodology of carrying out the research; following with Section 4 which will provide numeric results of the analysis, and finally section 5 will interpret the results and concludes the whole research

II. THEORETICAL FRAMEWORK

A. Corporate Social Responsibility (CSR)

1. Corporate Social Responsibility Definitions and Historical Development

There are two main definitions of corporate social responsibility. One group of academics and professionals argue that sole responsibility of any business is to make profits (to pay salaries, taxes and create more jobs, thus they support shareholders view (discussed in detail in following sections). The other group believes that businesses must serve a greater purpose and should work on benefiting the society they are in.

Academics each defined this phenomenon differently, yet the main concept of all definitions represent the "social contract'' companies have with society they are in. Carroll (1999), who had important research on corporate social responsibility, states that corporate social responsibility first appeared in the 1930s literature, however the issue of corporate social responsibility was only discussed in theory and barely used in practice.

Below are definitions of academics in historical order.

About a century ago Sheldon (1924) stated that corporate social responsibility is voluntary engagement in social and environmental programs. Since then, corporate social responsibility was slowly, but surely promoted by governments and other non-governmental organizations.

For many decades, corporate social responsibility was defined by academics, yet thorough studies on this subject was conducted by Howard R. Bowen for more than 10 years. Howard R. Bowen's book "Social Responsibilities of the Businessman", written in 1953, was the first to discuss somewhat modern definition of corporate social responsibility. He defined corporate social responsibility as "*the obligations of businessmen to pursue those policies, to make those decisions or to follow those lines of action which are desirable in terms of the objective and values*

*of our society" (*Bowen (1953, p. 6). During 1960 to 1970's Bowen's research raised awareness among business owners to consider giving back to society.

McGuire, on the other hand, brought a different perspective to corporate social responsibility. According to McGuire (1963), social responsibility entitles corporations not only to economics and legal obligations but also some responsibility towards society.

While more famous opinion on corporate social responsibility was established by Milton Friedman. Many studies on the subject quote Friedman's view on corporate social responsibility, he defined it as "The social responsibility of business is to increase its profits". He had a traditional view on the business and argued that businesses should only be judged by free market economy and not by governments. Friedman believed that all the companies' resources should be spent on increasing the wealth of the stockholders (Friedman, 1962).

Davis (1973) argued that companies not only have to meet legal obligations but also fulfill and improve social and environmental needs.

Carroll (1979) created a pyramid of corporate social responsibility (Figure 1), where four dimensions such as economic, legal, ethical, and philanthropic are discussed. The first fundamental obligation of a business is to be profitable by producing goods and services. Economic responsibility is required by the society. The second responsibility is legal obligation of a business, i.e. complying with all the laws, rules and regulations of the country, and industry specific rules. Most of the companies have a special department called "compliance" departments where they make sure that all the financial, operational, and other departmental activities are in lined to the laws. The next responsibility up the pyramid is ethical obligations of the firm. It is when a company chooses to do the right things, even if they are not required by the law. According to Carroll (1979), ethical corporation is expected by the society. Lastly, Philanthropic responsibility is desired by the society. Indeed, stakeholder approach is focused on philanthropic activities, they may be donations to charity, sponsoring schools, funding special events and so on. Carroll also pointed out that these responsibilities should be performed not in order of the sequence, but practiced all at the same time (Carroll, 1991).

Figure 1 Carroll's Pyramid of CSR Source: Carroll (1991, p. 42)

Today, corporate social responsibility is more than a cause related marketing, or business ethics. Corporate social responsibility is broadly defined as a corporation's responsibility both to shareholders and stakeholders (employees, suppliers, business partners, customers, potential investors, society, non-profit organizations, and environment). Corporate social responsibility is not only about helping society, but also about managing risks, increasing company's value, and creating opportunities beyond company's core activities in the interest of both shareholders and stakeholders (Yilmaz, 2011).

Dahlsrud (2006) conducted a research, where the author solely focused on analyzing corporate social responsibility definitions, counted 37, from years 1980-2003. He concluded that most definitions refer to five factors: environment, society, economy, stakeholder, and voluntariness. Additionally, Dahlsrud (2006) points out that, definitions describe corporate social responsibility, but do not suggest solutions on how to cope with the challenges the corporate social responsibility phenomena brings.

2. Principles and Approaches to Corporate Social Responsibility

a. Principles of corporate social responsibility

Sustainability, accountability, and transparency are three principles that make up corporate social responsibility as suggested by (Growther et al., 2008).

The concept of sustainability is discussed further in section II-B-3. Being socially responsible implies that organizations see themselves within a society in a long term and being able to fulfill the needs of both present and future.

Being accountable is another principle of corporate social responsibility, a firm should take responsibility for its actions which affect both inside and outside of the firm. A firm should report its environmental footprint and other firm related information with integrity.

Third principle is being transparent, in short it is company's "we do as we say", company's report should not be altered and be misleading to the public.

b. Approaches to corporate social responsibility

As described by Tulder and Zwart (2006), there are four main approaches to corporate social responsibility, they describe managerial behaviour: inactive, reactive, active and pro-interactive.

1) Inactive- management focuses primarily on profit generation by any means; it is an inside-in approach.
2) Reactive-management's top priority is still profitability; however, it does take into consideration interests of key stakeholders; it is an outside-in approach.
3) Active- management's top priority is not profit anymore; it is doing the right things for the society at any cost. This inside-out approach truly cares about environment and health of the society.
4) Pro-interactive- is a combination of all above approaches; management balances being profitable and being socially responsible; this is the most realistic and most logical approach.

More details on the approaches are found in the below Table 1.

Table 1 Summary of Approaches to corporate social responsibility in simple terms.

Inactive	Reactive	Active	Proactive/Interactive
Corporate self-responsibility	Corporate Social Responsiveness	Corporate Social Responsibility	Corporate Societal Responsibility
'Doing things right'	'Don't do things wrong'	'Doing the right things'	'Doing the right things right'
'Doing well'	'Doing well and doing good'	'Doing good'	'Doing well by doing good'
Efficiency	Efficiency	Ethics	Effectiveness
Profit maximisation	Quarterly Profits and market capitalisation	Long-term profitability	Medium-term profitability and sustainability
Business and Society Management	Business and Society Management	Business in Society Management	Business-Society Management

Source: Tulder and Zwart, 2006, p.143-146

3. Importance of Corporate Social Responsibility

Reputation enhancement, charging premium price for products, retaining high quality workforce are the key reasons to why firms should engage themselves in the corporate social responsibility practice.

With the help of social media and internet, nowadays consumers are well informed about the products they are purchasing. Now, consumers prefer "good and clean" products which are "clean and responsible" all the way from manufacturing to logistics to marketing. That is why companies realized that it is in their interest to be socially responsible firm (Hopkins, 2004).

Moreover, Baron (2001) pointed out that socially responsible firms seek socially responsible customers, who do understand and justify the pricing; thus, leading revenues to increase. Another advantage of engaging in and disclosing corporate social responsibility activities is so called "halo effect" which means that customers are drawn to other products of the company. Some companies do charge higher prices and therefore raise the profits (Madden et al., 2012).

Employees are another major reason to why firms should engage in corporate social responsibility. As suggested by Kinney (2000), both current and future

employees do have a concern toward corporate social responsibility and sustainability of their company. Reasons for this are: companies that do care about society, will take care of their employees even more. Likewise, since many studies did prove the relationship between corporate social responsibility and financial performance, profitable companies will offer a stable job. Stability of the job placement is a great worry of employees. Employee satisfaction also increases when a firm contribute to the society and the environment (Turker, 2009). It is suggested that employees of such firms are ready to accept lower wages, because their satisfaction comes from working for a socially responsible firm. Such company also has a financial advantage when lowering employees' wages (Abowd, 1989). In general, individuals have positive attitudes toward firms whose strategies and governance process include corporate social responsibility and sustainability objectives.

Yilmaz (2011) suggests that by implementing clean energy and recycling materials firms could reduce their direct costs. Firms could also improve worker's efficiency and reduce turnover, hence lower the costs which in turn will improve financial performance. Firms that are known for good corporate social responsibility practice have the best competitive advantage- good reputation. Finally, Yilmaz (2011) argues that socially responsible firms are trustable firms, and more likely have a better access to finances and receive appealing conditions on loans.

Moreover, corporate social responsibility guidelines became "Soft laws" demanded by the society, if not obeyed, company is threatened with bad reputation which will result in decrease of financial performance (Gond et al., 2010).

"Most health care professionals promise that if we engage in regular physical activity we'll look better, feel better, do better, and live longer. There are many who say that participation in corporate social initiatives has similar potential benefits. It appears that such participation looks good to potential consumers, investors, financial analysts, business colleagues, in annual reports, in the news, and maybe even in Congress and the courtroom. It is reported that it feels good to employees, current customers, stockholders, and board members. There is growing evidence that it does good for the brand and the bottom line as well as for the community. And there are some who claim that corporations with a strong reputation for corporate social responsibility last longer" (Kotler & Lee, 2005).

4. Corporate Social Responsibility Theories Summary

Just like corporate social responsibility approaches there are four main corporate social responsibility theories. Garriga et al., (2004) book is dedicated solely to corporate social responsibility theories, which are categorized in following four types: instrumental, political, integrative, and ethical.

According to Garriga (2004) "Instrumental Theories" focus on profit maximization through social activities, for example cause related marketing. Businesses that follow such theory in practice is solely seen as a wealth creation machine which are in search of more and more competitive advantages to grasp a wider market share and increase shareholders wealth even more.

Whereas "Political Theories" describes how an organization is seen as a citizen, who just like people have certain responsibilities toward society they live in. There is an invisible social contract between the organization and the society, organization fulfils the society's expectations from their operations. Hence the power of an organization arises from its political arena.

Third category recognized by Garriga (2004) are "Integrative Theories", as its name suggests integrates societal demands into its day-day business operations. Some approaches of this theory are public responsibility and stakeholder management. Businesses which incorporate this theory are not only responsible to their shareholders but other stakeholders as well.

Finally, "Ethical Theories" suggest that corporation should be integrated within a good society with ethical values. Moreover, being sustainable plays a major role for such corporations. Ethical theory is all about the universal rights to construct common good.

5. Shareholder Theory vs. Stakeholder Theory

Shareholder approach and stakeholder approach are the two fundamental and most popular corporate social responsibility theories. The main difference between them, is that the first sees stockholders only as a way for more profits, whereas the second one cares about their interests (Friedman, 1962), (Freeman, 1984).

a. Shareholder theory

Companies' first involvement in corporate social responsibility activity was indeed in voluntary work, which gave birth to many debates that expenses for such activities are much greater than potential financial benefit. This idea then evolved to Friedman's Shareholder Theory (sometimes referred to as Stockholder Theory) (Friedman, 1962). Milton Friedman suggested that the only aim of a company is the increase wealth of the shareholders. In 1970s issue of New York Times magazine, Milton Friedman said: *"the corporate executive would be spending someone else's money for a general social interest. Insofar as his actions in accord with his 'social responsibility' reduce returns to stockholders, he is spending their money. Insofar as his actions raise the price to customers, he is spending the customers' money. Insofar as his actions lower the wages of some employees, he is spending their money. (p. 1)"* Although it may be true, McAleer (2003) remarked that, through meeting the shareholder's needs, companies also did provide social benefit by increasing employment, paying the taxes, and providing goods and services. Shareholder approach is heavily criticized, the main argument is that companies seek short-term profit maximization sacrificing long term relationships and interests of stakeholders (Handy, 2002).

b. Stakeholder theory

Edward Freeman was the one who framed the Stakeholder Theory, his point of view was complete opposite of the Friedman's Shareholder Theory; Freeman believed if the needs of both shareholders and relevant stakeholders are met, they will in turn maximize the returns of the company (Freeman, 1984). He defined stakeholders as *"any group or individual who can affect or is affected by the achievement of the organization's objectives"*. According to Freeman & Hasnaoui (2011), Stakeholder theory is the one, where businesses are encouraged to participate in the corporate social responsibility; not solely to increase their financial performance but also to enhance company's reputation.

Lawrence et al., (2008) have separated stakeholders of a firm in two categories, namely market stakeholders and non-market stakeholders. They believe that, depending on which category the stakeholder from, relationship with him will differ. Market stakeholders are the primary group with which the firm interacts to provide

goods and services thus generate profits. Market stakeholders are illustrated in Figure 2.

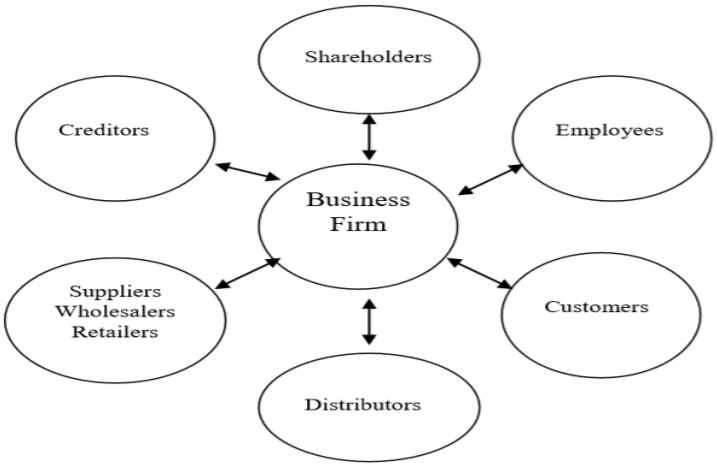

Figure 2 Market Stakeholders (Lawrence et al., 2008)

Those stakeholders that do not participate in direct economic transactions with the firm are Non-market stakeholders. However, they do have an influence for or influenced by the firm. Non-market stakeholders are illustrated in Figure 3. Figure 3 showcases the secondary stakeholders of a business firm. These stakeholders are less affected by the firm's corporate social responsibility actions.

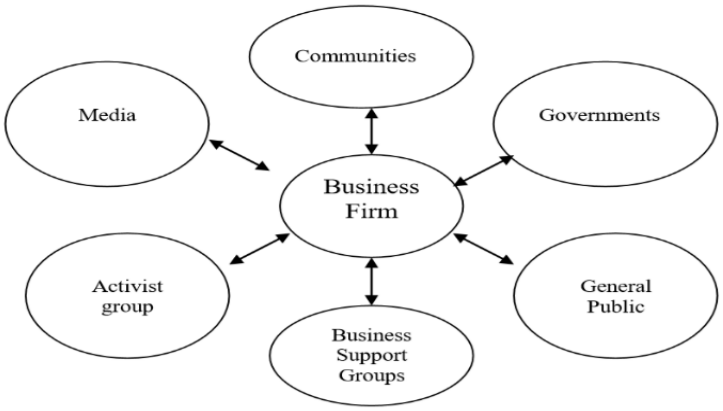

Figure 3 Non-market Stakeholders (Lawrence et al., 2008)

Managers who support Stakeholder Theory make sure that ethical rights of stakeholders are respected and met. Understanding the needs of stakeholders of any level will enable company to be effective and efficient, sustainable, and socially

responsible. Improving company-stakeholder relationship, company will increase its reputation which in turn have a positive effect on finances.

Uncontrollable use of natural resources, growing population, unfair labor conditions and other unethical behaviors all led to a humanism in business (Pirson & Lawrence, 2010) Business paradigm had happened in recent decades, where the companies who supported Shareholder Theory had transferred to supporting the Stakeholder's Theory. Corporations are now expected to benefit society and the environment with the profits they earn (Yuan et al. 2011). Companies that are listed in America's Fortune 500 are all engaged in some sort of corporate social responsibility events, yet many of the executives do not view engaging in corporate social responsibility activities as a core practice of the business (Yuan et al. 2011).

6. Corporate Social Responsibility Practices

Kotler and Lee (2005), in their book "Doing the Most Good for Your Company and Your Cause" have highlighted five most common corporate social responsibility practices and have provided hundreds of real-life examples. Below practices do fall under the ethical and philanthropic responsibilities on the Carroll's pyramid of corporate social responsibility, assuming that economic and legal responsibilities are met.

a. Cause promotions

A company is providing resources for a good cause, i.e. increasing awareness, raising funds, and encouraging volunteers through persuasive communications; causes may include battling global warming and hunger, building hospitals and schools, addressing diversity, and fighting against animal testing and more.

b. Cause-related marketing

Company contribute a certain percentage of a sale to a good cause; it is usually performed for a specific product and limited time. Additionally, corporation partners with non-for-profit organization, both to donate and increase the sales.

c. Corporate social marketing

The campaign is targeted to improve the overall well-being of the society by enhancing health care, increasing safety, and cleaning up the environment. This practice can be directly performed by the organization through its PR department.

d. Corporate philanthropy

Is the most common practice of corporate social responsibility, corporation fulfill their philanthropic duty through direct donations to charities and causes. This comes in form of cash which is more traditional approach, as well as providing goods and services, expertise, and giving free access to corporation's facilities and equipment.

e. Community volunteering

Corporation is engaged in volunteering activities for the community, corporation also urges their stakeholders (franchise and retail partners to participate in volunteering); or employees may also choose their own volunteering activities and receive support from the corporation (Kotler & Lee, 2005) .

7. Measuring Corporate Social Responsibility

Until now, there are no internationally recognized corporate social responsibility standards for social and environmental reporting; unlike for example US-GAAP and IFRS standards for financial reporting or ISO standards for quality and safety of products. Hence majority of corporations disclose their social responsibility reports on their websites. Although there are international corporate social responsibility ratings agencies which evaluate corporation's non-financial reports by social, environmental, economic, and corporate governance criteria to derive some sort of sustainability scores. One score is for the company itself, and the other serve as a benchmark of where the company stands in comparison to other regional or international companies.

KLD Rating is an online subscription base database that was founded in 1988. First ever Social Index Domini 400 was created by KLD, as well as five sustainability indices on US capital market. KLD rating is based on following main

branches that are: environment, society, employees and suppliers, customers, governance, and ethics.

EIRIS (Ethical Investment Research Service) is an international research company that was founded in 1983 by several churches and charity organizations. EIRIS aims at promoting socially responsible investments, therefore it provides its clients with all required information. Using 250 criteria's, EIRIS analysis is divided into three main categories. Governance issues: Board practice, codes of ethics, ethical risk management and women on the board. Environmental issues: environmental management, environmental policy, environmental performance, environmental reporting, ozone-depleting chemicals, pesticides, pollution convictions, tropical hardwood, various product/process impacts and water pollution. Social issues: alcohol, community involvement, equal opportunities, gambling, health and safety, human rights, weapon production and sale, supply chains, tobacco, trade unions, employee participation and training.

A. Business Ethics, Corporate Governance, Corporate Sustainability and Corporate Social Responsibility

1. Business Ethics

Business ethics is a core element of corporate social responsibility. Ethical behavior of a business is expected by the society and may not be required by the law. It is basic practices of the firm that are compliant with some sort of the ethics code, or code of conduct. Firms should show their integrity and morality, which are not sacrificed while achieving corporate goals (Carroll. 1991).

According to (Carroll, 2000), three types of moral management are defined further in more detail: Immoral management is a harsh behavior of management toward ethical and moral behavior. Management oppose to ethicality as they perceive it as a barrier to profitability and deny any moral conduct. Moral management: managers comply its business operations, decisions, and policies with moral standards. Moral managers do follow the law and do take an extra step in doing the "right" things. As compared to the immoral managers, moral managers do aim for success only if it is in the ethical boundaries. Amoral management is when

management believes that morality and business are completely different worlds, and it is not their responsibility to act morally. There are also unintentional amoral managers, who have no idea that their actions have some sort of ethical consequences (Carrol, 2000).

Freeman (2004) as a strong advocate of social responsibility argues, that business and ethics cannot be separated in any case, as business is a human institution which must serve the common welfare.

2. Corporate Governance

Corporate governance has been a topic on the agenda since the 1990s, both in theory and in practice, main events happened that year; United Nations's "Earth Summit" on sustainable economy held in Rio de Janeiro, as well as "Governance and Development" issued by World Bank.

Wayne Visser (2010) states that the common definition of governance is 'the manner of directing and controlling the actions and affairs of an entity'. Both public and private entities must be controlled equally, thus governance of companies is called "Corporate Governance". Corporate governance is defined as a set of rules, practices and processes that govern businesses. Law, regulations, and compliance requirements ensure that corporation is fair with shareholders, consumers, competition, and employees (OECD, 2005). Main bodies which ensure business is following certain corporate governance rules and codes are board of directors and top managers, however employees and other stakeholders do also play a role in compliance activities.

The Organization for Economic Cooperation and Development (OECD) defined corporate governance as "a set of relationships between a company's management, its board, its shareholders and other stakeholders (as shown in Figure 4) (OECD.org, 2020)

Pintea M.O and Fulop M.T (2015) define corporate governance as "Leadership, direction, control, transparency, and accountability attributes lie at the heart of sound and effective corporate governance"

Globalization, regulated securities markets, laws protecting against fraud, regulated audit and disclosure requirenments; each played a strong role in building

Corporate Governance which can be classified into four components: fairness, transparency, accountability, and responsibility (Guo Rui et al., 2015).

Figure 4 ilustrates the relationship between shareholders, board and management in the corporate governance system.

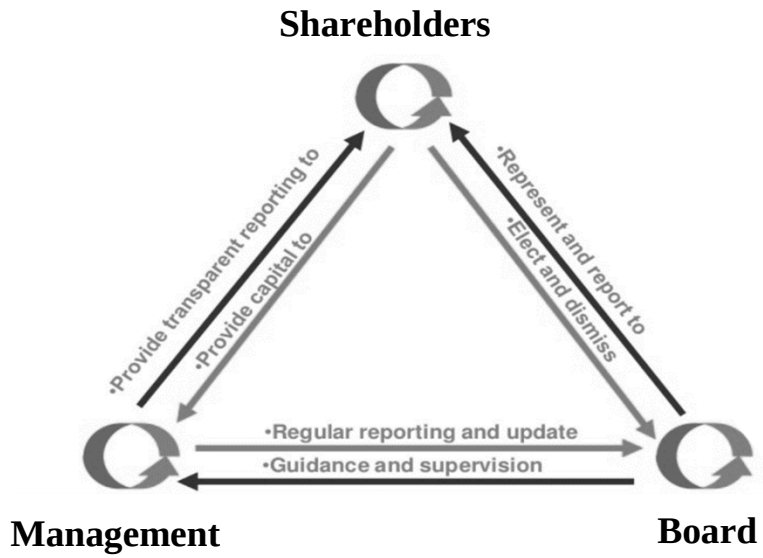

Figure 4 Relationship between Shareholders, Management and Board. Source: International Finance Corporation (Aliyev,2014)

a. Importance of corporate governance

It is very essential for any given country to have strong corporate governance practices due to several reasons: boosting investor's confidence about transparency and validity of financial disclosures, so that the capital will not flow to other countries with stronger corporate governance reputation. As a result, firms in a weak corporate governance regulated country will suffer.

Additionally, corporate governance focuses on long-term economic and environmental sustainability, good corporate governance enables corporations to use their resources appropriately (United Nations Conference on Trade and Development, 2003).

A research conducted by Georgia State University shows that public companies in the US who have an independent board of directors have better financial performance (higher returns on equity, better profit margin). There are endless benefits from having good corporate governance practice, among them

attracting honest employees who care about the integrity of the firm, it increases morals of existing staff, as well as banks preferring to lend money to companies with good corporate governance reputation (Almadani, 2014).

b. Evolution of corporate governance in united states

Bengt & Steven examined corporate governance in three different eras.

1st Era – 1960-1970 managerial capitalism. Owners had little or no power, managers were not focused on increasing shareholders wealth.

2nd Era – 1970-1990- Investor capitalism. Shareholders gained some influence over big decisions. Due to high foreign competition, high interest rates and stagnant stock market, US public companies had to borrow up to 500 billion US dollars to finance takeovers.

3rd Era – 1990-now Shareholder's value. Managers regained control, petitioned to the goverments for making anti-takeover regulations. In 1990s many giant companies crashed due to violating the regulations (Bengt & Steven, 2001).

The interest in corporate governance has been rising and falling. However in the moments of highly publicized corporate events, both public and governments revive their interest on the subject. For instance, in the beginning of on 2000s, several huge US companies has been caught commiting fraud, those are WorldCom and Enron.

These events resulted in the Sarbanes-Oxley Act 2002, the act imposed stricter rules for bookkeeping as well as harsh criminal penalties for violating the rules. Fraudulent activities of the above and several other public companies made investors lose their confidence in public companies. Therefore the goal of the Sarbanes-Oxley Act was to regain that confidence.

c. Cadbury Report and corporate governance

One of the first codes was written by Adrian Cadbury in 1992 in his "Cadbury Report". Some of the guidelines are compulsory, if not followed, the company will be responsible before law. There are solid (comply or else…) or flexible (comly or explain…) guidelines that a corporation must follow. Cadbury suggested that responsiblities must be devided among top management of the company, so that no one has "too much power" (Cadbury, 1992).

It might be easier for a complience officer to “tick the boxes” in the “comly or else” method, without using the mind and exeptions; as every company’s operations and the evnoronment are different. Yet the board should come up with the best practices of corporate governance assuming their diveristy and for the best interests of the company.

Main points of Cadbury Code (1992) covers:

- Division of power and responsibilities, same person cannot be a CEO and a Chairman of the Board at the same time
- The majority of the board must consist of directors from outside
- The majority of remuneration committee for Board are made of non-executives
- The Board should appoint at least three non-executive directors for Audit Committee.

After the Code has been published and placed into power, companies listed on London Stock Exchange were required to “comply or explain...”. This was done to find out to what extent companies follow the code and if not, what are the reasons. Over time, the amount of explanation and the criticism for not complying have been changing over the time, yet the Cadbury Code had become the basis for UK corporate governance practice (Cadbury, 1992)

d. OECD principles of corporate governance

The Organization for Economic Co-operation and Development (OECD) was founded in 1960s with 20 participating countries (including Turkey). According to 2020 data there are 36 member counties. Initially, goal of such co-op was to stimulate world economy and social prosperity through trade and aim for global sustainability.

The initial core principals of OECD were following:

1) Contribute to the world economy by making member countries financially stable, reach highest sustainable growth, full employment and raise standards of living.

2) Help both member and non-member countries in the economic development process.

3) Expand world trade intact with international norms that is multilateral and without discrimination (OECD, 1999).

OECD has changed its concept from mainly economic aspect to “Better lives initiative”. The goal is to make the world better for everyone and prepare the world for tomorrow. OECD work with government and policy makers as well as public to establish international standards to social, economic, and environmental issues all over the world. Some of the key objectives of “Better Lives Initiative” are: promote local and regional development, improve health and safety, preserve natural environment protect consumer, improve work-life balance, improve education system and skills of population, guide economic reforms, promote responsible business conduct, fight corruption, and combat tax avoidance (OECD.org, 2020). OECD also has an enormous library of resources, country specific reports, reports addressed to policy makers, and other reports which touch upon every aspect of life. OECD is a “*unique forum and knowledge hub for data and analysis, exchange of experiences, best-practice sharing, and advice on public policies and international standard-setting*” (OECD.org, 2020)

e. International corporate governance network (ICGN)

International Corporate Governance Network is a non-profit international corporate governance organization, which runs on member subscriptions and conference fees; it was established in 1995 in UK.

The main difference from OECD is that ICGN partners with corporations rather than country. Nowadays, it is present in more than 45 countries and manages over 26 trillion US dollars. Mission of ICGN corporation is to promote effective governance standards to achieve global economic sustainability.

Some of the key activities of ICGN include (ISGN, 2020):

- Provide reliable investor opinion on governance and stewardship to policy makers
- Create a global network of investors and companies to foster long-term value creation, by hosting conferences
- And provide education to enhance professional skills in governance

There are only two Turkish companies that partner with ICGN and they are Sabanci University and TKYD Corporate Governance Association of Turkey (ISGN, 2017).

f. Best practice

Best corporate governance practice is conducting internal audit, including independent board members, following board and capital structure guidelines, OECD and ICGN principles serve as a international source for best practice (OECD, 1999; ICGN,2017)

At least half of the board is made up of non-executive directors (NEDs). They place strategies, represent shareholders, make sure that executive directors make decisions in the best interest of shareholders and ensure the risk management system is operating. Additionally, they ensure that the board has right people and correct number of people. Chair of the board and CEO are separate people; if one person would be in charge to run two of the major jobs in the business that would be just too much work, and too much power in just two hands; this might be an issue for shareholders. The ideas of both CEO and the chair create a synergy that would hopefully make a business better off as a result.

Board subcommittees are made of non-executive directors. Audit committee- review the financial statements, clearance committee of internal and external audit, consist of three non-executive directors. Nomination committee take care of the structure of the board, they make sure the right and diverse people are in the board, whether internal or external people should join the board. Remuneration committee controls the payments for board directors. Payments may be fixed salary, performance related bonus or mix of both. The payment must be just right to encourage directors for long term sustainable success of the company and its shareholders; and avoid unnecessary risks. Risk committee (sometimes)- most of the company's risk assessments are done by audit committee. Yet some would prefer a separate committee with a specific focus on risk management. Risk committee would generally include executive directors of the business.

In summary, governance codes focus on LEARR concept

- Leadership – separation of CEO role from chairman role
- Effectiveness of the board - enough time and information are given to make key decisions
- Accountability – Board of directors are responsible for the business performance and financial transparency
- Remuneration – Board of directors are paid appropriately

- Relations with shareholders – taking annual general meeting not as a legal responsibility but as a responsibility before shareholders to represent their best interests (Financial Reporting Council, 2016).

g. Corporate governance theories

Theories that are found in the corporate governance literature include: Agency, Stewardship, Stakeholder, Resource Dependency, Social Contract, Legitimacy and Political Theories, among others. First four theories will be discussed below since they are most used.

i. Agency theory

Most literature on corporate governance cover Agency Theory, in fact this theory gave birth to much of corporate governance studies (Mallin, 2004). In short, it is a relationship between agents (managers, partners) and principals (shareholders) where board of directors' act as a monitoring body which ensures the interests of both parties are aligned.

Jensen and Meckling (1998) definition of agency theory: "We define the agency relationship as a contract under which one or more persons (the principal(s)) engage another person (the agent) to perform some service on their behalf which involves delegating some decision making authority to the agent." As humans, managers are self-interested, thus the managers who behave as agents are contractually bounded to principals (shareholders) to act upon shareholders best interest, which is wealth maximization, but also fulfilling their own interests at the same time (Deegan, 2004).

Role of accounting also plays a great role, if the wages and bonuses of agents directly depend on the financial performance of a firm, then increasing profits would be the prime aim of an agent. Additionally, as suggested by (Jensen & Meckling 1998), cutting agency costs which include: agent monitoring costs, and loss of welfare that resulted from managers decisions.

Spanos (2005), claims that ownership characteristics play a significant role in agency problem. In case structure of the firm is dispersed- investor that disagrees with management decisions may exit the company, however this action will

negatively affect the share price. The second case is when the structure is concentrated ownership, in this case large shareholders control behavior of the agents to gain personal control.

ii. Stewardship Theory

The following theory is a reaction to the agency theory; however, they differ fundamentally from each other. In stewardship theory, managers act as a good steward who are trusted and who has the same objectives as shareholders (Donaldson & Davis 1991). Stewardship theory is derived from social psychology and sometimes compared to McGregor's Theory Y, whereas agency theory is compared to Theory X – where managers are self-serving individuals and need to be controlled. On the other hand, Theory Y suggests that managers are trustworthy, and they serve the organization and its shareholders (Davis, Schoorman & Donaldson 1997).

Smallman (2004) argues that if a steward maximizes the wealth of owners, he in turn will also receive greater benefits. Stewardship theory claim strong connection between the manager and success of a company, is steward improves performance of a company he satisfies most of the stakeholders. Additionally, stewards act as a middleman in resolving the tensions and issues between different parties hence stewardship theory suggest a balanced governance. Stewardship theory focuses on empowering employees rather than controlling, even the position names are changed instead of having a non-executive director, they have specialist executive director (Clarke 2004).

Stewardship theory is successful if management and board of directors (BOD) are on the same page, however there is one limitation, it is when their interests are not aligned.

Cases when interests are not aligned:

1. When management act as an agent but BOD thinks they act as stewards, then management take advantage and receive a greater agency cost.
2. When management act as a steward but BOD think they act as agents, then there is a mistrust between them, hence the effectiveness of business operations decreases.

iii. Stakeholders theory

This theory revolves around satisfying the interests of diverse stakeholders of a firm, to say in short. Since the firm is no longer an instrument of solely owners, it does exist in a society, hence has a responsibility towards it (Abrams, 1951). It is argued by Coleman (2008) that Stakeholders Theory is better at explaining the role of corporate governance, since the firm doesn't only constitute of managers and owners, but other relevant stakeholders do complete a puzzle of a firm. This theory is also more prominent than Agency as wider environment of a company is crucial for its success and sustainability.

Recent business models convert stakeholder's (suppliers, employees, and investors) inputs to a saleable form to a customer which is transferred back to the shareholder. On the other hand, Jensen (2001) critique that performance of the firm should not be measured by the stakeholder's gains.

Stakeholders can be classified into three categories (Rodriguez et al., 2002)

1. Consubstantial – they are essential for the business's day to day operations. It includes shareholders and investors, partners, and employees.
2. Contractual – these stockholders are bounded with a contract. Includes: Financial institutions, suppliers, and customers.
3. Contextual – stakeholders that do play a role in the acceptance of a business activity in a society, they represent the environment. Includes: local administration, society, influencers.

iv. Resource dependency theory (RDT)

First appeared in the book "The External Control of Organizations: A Resource Dependence Perspective" (Jeffrey Pfeffer & Gerald Salanick, 1978). Main issues that affect resource environment are: Where are the resources? How important are they? How abundant the resource is? Who is giving these resources? And how interconnected the organization is in supply and demand of these resources (Donaldson and Davis, 1991).

Rather than looking at the internal controls of the company, resource dependency theory focuses on outside resources that company needs to run a business. It links the outside resources and the company; the company hence becomes interdependent with organizations that provide key resources for their daily

operations. Also sometimes called network governance between organizations. Whereas, the role of board of directors is to provide access to such resources, they work on decreasing resource uncertainty; because directors have greater opportunities to gather networks and information, form coalitions and change strategies to survive. According to Hillman et al., (2000) for managers to manage the firm effectively it must have minimum uncertainty.

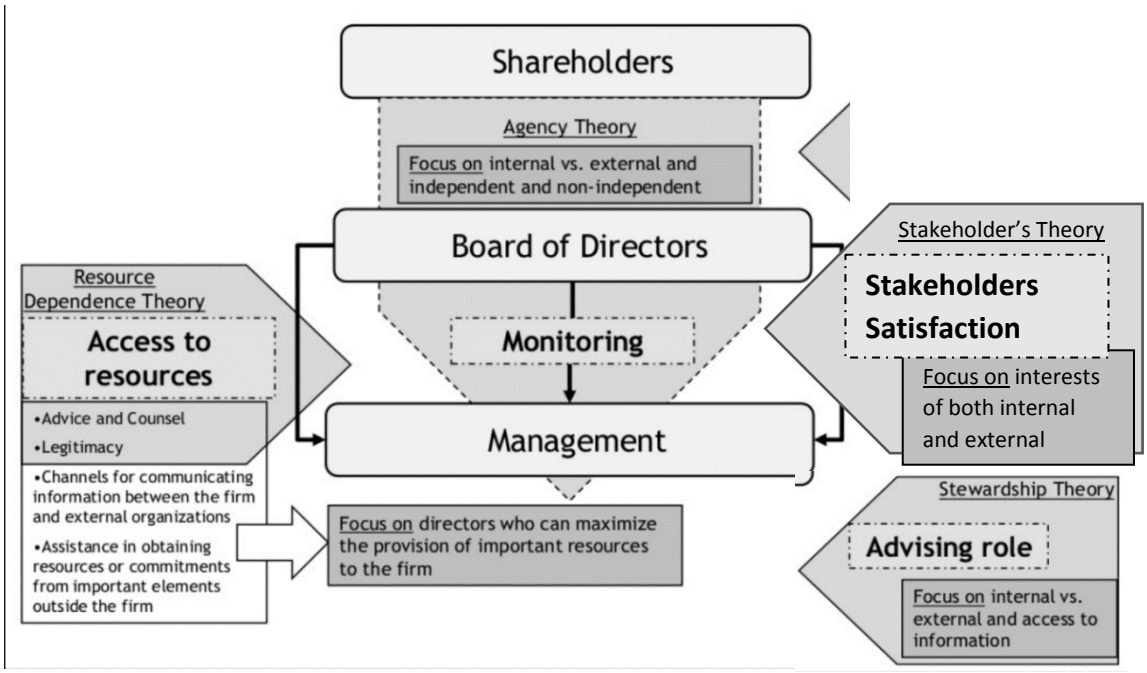

Figure 5: Corporate Governance Theories Source: (Wan, 2012) and altered by the author

Agency theory is a cornerstone for all the other theories (as shown in Figure 5), additionally it became a basis for many governance standards and codes such as OECD and ICGN. It is also important to point out that other theories should complement agency theory and never fully replace it or integrate several theories in one practice as suggested by Roberts., et al., (2001) and Stiles (2001)

h. Corporate governance in Turkey

Corporate governance in Turkey became a hot topic for discussion after both the Cadbury Report and OECD principles were disclosed to the world. Yet, corporate governance in Turkey came in practice only after its big financial crisis in 2001; whole financial system collapsed, banks and other financial institutions went bankrupt. Since then, Turkey was in need for strong reform of regulations in the sector. Based on OECD principles, a non-governmental Turkish Corporate Governance Code "*Turkish Industry and Business Association" (TUSIAD, 2002)* was established in 2002. TUSIAD is a voluntary organization of leading entrepreneurs and executives, established in 1971, focuses on many areas and sectors of economy, cooperating with 4500 member companies (much like ICGN) Comparable to OECD, issues related to board member structure, its operation and relationship with managers and other stakeholders were emphasized.

Following the establishment of the TUSIAD Governance code, another one was published the next year. In 2003, later updated in 2005, Turkish regulatory body Capital Markets Board (CMB) published "CMB Corporate Governance Principles". This code encompassed other areas of corporate governance which were not discussed in the TUSIAD code, they included rights of both shareholders and stakeholders, transparency, disclosure, and independent audit guidelines (CMB, 2003, 2005). The code was created, though it was not obligatory for public companies to comply until 2011, since then all public companies, who were not excused, must publish a compliance report stating whether they have complied, if not, reasons to maybe why they have not complied (Levent, 2019).

Another major Turkish corporate governance milestone was accomplished by regulatory body of stock exchange in Turkey "Borsa Istanbul (formerly the Istanbul Stock Exchange). In 2007, they have created the Corporate Governance Index (XKURY), to encourage managers to comply, assure investors of company's integrity and increase company's reputation. (BIST, 2019). Companies which would like to be included in the index must submit their compliance reports and be analyzed by independent rating agency (Levent, 2019).

Good corporate governance ensures that interests of shareholders are satisfied, company that is accountable, transparent, and honest will be trusted by the owners

and investors. Companies which follow the best practice of corporate governance do also gain trust of other key stakeholders, which in turn help the corporate sustainability.

3. Sustainability and Corporate Sustainability

In 1987 The World Commission on Environment and Development published "Our Common Future" also known as "Brundtland Report". The emphasis of the report laid on relationship between environmental degradation and economic development.

The debate was a food for thought on whether economic growth should be put above environmental protection. The report suggested that a tradeoff exists between economy and ecology, meaning one can be achieved at the expense of the other. Report propose that there should be a balance between developing the economy while preserving the natural environment. Hence the most famous definition of Sustainability was defined in the report as "meeting the needs of the present, without compromising the needs of future generations" (WCFD, 1987). Sustainability ensures availability of resources for generations to come, if the usage of the resources today exceed the capacity to regenerate supply for future, then we are borrowing from the future, thus future society's needs will not be fulfilled.

Though in recent years, the term sustainability does not only refer to natural environment but also it is about reducing negative effects a business has on society, economy and of course on environment. Meadows (1992) explains that sustainability is not a ready-made guide with specific rules, it is about asking the right questions. Recently society started demanding business to change their policies from classical economical to sustainable.

Corporate sustainability, on the other hand is defined as "meeting the current needs of stakeholders without compromising the needs of future stakeholders". For the companies to achieve long term corporate sustainability, not only they need to concentrate on economic capital, but also natural and social capital (Yilmaz, 2011).

According to Visser (2010), firm's expected life is short, after oil crisis of 1970, many industrial companies were worried if they could make it after oil resources will be vanished.

Companies now, are expected to live around 40-50 years, very rarely companies do survive up to 150 years. One of the main reasons for them to fail is capital insufficiency. Visser (2010) suggests that for the company to be sustainable, not only it needs to focus on increasing own life, but focus on improving the longevity and quality of the environment it operates within. These areas include: ecosystem, society, economy and financial market.

Another imporatant event in the development of corporate sustainability was The Triple Bottom Line approach which was introduced in 1994. It focuses on "People", "Planet" and "Profit" principle; widely adopted by Global Reporting Initiative (GRI) to access companies for sustainability. Even though sustainability poses a great advantage in the long term, it is a challenge for businesses, as they are now doing the activities that goverments wereshould be performing, in addition access to internet increased the sustainability focus.

Being sustainable is closely related to business ethics, the idea is to balance demand and supply of resources on short and long-term basis. Achieving success in short term should not be at the cost of long-term survival. Investing in green technology, long lasting relationships, and using green energy to name a few, firms will not only be able to survive in the long run, they will also succeed (Bansal, 2015).

a. Corporate sustainability index on Borsa istanbul

Almost every stock market in the developed countries has a sustainability index. First ever sustainability index was created in 1999. However, Turkey was a late bloomer in this regard. Borsa Istanbul- Turkish Stock Exchange platform, with the help from rating agency EIRIS launched a sustainability index (XUSRD) in 2014. Each year, companies listed on Borsa Istanbul (other than BIST 50-top 50 best performing stocks), send their request to be evaluated by EIRIS and included in the index. EIRIS uses publicly available information of the company and rate the company on environmental, social, and corporate governance areas. According to "BIST Sustainability Index Research Methodology" report, companies are evaluated by following criteria:

1-Environment

2-Biodiversity

3-Climate Change

4-Board Practice

5-Countering Bribery

6-Human Rights

7-Supply Chain

8-Health and Safety

9-Banking Criteria (for Banks)" (BIST, 2020)

b. Future of corporate sustainability in Turkey

Turkish Sustainability Code is globally accepted standard for transparency and a platform where companies will be able to disclose their corporate sustainability and responsibility reports based on 20 important sustainability criteria. As of Feb 2020, when writing the thesis, the code is not ready yet, it is still in the consultation stage. Türk Sürdürülebilirlik Kodu office has been working on the code from 2018 with the help of international team to adapt the criteria to Turkish market (What is the Sustainability Code?, 2018). Below are twenty criteria based on which the firms will submit their sustainability reports and qualify as a sustainable company. It is important to mention about the creation of such code in Turkey, because being sustainable is not a trend, it is future of successful companies.

Criteria:

1. Strategy. Whether the company has a sustainability strategy in running its business, and by what means does it comply with sustainability standards.
2. Materiality. Activities of that company that has a material effect on sustainability are disclosed, and how these effects both positive and negative are affecting operations of the company.
3. Objectives: This disclosure includes company's overall goals on sustainability, be it qualitative or quantitative or both.
4. Depth of the Value Chain.
5. Responsibility of the management in terms of sustainability.
6. Rules and Processes: What and how sustainability rules are followed in everyday operations.
7. Control: In this criteria company discloses how sustainability processes are integrated and evaluated.
8. Incentive Schemes: This disclosure includes the long-term value creation in case of achieving sustainability targets.

9. Stakeholder Engagement: company also discloses how significant stakeholders are included in the sustainability strategy of the company.
10. Innovation and Product Management: The following criteria is accessing the company's ability to use resources wisely in their product innovations and services, managing product sustainably all the way through the life cycle.
11. Use of Natural Resources: here the company discloses activities where natural resources such as water, energy, soil, and others are used.
12. Resource Management. Company's ability to manage resources efficiently, for example exploiting green energy is assessed.
13. Climate-Relevant Emissions: According to Greenhouse Gas protocol, each company discloses its emissions and goals on how to reduce them.
14. Employee Rights: the company is accessed on how it includes staff into a sustainability strategy and how it treats its employees based in national and global standards.
15. Equal Opportunities: factors like equal pay, work-life balance, diversity in the workplace, and others are disclosed.
16. Qualifications: company discloses how they adapt to changes in the demography and how the promote employability.
17. Human Rights. This criteria accesses company's strategies towards fighting for human rights.
18. Corporate Citizenship: what activities does the company do in the region it operates.
19. Political Influence. All activities related to government are disclosed.
20. Conduct that Complies with the Law and Policy: how the company measures and treats law misconduct is disclosed. (What is the Sustainability Code?, 2018)

4. The Relationship Between Corporate Social Responsibility, Corporate Governance, and Corporate Sustainability

Recent studies started to link corporate social responsibility and sustainability. Hopkins (2016) in his book on corporate social responsibility and sustainability argues that nowadays sustainability advances as "new area of knowledge" and that

sustainability becoming rather a norm than a necessary action. In his point of view, sustainability influences the corporate social responsibility and not the other way around. "*Corporations are trying to implement some aspects of sustainability to become more sustainable themselves; therefore, the concept of corporate social responsibility is evolving, transforming and becoming stronger due to sustainability, rather than the concept of sustainability becoming stronger because of the corporate social responsibility*". Corporate social responsibility is costly at the beginning and might not result in immediate profits, however corporate social responsibility is a building blocks for sustainability and long-term profitability. The author also mentions that sustainability is an aim, whereas corporate social responsibility is just a process to achieve it.

According to "Triple Bottom Line Sustainability" is "achieved as corporations achieve capability in the Social, Environment and Economic aspects of their business, thus the total Outcome of corporate social responsibility equals Sustainable Development on both local and global levels".

Corporate governance has two views: narrow and broad. Narrow represent the agency theory, where managers are focused primarily on increasing the wealth of shareholders. This view has a negative relationship with corporate social responsibility. While broad view represents Stakeholders theory, and this is where corporate social responsibility and corporate governance do overlap. Objectives of both corporate social responsibility and corporate governance is to satisfy the needs of all stakeholders.

Some of the social and ethical issues which corporate social responsibility is battling are environmental pollution, human rights, stealing, misuse of company's property, underpaying wages, to name a few. While corporate governance focuses on board-stakeholder-shareholder relationship, accountability, and business ethics. As we can see these are also dimensions of corporate social responsibility. Young & Thyil (2014) named it as: "*Corporate social responsibility within corporate governance or corporate social responsibility as an extended corporate governance"*, because board of directors extends its responsibilities from shareholders to other key stakeholders.

Corporate social responsibility focuses on external control while corporate governance on internal, yet both work on the same objective to reduce company's risk and make it sustainable (Pintea, 2015).

B. Findings of Other Studies on Relationship Between Corporate Social Responsibility and Corporate Financial Performance

Studies on the relationship between corporate social responsibility and corporate financial performance show contradicting results and is much debated in international literature. Nevertheless, these types of research are very important for current and future policy makers and businesses of all levels.

There are three main conclusions on the relationship between corporate social responsibility and corporate financial performance. First, that investing in social activities reduce financial performance of the company. Second group argue that vice-versa engaging in corporate social responsibility have boosted firms' financials. Third group of results do not find a link between the two.

Carbon Disclosure Project (CDP) has conducted a research in the year of 2014 on whether publicly traded companies (S&P 500) who engage in corporate social responsibility activities (environmental protection in particular) have seen an increase in profitability. They have proved that there is indeed a positive relationship between corporate social responsibility and profitability, corporations which included environmental sustainability in their practice were 18% more profitable than those who didn't; and 67% higher than those who didn't even disclose their environmental emissions. Marks and Spencer gained 50 million pounds in profits form recycling more than 90 percent of the waste (Shundarnagin, 2014).

The Committee Encouraging Philanthropy (CECP) in 2007 survey, reported that companies listed in UK and US Fortune 100 invested about 50 million US Dollars in Philanthropy, did better financially the following accounting year.

The following conclusion is in line with shareholder's approach and managerial opportunism approach. Spending money for social causes are seen as unnecessary expenditure that otherwise would have resulted in higher profits (Preston and O'Bannon, 1997). This perspective also suggests that if a company is more profitable than expected, higher engagement in social activities are observed

This perspective suggests that corporate social performance and corporate financial performance are interconnected, and it is hard to trace which on the two caused the other phenomena. There was a study conducted by Margolis and Walsh (2003) who analysed 131 previous studies on the relationship between Corporate Social Performance and Corporate Financial Performance, they have reached to a non-definite conclusion. About half of the studies had a positive relationship, the rest had negative or no relationship.

Solomon, et al., (1985) concluded that money spent on social activities are compensated by increased employees' productivity. The researcher was particularly interested in finding the studies of the last 10 years, below are studies that found a positive relationship between two factors.

Miller (2016) also found a positive relationship between two factors in banking industry in USA. Dependent variables represented financial indicators such as ROA, ROE and EPS, researcher also noted that the strength of the relationship varied over time.

Muriithi (2016) found positive relationship measured by ROA, however no relationship measured by total shareholder return.

Creel (2015) in his study concluded that those firms submitting corporate social responsibility reports do have higher quality of audit and have a higher ROA and less likely to make losses.

Hamilton (1995) studies the relationship between social performance disclosure and stock price performance of 463 US companies, as a result found a negative relationship.

Whereas Hart and Ahuja (1996) on the other hand found a positive effect of social performance disclosure on financial performance measured by ROA, ROE and ROS. Similar study with same dependent and independent variables was conducted by Seifert, Morris, and Bartkus (2003) for US market, yet the results were statistically insignificant.

Goll and Rasheed (2004), examined the relationship between discretionary social responsibility and firm's Return on Assets and Return on Sales; the study was conducted for 62 US companies and a positive relationship is found.

Barnett and Salomon (2006), cover 26 years of data from 60 companies measuring social performance - financial performance relationship, study suggests positive relationship between.

Studying the effect of corporate social responsibility performance on stock returns of 296 UK firms Brammer et al. (2006), found a negative correlation between the two factors. Luo and Bhattacharya (2006), research on the impact of corporate social responsibility rating on Tobin's Q and stock prices of 452 US companies had positive corporate social responsibility - corporate financial performance relationship.

Ilacqua's (2008) key finding of 168 biotech companies from 2003-2006 showed an increase in profit of 98 companies after corporate social responsibility activities, while 69 showed a decline and one indicated no change

Baron et al. (2009), have concluded in their research that the relationship between these two variables depend on the industry in which firms operates. They found a negative relationship between corporate social performance and corporate financial performance in manufacturing industry while a positive in commerce and services sectors.

Makni et al. (2009), examined 179 Canadian companies to test the connection between corporate social responsibility and financial performance measured by ROA, ROE and Tobin's Q; the result of the study was negative.

Table-3 lists recent literature (from 2016-2018) on the relationship between corporate social responsibility and corporate financial performance of firms from different industries and around the world, but majority of firms are from USA.

Blasi et al. (2018) found some common positive patterns between corporate social responsibility and corporate financial performance (ROE, ROA, ROI, ROS), sample size included 988 Italian firms with data of 12 years.

Beck et al. (2018) examined the relationship in 116 public companies in different countries: UK, Australia, and Hong Kong; study resulted in significant positive relationship between corporate social responsibility and corporate financial performance.

The relationship was studied in construction industry of Hong Kong was examined by Wang et al. (2016), results suggest positive correlation of ROA, EPS

and ROE and corporate social responsibility disclosure MSCI. Whereas Yoon and Chung (2018) study focused on 59 US firms in hospitality industry, yet no significant results were found.

The study with the biggest data set so far, with 12,294 observations from 1992-2005 was carried out by Jegoo et al. (2018); 3 different US databases were used; researchers came with neutral result of the corporate social responsibility - corporate financial performance relationship.

Hasan et al. (2016) studied 986 US companies in manufacturing industry with 17 year data set; corporate financial performance was measured by Tobins Q, ROA, and total factor productivity, whereas corporate social responsibility was measured by merging Compustat and KLD databases; resulting in positive relationship.

Similarly, Yang and Baasandorj (2017) studied the relationship in airline industry and found a positive effect of corporate social responsibility disclosure on ROA and Tobin's Q of airline companies.

Hategan and Curea-Pitorac (2017) also observed a positive corporate social responsibility - corporate financial performance relationship in Romanian public companies; ROA, ROE, Total asset turnover, leverage, price to sales ratio, price to book value ratio were used to measure financial performance while charitable contributions measured corporate social responsibility activity.

Likewise, Taylor et al. (2018) came to a significantly positive corporate social responsibility - corporate financial performance relationship of 432 US publicly traded firms; financial performance was measured by Tobin's Q when corporate social responsibility was measured by ESG scores for environment, social and governance activities.

Mišura et al. (2018) assessed the relationship in Croatia's Tobacco industry and found no significant corporate social responsibility - corporate financial performance relationship. Correspondingly, Theodoulidis et al. (2017) analysis of tourism industry of 683 firms in Italy and UK had no significant corporate social responsibility - corporate financial performance correlation. Likewise, Akisik et al. (2017) found no significant corporate social responsibility - corporate financial performance relationship (see Table-3)

Some of the literature in Turkey written in English are by:

Yilmaz (2011) focused on finding the relationship between corporate social responsibility disclosures and financial performances of 27 banks in Turkey. A social score has been created for each company depending on the amount of social activities of the firm. Yilmaz (2011) also run the vice versa relationship, making corporate financial performance as an independent variable. As a result, only two variables (total assets and net profits) had a significant positive relationship, while others had no significant relationships.

Erdur and Kara (2014) have studied the relationship between corporate social responsibility and corporate financial performance through Borsa Istanbul Corporate Governance Index. Financial data of 33 companies from 2006-2012 was studied. According to the analysis they have found string positive relationship between corporate social responsibility and firms' Tobins Q, ROE and ROA, leverage ratios and net profit. Whereas no relationship was found between corporate social responsibility and total sales and return on sales ratios.

Table 2 Summary of literature on CSR and CFP relationship. Source: Author and Hussain et al., (2018)

Study	CSR measures	CFP measures	Sample size	Coverage years	Country	Results
Jaggi and Freedman (1992)	environmental performance	ROA, ROE, net income, cash flow	13	1	US	negative
Hamilton (1995)	SP disclosure	stock price performance	463	1	US	negative
Hart and Ahuja (1996)	SP disclosure	ROA, ROE, ROS	127	4	US	positive
Cordeiro and Sarkis (1997)	Toxic Rel'llease Inventory disclosure	analysts' earnings per share forecast	523	1	US	negative
Seifert, Morris, and Bartkus (2003)	SP disclosure	ROA, ROE, ROS	90	1	US	insignificant
Goll and Rasheed (2004)	discretionary social responsibility	ROA, ROS	62	1	US	positive
Barnett and Salomon (2006)	self -defined mea of SP	risk -adjusted FP	61	28	US	positive
Brammer et al. (2006)	CSR performance	stock returns	296	1	UK	negative
Luo and Bhattacharya (2006)	CSR rating	Tobin's *Q*, stock returns	452	4	US	positive
Mahoney et al. (2008)	self -defined mea	ROA	44	5	US	positive
Makni, Francoeur, and Bellavance (2009)	corporate social performance	ROA, ROE, market return	179	2	Canada	negative
Mishra and Suar (2010)	SP disclosure	ROA	150	1	India	positive
Blasi et al. (2018)	governance, community, diversity, employee relations, environmental, human rights and product	ROE, ROA, ROI, ROS	988	12	Italy	some common positive patterns
Beck et al. (2018)	GRI reports are used to measure CSR Performance.	Pre-tax ROE, ROA,	116	1	Australia	strong positive
Wang et al. (2016)	MSCI	ROA, ROE and EPS	30	6	Hong Kong	positive
Yoon and Chung (2018)	MSCI	ROA, Tobins Q	59	11	USA	neutral
Jegoo et al. (2018)	MSCI	ROA, Raw Market Returns, Sharpe Ratio,Tobins Q, Mean Gini risk	12,294 observations from 3 different databases.	13	USA	neutral

Hasan et al. (2016)	Merge the Compustat and KLD data for CSR excluding governance	Tobins Q, ROA, Total Factor Productivity	986	17	USA	positive
Yang and Baasandorj (2017)	CSR score from Thomson Reuters ASSET4 ESG database	ROA, Tobins Q,	16	9	Taiwan	positive
Hategan and Curea-Pitorac (2017)	Charitable Contributions	ROA, ROE, Total asset turnover, Leverage, Price to Sale Ratio, Price to Book Value Ratio	29	5	Romania	positive
Charlo et al. (2017)	FTSE4Good IBEX index for CSR.	*Cross Sectional study:* ROE, EPS, Price to Book Value. *Panel Study:* ROA, ROE, Tobins Q, EPS	87	5	Spain	neutral
Kobo and Ngwakwe (2017)	Socially Responsible Investing Index (SRI)	Share price, turnover, ROE,	5	4	South Africa	strong positive
Mišura et al. (2018)	CSRHub rating (community, employees, environment, and governance)	ROA and Tobins Q	9 (99% of population)	4	Croatia	neutral
Taylor et al. (2018)	ESG scores for environment, social and governance activities	Tobins Q	432	5	USA	strong positive
Theodoulidis et al. (2017)	MSCI ESG	ROA and Tobins Q	683	9	UK, Italy	neutral
Akisik and Gal (2017)	CSR reports from GRI	ROA and Tobins Q	Complete compustat and GRI data	6	USA	neutral

**MSCI (*Morgan Stanley Capital International) Index for measuring CSR- *Internal CSR: Employees, Governance, Diversity. External CSR: Community, Environment and Product.*

III. RESEARCH AND METHODOLOGY

A. Aim of the Research

Companies being responsible not only to shareholders but also to their stakeholders is a worldwide recognized issue. Businesses use the resources of the environment in which they operate, produce goods and services by making use of employees, finding capital, and sell the goods and services they produce to their customers; hence they should be in good relationship with all stakeholders. The concept of stakeholder is not limited to these components, it also covers the environment and society. All these parts are included in the concept of social responsibility. Social responsibility is not just an abstract and philosophical approach, it takes over the company in a system, which also includes a financial dimension.

The main purpose of this study is to reveal empirically the effect of corporate social responsibility practices on the financial performance of companies. Beyond the theoretical approaches, this study will address corporate social responsibility, corporate sustainability, and corporate governance altogether. This approach will reveal the difference of this study from the studies in the literature.

Corporate social responsibility – corporate financial performance relationship, has not been studied enough in Turkey. Moreover, there are no studies that combine three phenomena such as corporate social responsibility, corporate sustainability and corporate governance, and analyze whether a company that is engaged in all three has better financial performance than those that do not. In this context, this study is expected to make an important contribution to the literature.

B. Scope of the Research

Two types of data are to be used in this study:

a) Financial data (ROA, Tobins Q and EPS as dependent variables). Firm size, growth rate and leverage as control variables.

b) Non-financial data (corporate social responsibility, corporate governance, and listed years)

Both data types are to be gathered from public sources. The main data source for financial data are the financial reports of companies published on the Public Disclosure Platform (KAP); whereas the market data will be gathered from Borsa Istanbul (BIST) website.

Corporate social responsibility values are derived from BIST Sustainability Index (XUSRD). Companies listed in the index are assumed to be socially responsible, as they are thoroughly analyzed by EIRIS and are meeting necessary requirements to be sustainable i.e. socially responsible. Corporate social responsibility, corporate governance data as well as stakeholder's rating will be obtained from the following sources: BIST (Borsa Istanbul) and Corporate Governance Association of Turkey (TKYD).

The research covers public companies listed in BIST 100 Index. Financial institutions such as banks, investment funds and sports companies will be excluded. For the data size to be scientifically sound, the researcher decided to take five-year time frame from 2015 to 2019 included.

There is no need for an Ethics Committee Report, as all data consists of public data, everyone has easy access, is offered for all investors' use, and does not contain a questionnaire or survey or interview.

C. Sample

BIST 100 index as a base for the sample was chosen. BIST 100 Index represents highest performing companies of Turkey. After thorough analysis of the sample, 73 companies out of 100 were chosen, other 17 companies we removed due to the following reasons:

1. All banks and insurance companies were removed due to their accounting differences with other companies, especially sources of revenues and expenses.
2. All sport team companies were also removed, due to their accounting period being pegged to a sports season, which is different from usual Jan 1- Dec 31 accounting period.
3. Several other companies were removed because they were missing some important financial data like revenues.

Full list of selected companies can be viewed in (App-1). Sample represent mixture of industries as seen in Table 3 below, highest number of companies are in chemical and metal industries; holdings do represent the highest number in BIST 100 (banks and insurance companies excluded).

Table 3 Sectors of the Sample

Sector	Number of companies	% of sample
Holding and investment companies	13	18
Chemicals, petroleum rubber and plastic products	11	15
Metal products machinery electrical equipment and transportation vehicles	11	15
Non-metallic mineral products	6	8
Wholesale and retail trade	5	7
Food, beverage, and tobacco	4	5
Basic metal	4	5
Mining	4	5
Electricity gas and water	3	4
Technology	3	4
Transportation and storage	3	4
Paper, printing, and publishing	2	3
Telecommunication	2	3
Construction	1	2
Textile	1	2
Total	**73**	**100**

D. Variables

1. Independent Variables (Non-Financial Data)

Corporate social responsibility level (CSR) is a dichotomous variable, companies that are included in BIST Sustainability Index XUSRD are given value 1, otherwise value 0.

Total Corporate Governance level (CGL) is gathered from Corporate Governance Association of Turkey (TKYD). Rating is from 0-100; value 1 is given to firms with a rating lower than 69.99, whereas 4 is given to those with rating higher than 90.

0: No rating
1: Rating <69.99
2: Rating 70-79.99
3: Rating 80-89.99
4: Rating ≥90

Stakeholder's Rating (STR) is a sub rating of SGL, original values from 0-100 are used in the analysis.

2. Dependent Variables (Financial Data)

Based on the literature, three dependent variables to represent Corporate Financial Performance (CFP) were chosen, namely: ROA, Tobin's Q and EPS.

Return on Assets (ROA) -measures the profitability of company's assets. It indicates how much profit a company earns in comparison to its overall resources. ROA formula is given below.

$$ROA = \frac{Net\ Income}{Total\ Assets}$$

Earnings per share (EPS) - also indicates firm's profitability. It calculated as total income divided by total shares of stock. The higher the EPS the more profitable company is.

$$EPS = \frac{Net\ Income}{Total\ Shares\ Outstanding}$$

Tobin's Q (TOBIN) – is a ratio between firm's market value and replacement cost (total assets). It gives investors and other decision makers whether the stock is under-priced or overpriced. If the Tobin's Q<1 then the stock is under-priced, if Tobin's Q>1 then the stock is overpriced.

$$Tobin's\ Q = \frac{(Total\ Debt + Market\ Value)}{Total\ Assets}$$

3. Control Variables

The study uses four control variables: Firm Size, Growth Rate, Listed years and Leverage.

Firm Size (FS) – measured by natural logarithm of total assets, firm's size measures the magnitude of a firm.

$$Firm\ Size = \ln(Total\ Assets)$$

Growth Rate (GR) is measured by revenue growth. Based on the literature growth rate is an important control variable. It showcases how fast of slow a company grows, and whether that growth is positive or negative.

Listed Years (LY) - is number of years the firms are listed in the Borsa Istanbul. Natural logarithm of listed years is used in the panel data analysis.

Leverage (LEV) - measures the riskiness of a firm, leverage tells the decision makers whether the firm can pay off its liabilities.

$$Leverage = \frac{Total\ Debt}{Total\ Assets}$$

E. Hypotheses

In this study six hypothesis are to be tested. Hypotheses are represented below.

$H1_0$: Corporate Social Responsibility and Corporate Governance Level of public companies listed on Turkish stock market have no significant relationship with their Return on Assets (ROA).

$H1_A$: Corporate Social Responsibility and Corporate Governance Level of public companies listed on Turkish stock market have significant relationship with their Return on Assets (ROA).

$H2_0$: Corporate Social Responsibility and Stakeholder Rating of public companies listed on Turkish stock market have no significant relationship with their Return on Assets (ROA)

$H2_A$: Corporate Social Responsibility and Stakeholder Rating of public companies listed on Turkish stock market have significant relationship with their Return on Assets (ROA)

$H3_0$: Corporate Social Responsibility and Corporate Governance Level of public companies listed on Turkish stock market have no significant relationship with their Tobin's Q ratio.

$H3_A$: Corporate Social Responsibility and Corporate Governance Level of public companies listed on Turkish stock market have significant relationship with their Tobin's Q ratio.

$H4_0$: Corporate Social Responsibility and Stakeholder Rating of public companies listed on Turkish stock market have no significant relationship with their Tobin's Q ratio.

$H4_A$: Corporate Social Responsibility and Stakeholder Rating of public companies listed on Turkish stock market have significant relationship with their Tobin's Q ratio.

$H5_0$: Corporate Social Responsibility and Corporate Governance Level of public companies listed on Turkish stock market have no significant relationship with their Earnings per Share (EPS).

$H5_A$: Corporate Social Responsibility and Corporate Governance Level of public companies listed on Turkish stock market have significant relationship with their Earnings per Share (EPS).

$H6_0$: Corporate Social Responsibility and Stakeholder Rating of public companies listed on Turkish stock market have no significant relationship with their Earnings per Share (EPS).

$H6_A$: Corporate Social Responsibility and Stakeholder Rating of public companies listed on Turkish stock market have significant relationship with their Earnings per Share (EPS).

F. Models

Figure 6 below represent the research model of the study, and six equations for the panel data analysis.

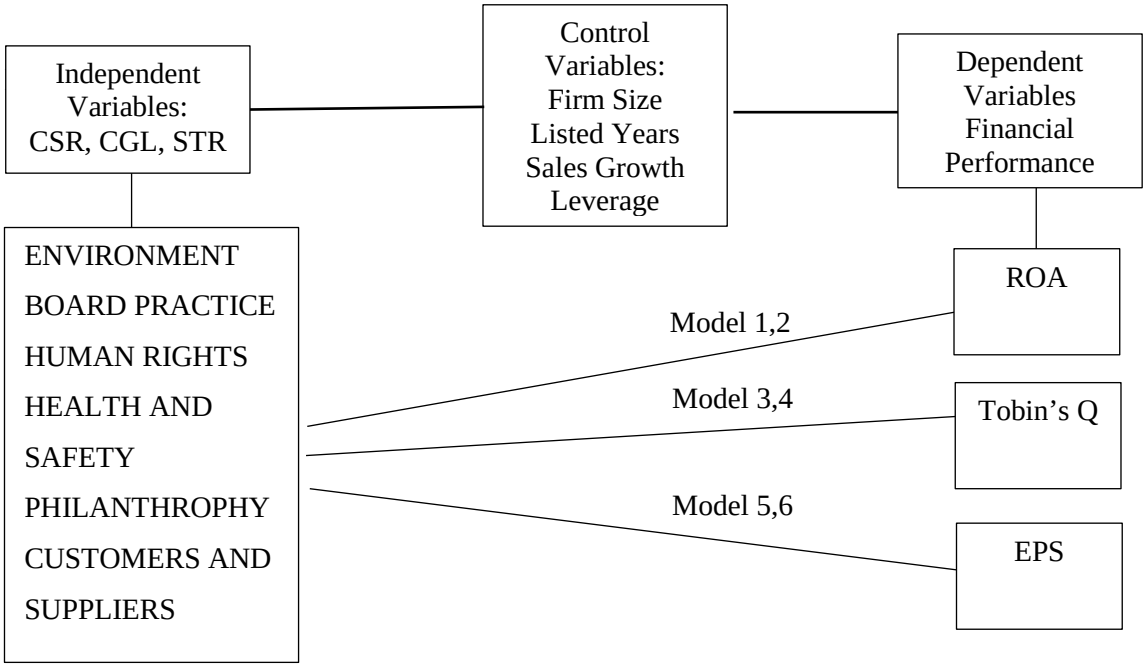

Figure 6 The Research Model

Model 1 $ROA = \beta_1 CSR + \beta_2 CGL + \beta_3 FS + \beta_4 GR + \beta_5 \, lnLY + \beta_6 LEV$

Model 2 $ROA = \beta_1 CSR + \beta_2 STR + \beta_3 FS + \beta_4 GR + \beta_5 \, lnLY + \beta_6 LEV$

Model 3 $TOBIN = \beta_1 CSR + \beta_2 SGL + \beta_3 FS + \beta_4 GR + \beta_5 \, lnLY + \beta_6 LEV$

Model 4 $TOBIN = \beta_1 CSR + \beta_2 STR + \beta_3 FS + \beta_4 GR + \beta_5 \, lnLY + \beta_6 LEV$

Model 5 $EPS = \beta_1 CSR + \beta_2 SGL + \beta_3 FS + \beta_4 GR + \beta_5 \, lnLY + \beta_6 LEV$

Model 6 $EPS = \beta_1 CSR + \beta_2 STR + \beta_3 FS + \beta_4 GR + \beta_5 \, lnLY + \beta_6 LEV$

G. Panel Data Analysis

1. What is Panel Data Analysis?

There are two most common ways to analyse statistical data, namely: regression analysis (or cross-section) and time series analysis. Regression analysis investigates relationship between variables, dependent and independent while also controlling other variables. While the time series analysis, observes the relationship of one or two variables over specific period.

The panel data analysis (also called longitudinal data or pooled data) is a synergy between regression and time-series analyses. Panel data includes a cross-section of many subjects like the regression analysis, while also observing these subjects over time like in time series analysis (Frees, 2004).

Originally, the name "panel data" comes from the panel of individuals that have been surveyed over time dating back to 1948. Nowadays, panel data does not only refer to survey data, but its meaning is also much broader and used in variety of fields. Psychologists, sociologists, and other medical researchers use panel data analysis to observe human behavior over time. Panel data analysis helps economists' study, for example, organizational behavior and employee's salaries, while politicians' study behavior of parties over time. Panel data analysis is also a common choice of many academics (Yaffee, 2003).

Panel Data Model:

$$y_{nt} = b_{0nt} + \sum_{k=1}^{K} b_{knt} x_{knt} + w_{nt}$$

Y is variable, N is research unit, T is a time frame.

Y_{nt} is an observed or dependent variable for the research unit *n* at time frame *t.*

X_{knt} *values K for dependent variable,*

B_{0nt} *-constant*

W_{nt}*- represent error* (Sevestre, 2005)

Panel data can be:

Balanced- research units are observed over same time frame or/and same number of observations

Unbalanced- research units are observed over different time frame and has or/and has different number of observations

Continuous – research units remain the same during the whole study

Rotative – research units may be replaced by another

Short Panel-if number of research units N outnumber the time frame T

Long Panel- if the time frame T outnumber the number of research units N

The data set of this thesis represent unbalanced continuous and short panel data set. Panel data analysis emerged because of advanced statistical methods and data processing computer applications like Stata, SPSS, SAS, EViews (Jaba et al., 2017)

General advantages of panel data are: It studies dynamic relationships by combining cross-sectional and time series observations, which provides more informative data. Similarities and differences of the subjects are analysed. Panel data provide more efficient data than cross-sectional or time-series by themselves. Complicated behavior of research unit can be studied with panel data. General disadvantage of panel data is its complexity (Frees, 2004).

2. Fixed Effects Model

Coefficients in this model change for individual unit, however it is fixed over time. It also represents the entire population of the data and not just a random sample of population. Fixed effect model is viewed by researchers as preferable between the two methods. The model has constant slopes coefficients; Fixed effects variables are constant throughout the sample, or they can change steadily over time. For example: age, gender, ethnicity (Bell et al., 2018).

Main disadvantages of fixed effects model are having too many cross-sectional units that require many dummies, this may result in insufficient degree of freedom hence lower the validity of tests. Moreover, many variables with low degree of freedom may lead to multicollinearity (Yaffee, 2003).

3. Random Effects Model

Unlike fixed effects, random effects model represents a sample of a larger population. The random effects model assumes that unobserved effect is uncorrelated with variables in every t. Sometimes, lack of statistical independence can lead data to be pseudo replicated; as measurement are taken from several individuals or firm, that do have many other possible independent variables affecting the values. Great advantage of random effects model is having time-invariant variables included among regressors (Yaffee, 2003)

H. Data Analysis

1. Descriptive Statistics

Table 4 presents the descriptive statistics of all the variables used in the study, including dependent, independent and control variables for the sample of 73 publicly traded companies over the period of 5 years. Two dichotomous (dummy) variables: CSR and CGL were excluded from the descriptive statistics analysis due to the nature of a variable, meaningless results will occur.

The findings show that Return on Assets varies between -0.3439 being the lowest and 0.9954 being the highest value of the sample, while the mean of ROA is 0.0521; standard deviation of ROA is showed to be 0.0952. In terms of Skewness, ROA has positive skewness, meaning that it has more of higher values than lower. The same goes to Kurtosis, ROA has a positive Kurtosis (Leptokurtic) higher than 3, which means that ROA has a peaked curve.

Second dependent variable Tobin's Q has a mean of 1.3277, with a standard deviation of 0.6922. Maximum value of Tobin's Q is 5.7429, while the minimum is 0.2186. Tobin's Q skewness results show that there are more higher values than lower, hence it had positive skewness. Kurtosis results show that Tobin's Q has a peaked curve distribution, just like ROA.

The third dependent variable EPS has mean value of 2.2732, with SD of 8.2806. EPS values range between -4.7966 and enormous value of 110.32. From the Kurtosis results, EPS has a high peak, thus we can also note that there is an outlier in the dataset (EGEEN company).

It is important to note, that descriptive statistics were not run for two of the independent variables CSR and CGL, since they are dummy variables, and will not generate meaningful results. STR is a third independent variable, it is a stakeholder's rating which ranges from 0 to 1, hence has a mean of 0.33 and a standard deviation of 0.4585. Its maximum value is 0.9951 and the minimum is 0. In terms of Skewness, it has longer right tail; and Kurtosis results show that the curve is flatted (Platykurtic) since the value if less than 3.

There are four control variables, Firm Size, Growth Rate, Listed Years and Leverage, only original values were used in the descriptive statistics.

Firm Size that is measured in ln (Total Assets) ranges between 19.12549 and 26.7305, with its mean being 22.1941 and SD of 1.4707. Firm size has a positive skewness and a normal distribution.

Growth Rate of the sample on average is 0.3036, and with a deviation of 1.2994 from a mean. Highest growth rate is found to be 22.7672%, and the lowest is -1%. Skewness results show that there are more higher values then the lower, while Kurtosis show a very peaked curve,

Listed years show how many years a company has been trading in the stock market. The oldest company from the sample is 33 years, while the youngest in the stock market is 2 years, averaging at 20.7507 years. As of Skewness it is a negative 0.3320, meaning that there are more of newer companies in the stock market than the older ones. Kurtosis result show LY to be Platykurtic, having a flatted curve. Last from control variables is Leverage, having a mean of 5.63 % with a standard deviation of 2.30%. Highest risk is 116.65% while the lowest is 7.79%. Results show negative skewness, meaning that there are more of lower values that higher values, whereas Kurtosis show LEV distribution curve to be flatted.

	ROA	TOBIN	EPS	STR	FS	GR	LY	LEV
Mean	0.0521	1.327672	2.273276	0.335825	22.19408	0.303641	20.75068	0.563055
Median	0.0461	1.170303	0.605259	0.000000	22.14983	0.174892	21.00000	0.602948
Maximum	0.9953	5.742872	110.3238	0.995100	26.73047	22.76715	33.00000	1.166506
Minimum	-0.3439	0.218620	-4.796645	0.000000	19.12549	-0.999927	2.000000	0.077901
Std. Dev.	0.0951	0.692160	8.280601	0.458543	1.470692	1.299441	8.333092	0.229764
Skewness	2.8007	2.401080	8.871007	0.637864	0.397529	14.68457	-0.331985	-0.361832
Kurtosis	30.2674	11.46330	99.58447	1.421197	2.969674	247.9539	2.012058	2.535300

Table 4 Sectors of the Sample

2. Correlation Matrix

Variables	ROA	TOBIN	EPS	CSR	CGL	STR	FS	GR	LNLY	LEV
ROA	1.000000									
TOBIN	**0.319000**	1.000000								
	0.0000*	-----								
EPS	**0.431201**	**0.237528**	1.000000							
	0.0000*	0.0000*	-----							
CSR	**-0.006686**	**-0.021075**	**-0.040555**	1.000000						
	0.8987	0.6882	0.4398	-----						
CGL	**0.027436**	**0.016731**	**-0.053050**	**0.352093**	1.000000					
	0.6013	0.7501	0.3121	0.0000*	-----					
STR	**0.022083**	**0.017139**	**-0.052938**	**0.357609**	**0.998520**	1.000000				
	0.6741	0.7442	0.3132	0.0000*	0.0000*	-----				
FS	**-0.110578**	**-0.325194**	**-0.141627**	**0.579478**	**0.273062**	**0.283579**	1.000000			
	0.0347*	0.0000*	0.0067*	0.0000*	0.0000*	0.0000*	-----			
GR	**0.143720**	**-0.030808**	**0.017689**	**-0.044872**	**0.089021**	**0.080900**	**-0.065812**	1.000000		
	0.0059*	0.5574	0.7363	0.3927	0.0895**	0.1229	0.2097	-----		
LNLY	**0.123247**	**-0.063454**	**0.134342**	**0.020645**	**-0.019259**	**-0.017058**	**0.080432**	**0.030894**	1.000000	
	0.0185*	0.2265	0.0102*	0.6942	0.7138	0.7453	0.1251	0.5563	-----	
LEV	**-0.450668**	**0.018063**	**-0.204871**	**0.329317**	**0.059053**	**0.067390**	**0.235359**	**-0.115640**	**-0.178432**	1.000000
	0.0000*	0.7309	0.0001*	0.0000*	0.2605	0.1990	0.0000*	0.0272*	0.0006*	-----

Table 5 Correlation Matrix Results

**probability is lower than 0.05 at 5% significance level*
*** probability is lower than 0.10 at 10% significance level*

Before conducting panel regression analysis, correlations between variables were calculated. Correlation results are not to be interpreted as a study finding, rather as a step in ensuring the validity of a study and avoiding multicollinearity (Levent, 2019). As we can see in the Table 5, all bold values represent the correlation to and with other variable(s), whereas the value below is its respective probability.

Therefore, correlation between dependent variables which represent company's financial performance ROA, TOBIN, and EPS range between weak positive and moderate positive relationship. Correlation between ROA and TOBIN is 0.319 or 31.9%, ROA with EPS 43.1%; TOBIN and EPS have the 23.8% positive correlation.

When looking at correlation of independent variables with each other, weak positive correlation around 36%, is found between variables CSR and CGL, and CSR and STR. Very strong positive relationship is between independent variables CGL and STR, it is expectable as, stakeholder's rating (STR) is part of a total corporate governance level (CGL).

As far as correlation within control variables, weak positive relationship is found between LEV and FS, no relationship is found among other control variables.

There is weak negative correlation between CSR and all dependent variables ROA, TOBIN, and EPS. However, some p values below correlation values are higher than 10% significance level, hence are insignificant.

3. Unit Root Tests

Unit Root tests are conducted to check whether variable has a unit root and if the variables has stationary structure. All variables are tested for Unit Root, Levin, Lin and Chu test was performed in EViews program. Table 6 summarizes the results of unit root test of all dependent, independent, and control variables; detailed results are found in App-2. If the probability is <0.05 then the variable does not have a common unit root. All variables except CGL has a probability value of 0, hence no unit root was observed. It is decided to keep CGL at 10% significance level, since the probability value is close to 0.05. Hence all variables are stationary.

Table 6 Levin, Lin and Chu Unit Root Test Summary Results

Variable	Statistic	Probability
ROA	-80.0237	0.0000*
Tobin	-28.7680	0.0000*
EPS	-20.3435	0.0000*
CSR	-6.99031	0.0000*
CGL	-1.54509	0.0612**
STR	-6.24960	0.0000*
FS	-10.7682	0.0000*
GR	-217.105	0.0000*
lnLY	-77.0124	0.0000*
LEV	-38.7096	0.0000*

** probability is lower than 0.05 at 5% significance level*
*** probability is lower than 0.10 at 10% significance level*

4. Multicollinearity Test

Multicollinearity test performed as one of the steps to test the quality of models, it is measured by centred Variance Inflation Factor (VIF). Literature suggest if the VIF value is lower than 10, then there is no multiple linear connection (Gujarati,2004). Table 7 illustrates the results of VIF test for all models, none of the values exceed value 10, hence there are no multiple linear connection issue found in the models.

Table 7 Centred Variance Inflation Factor (VIF) Results Summary

Variables	***Model 1&3***	***Model 2&4***	***Model 5***	***Model 6***
CSR	1.715014	1.713417	1.715014	1.713417
CGL	1.174339		1.174339	
STR		1.178624		1.178624
FS	1.545016	1.547984	1.545016	1.547984
GR	1.028556	1.026955	1.028556	1.026955
lnLY	1.053738	1.053417	1.053738	1.053417
LEV	1.190528	1.189528	1.190528	1.189528

5. Hausman Test

Hausman Test is conducted using EViews program to decide on the type of panel data analysis, fixed or random effects. Table 8 represent the results summary of Hausman test for 6 models; 5% significance level is used in this study. Null hypothesis suggests that random effects model is valid. If the probability value is smaller than 0.05 then it is significant, and the Null hypothesis should be rejected, therefore fixed effects model should be used. In other hand, if the probability value is

higher than 0.05 significance level, than the Null hypothesis should not be rejected, hence random effects model should be used.

Since the probability value of all models are less than 0.05, Null hypothesis is rejected, it is now appropriate to use fixed effects panel data analysis for the study.

Table 8 Hausman Test Results Summary

Model #	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
1	29.618815	6	0.0000*
2	29.598795	6	0.0000*
3	14.588133	6	0.0237*
4	13.991916	6	0.0297*
5	26.638820	6	0.0002*
6	26.688039	6	0.0002*

** probability is lower than 0.05 at 5% significance level*
*** probability is lower than 0.10 at 10% significance level*

6. Panel Regression Analysis

Panel data regression analysis, in other words it is known as longitudinal data analysis is performed for all 6 models using fixed effects method. The following analysis will generate the outcome of the study and an answer to the research question: Are public companies in Turkey with higher corporate social responsibility and corporate governance practices more profitable than those who are not?

Coefficient indicates the direction of individual variable relationship and its strength. Standard error simply shows how much deviation occurs from predicting the slope coefficient estimate. Whereas t-statistics shows the number of standard errors that the coefficient is from zero. Moving forwards, the probability of individual variables shows the significance value of the result, for it to be significant it should be less than 0.05 at 5% significance level.

a. Panel regression analysis for Model 1

Model 1 tests the relationship between independent variable CSR (measured by inclusion in BIST sustainability index) and second independent variable CGL (total corporate governance level) and dependent variable ROA as well as having several controlling variables. The equation for Model 1 is illustrated below.

$$\text{Model 1 } ROA = \beta_1 CSR + \beta_2 CGL + \beta_3 FS + \beta_4 GR + \beta_5\, lnLY + \beta_6 LEV$$

Regression analysis results for Model 1 are given in Table 9 below. R-square value gives the variation in dependent variable that is explained by independent variable(s). In Model 1, the value of R-Square is 0.877072 or 88% variation in dependent variable is explained by independent variables. The significance of the Model 1 is seen from the probability value of F statistics is 0.0000, which is less than 0.05 at 5% significance level this indicates that Model 1 is significant. Another important value which should be considered in the analysis that is Durbin-Watson Statistics (DW), this value shows the measures of serial correlation in the model (Johnston & DiNardo, 1997). As a rule of thumb, if it is lower than 2, there is evidence of positive serial correlation, in model 1 it is 2.04.

Results in Table 9 show probability value of independent variables: CSR to be 0.0017 ($p<0.05$), CGL 0.2978 ($p>0.05$). The probabilities of control variables are: FS 0.0000 ($p<0.05$), GR 0.0036 ($p<0.05$), LNLY 0.0000 ($p<0.05$) and LEV 0.0000 ($p<0.05$). All variables except CGL show statistically significant results. Looking at negative 0.007 coefficient of CSR, hence it can be concluded that, CSR has a weak negative effect on ROA of a firm.

In conclusion, being included in BIST Sustainability Index and having high Corporate Governance Level ranking do not have positively effect on firm's ROA.

Table 9 Panel Regression Analysis Results for Model 1

MODEL 1

Dependent Variable: **ROA**

Cross-sections included: 73

Total panel (balanced) observations: 365

Linear estimation after one-step weighting matrix

White cross-section standard errors & covariance (d.f. corrected)

Variable	Coefficient	Std. Error	t-Statistic	Prob.
CSR	-0.007037	0.002227	-3.160032	0.0017
CGL	-0.002907	0.002787	-1.043114	0.2978
FS	0.024245	0.003665	6.615163	0.0000
GR	0.015406	0.005253	2.932898	0.0036
LNLY	0.019555	0.005532	3.534859	0.0005
LEV	-0.363339	0.023231	-15.64040	0.0000
C	-0.336409	0.068263	-4.928146	0.0000

Effects Specification

Cross-section fixed (dummy variables)

Weighted Statistics

Root MSE	0.057908	R-squared	0.877072
Mean dependent var	0.136039	Adjusted R-squared	0.843547
S.D. dependent var	0.196405	S.E. of regression	0.065419
Sum squared resid	1.223974	F-statistic	26.16121
Durbin-Watson stat	2.043915	Prob(F-statistic)	0.000000

Unweighted Statistics

R-squared	0.566164	Mean dependent var	0.052126
Sum squared resid	1.429791	Durbin-Watson stat	2.627236

** probability is lower than 0.05 at 5% significance level*

*** probability is lower than 0.10 at 10% significance level*

b. Panel regression analysis for Model 2

Model 2 tests the relationship between independent variable CSR (measured by inclusion in BIST sustainability index) and second independent variable STR (stakeholder's rating) and dependent variable ROA as well as several controlling variables. The equation for Model 2 is illustrated below.

$$\text{Model 2 } ROA = \beta_1 CSR + \beta_2 STR + \beta_3 FS + \beta_4 GR + \beta_5\, lnLY + \beta_6 LEV$$

Regression analysis results for Model 2 are given in Table-10 below. R-square value gives the variation in dependent variable that is explained by independent variable(s). In Model 2, the value of R-Square is 0.8782 or 88% variation in dependent variable is explained by independent variables. The significance of the Model 2 is seen from the probability value of F statistics 0.0000, which is less than 0.05 at 5% significance level this indicates that Model 2 is significant. Another important value which should be considered in the analysis that is Durbin-Watson Statistics (DW), this value shows the measures of serial correlation in the model (Johnston & DiNardo, 1997). As a rule of thumb, if it is lower than 2, there is evidence of positive serial correlation. In our case it is little bit higher than 2 (2.04; See Table-10).

Results in Table-11 show probability value of independent variables: CSR to be 0.052 ($p<0.05$), STR 0.2178 ($p>0.05$). The probabilities of control variables are: FS 0.0000 ($p<0.05$), GR 0.0035 ($p<0.05$), LNLY 0.004($p<0.05$) and LEV 0.0000 ($p<0.05$). All variables except STR show statistically significant results. Looking at negative 0.007 coefficient of CSR, hence it can be concluded that, CSR has a weak negative effect on ROA of a firm. The results are the same as for the previous model. In conclusion, being included in BIST Sustainability Index and having high stakeholder's ranking do not have positively significant effect on firm's ROA.

Table 10 Panel Regression Results for Model 2

MODEL 2
Dependent Variable: **ROA**
Cross-sections included: 73
Total panel (balanced) observations: 365
Linear estimation after one-step weighting matrix
White cross-section standard errors & covariance (d.f. corrected)

Variable	Coefficient	Std. Error	t-Statistic	Prob.
CSR	-0.006849	0.002431	-2.817285	0.0052
STR	-0.014638	0.011853	-1.234990	0.2178
FS	0.024219	0.003608	6.713227	0.0000
GR	0.015321	0.005204	2.943998	0.0035
LNLY	0.020141	0.005585	3.606615	0.0004
LEV	-0.362942	0.023501	-15.44366	0.0000
C	-0.336920	0.065848	-5.116634	0.0000

Effects Specification

Cross-section fixed (dummy variables)

Weighted Statistics

Root MSE	0.057896	R-squared	0.878248
Mean dependent var	0.136318	Adjusted R-squared	0.845043
S.D. dependent var	0.197412	S.E. of regression	0.065405
Sum squared resid	1.223470	F-statistic	26.44920
Durbin-Watson stat	2.044361	Prob(F-statistic)	0.000000

Unweighted Statistics

R-squared	0.566500	Mean dependent var	0.052126
Sum squared resid	1.428684	Durbin-Watson stat	2.631109

** probability is lower than 0.05 at 5% significance level*
*** probability is lower than 0.10 at 10% significance level*

c. Panel regression analysis for Model 3

Model 3 tests the relationship between independent variable CSR (measured by inclusion in BIST sustainability index) and second independent variable CGL (Corporate Governance Level) and dependent variable Tobin's which represent financial performance of a company. As well as several controlling variables. The equation for Model 3 is illustrated below.

Model 3 $TOBIN = \beta_1 CSR + \beta_2 SGL + \beta_3 FS + \beta_4 GR + \beta_5 lnLY + \beta_6 LEV$

Regression analysis results for Model 3 are given in Table-11 below. R-square value gives the variation in dependent variable that is explained by independent variable(s). In Model-3, the value of R-Square is 0.9101 or 91%, the independent variables in the model can explain 91% of the changes in the dependent variable Tobin. The significance of the Model 3 is seen from the probability value of F statistics 0.0000, which is less than 0.05 at 5% significance level this indicates that Model 3 is significant. Another important value which should be considered in the analysis that is Durbin-Watson Statistics (DW), this value shows the measures of serial correlation in the model (Johnston & DiNardo, 1997). As a rule of thumb, if it is lower than 2, there is evidence of positive serial correlation. In Model 3 it is 2.13.

Results in Table-11 show probability value of independent variables: CSR to be 0.2180 ($p>0.05$), CGL 0.0062 ($p<0.05$). The probabilities of control variables are: FS 0.0008 ($p<0.05$), GR 0.2928 ($p>0.05$), LNLY 0.1271 ($p>0.05$), LEV 0.0142($p<0.05$).

The probability of all variables: CSR, GR, and LNLY are higher than 5% significance level, hence the results are statistically insignificant. On the other hand, CGL has a coefficient of -5%, meaning that Corporate Governance has a negative weak relationship with Tobin's Q.

In conclusion, being included in BIST Sustainability Index and having high Corporate Governance level ranking do not have positively significant effect on firm's Tobin's Q.

Table 11 Panel Regression Results for Model 3

MODEL 3
Dependent Variable: **TOBIN**
Cross-sections included: 73
Total panel (balanced) observations: 365
Linear estimation after one-step weighting matrix
White cross-section standard errors & covariance (d.f. corrected)

Variable	Coefficient	Std. Error	t-Statistic	Prob.
CSR	-0.037061	0.030019	-1.234579	0.2180
CGL	-0.050219	0.018203	-2.758887	0.0062
FS	-0.144938	0.042590	-3.403075	0.0008
GR	0.008941	0.008483	1.053897	0.2928
LNLY	-0.131367	0.085849	-1.530205	0.1271
LEV	0.276247	0.111991	2.466688	0.0142
C	4.852501	0.976001	4.971821	0.0000

Effects Specification

Cross-section fixed (dummy variables)

Weighted Statistics

Root MSE	0.276479	R-squared	0.910105
Mean dependent var	2.551098	Adjusted R-squared	0.885588
S.D. dependent var	1.402388	S.E. of regression	0.312339
Sum squared resid	27.90084	F-statistic	37.12172
Durbin-Watson stat	2.137760	Prob(F-statistic)	0.000000

Unweighted Statistics

R-squared	0.822865	Mean dependent var	1.327672
Sum squared resid	30.89011	Durbin-Watson stat	1.520968

** probability is lower than 0.05 at 5% significance level*
*** probability is lower than 0.10 at 10% significance level*

d. Panel regression analysis for Model 4

Model 4 tests the relationship between independent variable CSR (measured by inclusion in BIST sustainability index) and second independent variable STR (stakeholder's rating) and dependent variable Tobin's Q which represent financial performance of a company. The equation for Model 4 is illustrated below.

$$\text{Model 4 } TOBIN = \beta_1 CSR + \beta_2 STR + \beta_3 FS + \beta_4 GR + \beta_5 \, lnLY + \beta_6 LEV$$

Regression analysis results for Model 4 are given in Table-12 below. R-square value gives the variation in dependent variable that is explained by independent variable(s). In Model 4, the value of R-Square is 0.9101 or 91%, the independent variables in the model can explain 91% of the changes in the dependent variable Tobin. The significance of the Model 4 is seen from the probability value of F statistics 0.0000, which is less than 0.05 at 5% significance level this indicates that Model 4 is significant. Another important value which should be considered in the analysis that is Durbin-Watson Statistics (DW), this value shows the measures of serial correlation in the model (Johnston & DiNardo, 1997). As a rule of thumb, if it is lower than 2, there is evidence of positive serial correlation. In Model 4 it is 2.11.

Results in Table-12 show probability value of independent variables: CSR to be 0.1609 ($p>0.05$), STR 0.1106 ($p>0.05$). The probabilities of control variables are: FS 0.0008 ($p<0.05$), GR 0.2924 ($p>0.05$), LNLY 0.1257 ($p>0.05$), LEV 0.0215 ($p<0.05$).

The probability of all independent variables and control variables except Firm Size (FS) and Leverage (LEV) are higher than 0.05. Model 4 analysis show statistically insignificant results. In conclusion, being included in BIST Sustainability Index and having high Stakeholder ranking do not have positively significant effect on firm's Tobin's Q.

Table 12 Panel Regression Results for Model 4

MODEL 4
Dependent Variable: **TOBIN**
Cross-sections included: 73
Total panel (balanced) observations: 365
Linear estimation after one-step weighting matrix
White cross-section standard errors & covariance (d.f. corrected)

Variable	Coefficient	Std. Error	t-Statistic	Prob.
CSR	-0.043315	0.030812	-1.405806	0.1609
STR	-0.152117	0.095052	-1.600353	0.1106
FS	-0.143833	0.042653	-3.372176	0.0008
GR	0.008716	0.008263	1.054857	0.2924
LNLY	-0.130371	0.084894	-1.535694	0.1257
LEV	0.258977	0.112014	2.312010	0.0215
C	4.818819	0.980786	4.913224	0.0000

Effects Specification

Cross-section fixed (dummy variables)

Weighted Statistics

Root MSE	0.276049	R-squared	0.910119
Mean dependent var	2.535518	Adjusted R-squared	0.885605
S.D. dependent var	1.404052	S.E. of regression	0.311853
Sum squared resid	27.81412	F-statistic	37.12780
Durbin-Watson stat	2.113721	Prob(F-statistic)	0.000000

Unweighted Statistics

R-squared	0.822699	Mean dependent var	1.327672
Sum squared resid	30.91895	Durbin-Watson stat	1.522339

** probability is lower than 0.05 at 5% significance level*
*** probability is lower than 0.10 at 10% significance level*

e. Panel regression analysis for Model 5

Model 5 tests the relationship between independent variable CSR (measured by inclusion in BIST sustainability index) and second independent variable CGL (Corporate Governance Level) and dependent variable Earnings per Share (EPS) which represent financial performance of a company. As well as several controlling variables. The equation for Model 5 is illustrated below.

Model 5 $EPS = \beta_1 CSR + \beta_2 SGL + \beta_3 FS + \beta_4 GR + \beta_5 \, lnLY + \beta_6 LEV$

Regression analysis results for Model 5 are given in Table-13 below. R-square value gives the variation in dependent variable that is explained by independent variable(s). In Model-5, the value of R-Square is 0.8466 or 85%, the independent variables in the model can explain 91% of the changes in the dependent variable EPS. The significance of the Model 5 is seen from the probability value of F statistics 0.0000, which is less than 0.05 at 5% significance level this indicates that Model 5 is significant. Another important value which should be considered in the analysis that is Durbin-Watson Statistics (DW), this value shows the measures of serial correlation in the model (Johnston & DiNardo, 1997). As a rule of thumb, if it is lower than 2, there is evidence of positive serial correlation. In Model 5 it is 1.46.

Results in Table-13 show probability value of independent variables: CSR 0.0005 ($p<0.05$), CGL 0.5004 ($p>0.05$). The probabilities of control variables are: FS 0.0008 ($p<0.05$), GR 0.0293 ($p<0.05$), LNLY 0.0004 ($p<0.05$), LEV 0.0000 ($p<0.05$).

CSR has a coefficient -40, it is a statistically significant result at 5% significance level. The result of Model 5 shows an interesting result, there is a moderate negative relationship between CSR and EPS of a firm, meaning that firms that are engaged in CSR have lower EPS. In conclusion, being included in BIST Sustainability Index and having high Corporate Governance level ranking do not have positively significant effect on firm's EPS yet is has moderate negative results.

Table 13 Panel Regression Results for Model 5

MODEL 5
Dependent Variable: **EPS**
Cross-sections included: 73
Total panel (balanced) observations: 365
Linear estimation after one-step weighting matrix
White cross-section standard errors & covariance (d.f. corrected)

Variable	Coefficient	Std. Error	t-Statistic	Prob.
CSR	-0.389438	0.110474	-3.525159	0.0005
CGL	0.033075	0.049541	0.667614	0.5049
FS	2.516377	0.133779	18.81000	0.0000
GR	0.076275	0.034825	2.190257	0.0293
LNLY	-0.561807	0.158028	-3.555101	0.0004
LEV	-6.762106	0.320797	-21.07909	0.0000
C	-48.05307	2.737494	-17.55367	0.0000

Effects Specification

Cross-section fixed (dummy variables)

Weighted Statistics

Root MSE	3.254003	R-squared	0.846654
Mean dependent var	5.831060	Adjusted R-squared	0.804832
S.D. dependent var	9.630998	S.E. of regression	3.676050
Sum squared resid	3864.815	F-statistic	20.24441
Durbin-Watson stat	1.466825	Prob(F-statistic)	0.000000

Unweighted Statistics

R-squared	0.763178	Mean dependent var	2.273276
Sum squared resid	5910.823	Durbin-Watson stat	1.640288

** probability is lower than 0.05 at 5% significance level*

*** probability is lower than 0.10 at 10% significance level*

f. Panel regression analysis for Model 6

Model 6 tests the relationship between independent variable CSR (measured by inclusion in BIST sustainability index) and second independent variable STR (stakeholder's rating) and dependent variable Earnings per share (EPS) which represent financial performance of a company. As well as several controlling variables. The equation for Model 6 is illustrated below.

Model 6 $EPS = \beta_1 CSR + \beta_2 STR + \beta_3 FS + \beta_4 GR + \beta_5\, lnLY + \beta_6 LEV$

Regression analysis results for Model 6 are given in Table-14 below. R-square value gives the variation in dependent variable that is explained by independent variable(s). In Model-6, the value of R-Square is 0.8471 or 85%, the independent variables in the model can explain 85% of the changes in the dependent variable EPS. The significance of the Model 6 is seen from the probability value of F statistics 0.0000, which is less than 0.05 at 5% significance level this indicates that Model 6 is significant. Another important value which should be considered in the analysis that is Durbin-Watson Statistics (DW), this value shows the measures of serial correlation in the model (Johnston & DiNardo, 1997). As a rule of thumb, if it is lower than 2, there is evidence of positive serial correlation. In Model 6 it is 1.47.

Results in Table-14 show probability value of independent variables: CSR 0.0003 ($p<0.05$), STR 0.4671 ($p>0.05$). The probabilities of control variables are: FS 0.0000 ($p<0.05$), GR 0.0312 ($p<0.05$), LNLY 0.0004 ($p<0.05$), LEV 0.0000 ($p<0.05$).

CSR has a coefficient -40, it is a statistically significant result at 5% significance level. The result of Model 6 shows the same interesting result as Model 5, there is a moderate negative relationship between CSR and EPS of a firm, meaning that firms that are engaged in CSR have lower EPS.

Probability of another control variable Leverage is 0.0000 with a coefficient of -6.73, the result show insignificant negative relationship between LEV and EPS; the higher the Leverage, the lower the EPS; it is a very expected result. The results of Model 6 are very similar to results of Model 5. In conclusion, being included in BIST

Sustainability Index and having high Stakeholder's rating level ranking do not have positively significant effect on firm's EPS.

Table 14 Panel Regression Results for Model 6

MODEL 6
Dependent Variable: **EPS**
Cross-sections included: 73
Total panel (balanced) observations: 365
Linear estimation after one-step weighting matrix
White cross-section standard errors & covariance (d.f. corrected)

Variable	Coefficient	Std. Error	t-Statistic	Prob.
CSR	-0.388744	0.106839	-3.638589	0.0003
STR	0.139041	0.190932	0.728223	0.4671
FS	2.511547	0.132683	18.92899	0.0000
GR	0.077934	0.035993	2.165268	0.0312
LNLY	-0.583170	0.164062	-3.554564	0.0004
LEV	-6.733140	0.329861	-20.41206	0.0000
C	-47.90160	2.702036	-17.72796	0.0000

Effects Specification

Cross-section fixed (dummy variables)

Weighted Statistics

Root MSE	3.255861	R-squared	0.847156
Mean dependent var	5.832996	Adjusted R-squared	0.805471
S.D. dependent var	9.533391	S.E. of regression	3.678149
Sum squared resid	3869.231	F-statistic	20.32293
Durbin-Watson stat	1.471249	Prob(F-statistic)	0.000000

Unweighted Statistics

R-squared	0.763148	Mean dependent var	2.273276
Sum squared resid	5911.566	Durbin-Watson stat	1.640066

** probability is lower than 0.05 at 5% significance level*
*** probability is lower than 0.10 at 10% significance level*

IV. CONCLUSION

The main purpose of this study is to reveal empirically the effect of corporate social responsibility practices on the financial performance of companies listed on Turkish stock market Borsa Istanbul. Beyond the theoretical approaches, this study addressed corporate social responsibility, corporate sustainability, and corporate governance altogether. This approach, with uniquely designed models will reveal the difference of this study from the studies in the literature.

This study analyses 73 companies from Borsa Istanbul BIST 100 index, the study period is five years from 2015-2019. Determinants of Corporate Financial Performance were chosen to be ROA, Tobin's Q and EPS. While the determinants of corporate social responsibility are corporate governance rating and an inclusion in BIST Sustainability Index. According to the supporting literature, this research has four supporting control variables such as: listed years, leverage, sales growth, and firm's size. Data was analyzed using panel data analysis (fixed effects model) via EViews program.

Corporate social responsibility – corporate financial performance relationship, has not been studied enough in Turkey. Moreover, there are no studies that combine three phenomena such as corporate social responsibility, corporate sustainability, and corporate governance. Since sustainability issue is becoming a norm in developed world, this research is an important contribution for the Turkish market.

The results of this study reveal that there is no positive relationship between corporate social responsibility and corporate financial performance for public companies in Turkey. Perhaps, there is a negative relationship between firm's earnings per share (EPS) and corporate social responsibility.

A. Discussion of Results

Only significant at 5% significance level result are discussed. Models whose results were insignificant are sought to not reject H0 Hypothesis. Summary of panel data analysis with its model's respected coefficients at 5% significance level are presented in Table-15.

Table 15 Summary of Panel Data Analysis for Six Models

	Corporate Social Responsibility	Corporate Governance Level	Stakeholder's Rating
Model 1-ROA	**-0.007**	Insignificant	Not in the model
Model 2-ROA	**-0.007**	Not in the model	Insignificant
Model 3-Tobin's Q	Insignificant	**-0.05**	Not in the model
Model 4-Tobin's Q	Insignificant	Not in the model	Insignificant
Model 5- EPS	**-0.40**	Insignificant	Not in the model
Model 6-EPS	**-0.40**	Not in the model	Insignificant

After conducting panel data analysis, no positive relationship between corporate social responsibility and financial performance were found. Results of Model 1 reveal a very weak negative relationship between CSR and ROA (see Table-9). Therefore, being included in BIST Sustainability Index and having high Corporate Governance Level ranking do not have positively significant effect on firm's ROA.

The results of Model 2 (see Table – 10) which tests the relationship between CSR and Stakeholder's rating effect on ROA; has the same results as of the previous model. Therefore, being included in BIST Sustainability Index and having high stakeholder's ranking do not have positively significant effect on firm's ROA.

Another significant finding is seen in Model 3 (see Table – 11), it was found that there is a weak negative relationship between Tobin's Q and Corporate Governance ratings. Therefore, being included in BIST Sustainability Index and having high Corporate Governance level ranking do not have positively significant effect on firm's Tobin's Q.

More interesting results are seen for the Model 5 and 6; analysis reveal that there is a moderate negative (-0.40) relationship between company's corporate social responsibility activity and Earnings per share. Since, -40 coefficient is still not

significant, Therefore, being included in BIST Sustainability Index and having high governance level and stakeholder's ranking do not have positively significant effect on firm's EPS.

The results were somewhat expected since corporate social responsibility is not a top priority for investors in Turkey at this moment. Turkey is an emerging economy; thus, one may guess, that sustainability concept is newly born in Turkey and not yet adapted in many companies.

Above results may also suggest that financial benefits of corporate social responsibility are not seen in short term. Since the Sustainability Index was only established in 2014, it was not possible to study longer periods. Corporate Sustainability is per se, operating a company in a way, to live and be profitable many decades to come. This may be the major reason for the revealed results.

Additionally, results may indicate that there may be an indirect benefit of corporate social responsibility on finances. For instance, employees who choose to work for a pro- corporate social responsibility firm in turn work more efficient and will not cost company termination expenses, thus benefiting company financially. Such indirect financial benefits may happen with suppliers, financial institutions and with other stakeholders.

The results of this study my serve as a motivation for investors, companies and even government bodies to think in a corporate sustainability perspective.

B. Literature Contribution

This research is an important contribution to the corporate social responsibility - corporate financial performance literature overall, since it uses uniquely created models, combining sustainability and corporate governance rating as a representation of corporate social responsibility, as well as controlling the data with four control variables. The models used in this study can further be used to explore the subject in more detail.

Moreover, there were no such studies conducted for Turkish market, hence, this research may serve as a fundament for future researchers in Turkey and worldwide. Sustainability and corporate social responsibility are among the hot

topics of discussions in a global corporate world and it is expected to grow even more as years passes and resources decreases.

C. Recommendations for Future Researchers

Future researchers may study the corporate social responsibility - corporate financial performance relationship for a specific industry in Borsa Istanbul, results of such studies may help other non-public companies maybe change their strategies to gain sustainability benefits in future.

Future researchers may also opt for the sustainability index to mature, then take a longer study period, this may be 10-15 years. By doing so, researchers may observe a long-term effect of corporate social responsibility (and sustainability) on corporate financial performance.

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APPENDIX

Appendix-1: List of Companies

No	CODE	Company Name	Industry	Number	CODE	Company Name	Industry
1	AFYON	AFYON ÇİMENTO	Non-metallic mineral products	38	KARSN	KARSAN OTOMOTİV	Metal products machinery electrical equipment and transportation vehicles
2	AKENR	AK ENERJİ	Electricity gas and water	39	KARTN	KARTONSAN	Paper, Printing and publishing
3	AKSA	AKSA Akrilik	Chemicals, petroleum rubber and plastic products	40	KCHOL	KOÇ HOLDİNG	Holding and investment companies
4	AKSEN	AKSA ENERJİ	Electricity gas and water	41	KONYA	KONYA ÇİMENTO	Non-metallic mineral products
5	ALARK	ALARKO HOLDİNG	Holding and investment companies	42	KOZAL	KOZA ALTIN	Mining
6	ALKIM	ALKİM KİMYA	Chemicals, petroleum rubber and plastic products	43	KOZAA	KOZA MADENCİLİK	Mining
7	ANACM	ANADOLU CAM	Non-metallic mineral products	44	LOGO	LOGO YAZILIM	Technology
8	AEFES	ANADOLU EFES	Food, beverage and tobacco	45	MNDRS	MENDERES TEKSTİL	Textile
9	ASUZU	ANADOLU ISUZU	Metal products machinery electrical equipment and transportation vehicles	46	MGROS	MİGROS TİCARET	Wholesale and retail trade
10	ARCLK	ARÇELİK	Metal products machinery electrical equipment and transportation vehicles	47	NTHOL	NET HOLDİNG	Holding and investment companies
11	ASELS	ASELSAN	Technology	48	NETAS	NETAŞ TELEKOM.	Technology
12	AYGAZ	AYGAZ	Chemicals, petroleum rubber and plastic products	49	OTKAR	OTOKAR	Metal products machinery electrical equipment and transportation vehicles

13	BAGFS	BAGFAŞ	Chemicals, petroleum rubber and plastic products	50	PRKME	PARK ELEK.MADENCİLİK	Mining
14	BIMAS	BİM MAĞAZALAR	Wholesale and retail trade	51	PGSUS	PEGASUS	Transportation and storage
15	BIZIM	BİZİM MAĞAZALARI	Wholesale and retail trade	52	PETKM	PETKİM	Chemicals, petroleum rubber and plastic products
16	BRSAN	BORUSAN MANNESMANN	Basic metal	53	SAHOL	SABANCI HOLDİNG	Holding and investment companies
17	BRISA	BRİSA	Chemicals, petroleum rubber and plastic products	54	SASA	SASA POLYESTER	Chemicals, petroleum rubber and plastic products
18	CCOLA	COCA COLA İÇECEK	Food, beverage and tobacco	55	SODA	SODA SANAYİİ	Chemicals, petroleum rubber and plastic products
19	CLEBI	ÇELEBİ	Transportation and storage	56	SISE	ŞİŞE CAM	Holding and investment companies
20	CIMSA	ÇİMSA	Non-metallic mineral products	57	TATGD	TAT GIDA	Food, beverage and tobacco
21	DOHOL	DOĞAN HOLDİNG	Holding and investment companies	58	TAVHL	TAV HAVALİMANLARI	Holding and investment companies
22	DOAS	DOĞUŞ OTOMOTİV	Wholesale and retail trade	59	TKFEN	TEKFEN HOLDİNG	Holding and investment companies
23	ECILC	ECZACIBAŞI İLAÇ	Holding and investment companies	60	TKNSA	TEKNOSA İÇ VE DIŞ TİCARET	Wholesale and retail trade
24	EGEEN	EGE ENDÜSTRİ	Metal products machinery electrical equipment and transportation vehicles	61	TOASO	TOFAŞ OTO. FAB.	Metal products machinery electrical equipment and transportation vehicles
25	ENKAI	ENKA İNŞAAT	Construction	62	TRKCM	TRAKYA CAM	Non-metallic mineral products
26	EREGL	EREĞLİ DEMİR CELİK	Basic metal	63	TCELL	TURKCELL	Telecommunication
27	FROTO	FORD OTOSAN	Metal products machinery electrical equipment and transportation vehicles	64	TMSN	TÜMOSAN MOTOR VE TRAKTÖR	Metal products machinery electrical equipment and transportation vehicles
28	GOODY	GOOD-YEAR	Chemicals, petroleum rubber and plastic products	65	TUPRS	TÜPRAŞ	Chemicals, petroleum rubber and plastic products
29	GOLTS	GÖLTAŞ ÇİMENTO	Non-metallic mineral products	66	THYAO	TÜRK HAVA YOLLARI	Transportation and storage
30	GSDHO	GSD HOLDİNG	Holding and investment companies	67	TTKOM	TÜRK TELEKOM	Telecommunication
31	GUBRF	GÜBRE FABRİK.	Chemicals, petroleum rubber and plastic products	68	TTRAK	TÜRK TRAKTÖR	Metal products machinery electrical equipment and transportation

							vehicles
32	HURGZ	HÜRRİYET GZT.	Paper, Printing and publishing	69	ULKER	ÜLKER BİSKÜVİ	Food, beverage and tobacco
33	IHLAS	İHLAS HOLDİNG	Holding and investment companies	70	VESTL	VESTEL	Metal products machinery electrical equipment and transportation vehicles
34	IPEKE	İPEK DOĞAL ENERJİ	Mining	71	VESBE	VESTEL BEYAZ EŞYA	Metal products machinery electrical equipment and transportation vehicles
35	ITTFH	İTTİFAK HOLDİNG	Holding and investment companies	72	AGHOL	ANADOLU GRUBU HOLDING	Holding and investment companies
36	IZMDC	İZMİR DEMİR ÇELİK	Basic metal	73	ZOREN	ZORLU ENERJİ	Electricity gas and water
37	KRDMD	KARDEMİR (D)	Basic metal				

Appendix-2: Unit Root Test Results

Dependent Variables:

Panel unit root test: Summary
Series: **ROA**
Sample: 2015 2019
Exogenous variables: Individual effects, individual linear trends
Automatic selection of maximum lags
Automatic lag length selection based on SIC: 0
Newey-West automatic bandwidth selection and Bartlett kernel
Balanced observations for each test

Method	Statistic	Prob.**	Cross-sections	Obs
Null: Unit root (assumes common unit root process)				
Levin, Lin & Chu t*	-80.0237	0.0000	73	292
Breitung t-stat	3.15987	0.9992	73	219
Null: Unit root (assumes individual unit root process)				
Im, Pesaran and Shin W-stat	-7.36318	0.0000	73	292
ADF - Fisher Chi-square	212.586	0.0003	73	292
PP - Fisher Chi-square	328.191	0.0000	73	292

** Probabilities for Fisher tests are computed using an asymptotic Chi -square distribution. All other tests assume asymptotic normality.

Panel unit root test: Summary
Series: **Tobin's Q**
Sample: 2015 2019
Exogenous variables: Individual effects, individual linear trends
Automatic selection of maximum lags
Automatic lag length selection based on SIC: 0
Newey-West automatic bandwidth selection and Bartlett kernel
Balanced observations for each test

Method	Statistic	Prob.**	Cross-sections	Obs
Null: Unit root (assumes common unit root process)				
Levin, Lin & Chu t*	-28.7680	0.0000	73	292
Breitung t-stat	1.09036	0.8622	73	219
Null: Unit root (assumes individual unit root process)				
Im, Pesaran and Shin W-stat	-5.52747	0.0000	73	292
ADF - Fisher Chi-square	196.227	0.0035	73	292
PP - Fisher Chi-square	286.006	0.0000	73	292

** Probabilities for Fisher tests are computed using an asymptotic Chi -square distribution. All other tests assume asymptotic normality.

Panel unit root test: Summary
Series: **EPS**
Sample: 2015 2019
Exogenous variables: Individual effects, individual linear trends
Automatic selection of maximum lags
Automatic lag length selection based on SIC: 0
Newey-West automatic bandwidth selection and Bartlett kernel
Balanced observations for each test

Method	Statistic	Prob.**	Cross-sections	Obs
Null: Unit root (assumes common unit root process)				
Levin, Lin & Chu t*	-20.3435	0.0000	73	292
Breitung t-stat	6.62520	1.0000	73	219
Null: Unit root (assumes individual unit root process)				
Im, Pesaran and Shin W-stat	-1.95886	0.0251	73	292
ADF - Fisher Chi-square	160.245	0.1986	73	292
PP - Fisher Chi-square	274.688	0.0000	73	292

** Probabilities for Fisher tests are computed using an asymptotic Chi -square distribution. All other tests assume asymptotic normality.

Independent Variables:

Panel unit root test: Summary
Series: **Corporate Social Responsibility (CSR)**
Sample: 2015 2019
Exogenous variables: Individual effects, individual linear trends
Automatic selection of maximum lags
Automatic lag length selection based on SIC: 0
Newey-West automatic bandwidth selection and Bartlett kernel
Balanced observations for each test

Method	Statistic	Prob.**	Cross-sections	Obs
Null: Unit root (assumes common unit root process)				
Levin, Lin & Chu t*	-6.99031	0.0000	13	52
Breitung t-stat	-3.12137	0.0009	13	39
Null: Unit root (assumes individual unit root process)				
Im, Pesaran and Shin W-stat	0.53184	0.7026	13	52
ADF - Fisher Chi-square	10.0693	0.9979	13	52
PP - Fisher Chi-square	14.1363	0.9712	13	52

** Probabilities for Fisher tests are computed using an asymptotic Chi -square distribution. All other tests assume asymptotic normality.

Panel unit root test: Summary
Series: **Corporate Governance Level (CGL)**
Sample: 2015 2019
Exogenous variables: Individual effects, individual linear trends
Automatic selection of maximum lags
Automatic lag length selection based on SIC: 0
Newey-West automatic bandwidth selection and Bartlett kernel
Balanced observations for each test

Method	Statistic	Prob.**	Cross-sections	Obs
Null: Unit root (assumes common unit root process)				
Levin, Lin & Chu t*	-1.54509	0.0612	1	4
Breitung t-stat	-0.65760	0.2554	1	3
Null: Unit root (assumes individual unit root process)				
Im, Pesaran and Shin W-stat	0.18883	0.5749	1	4
ADF - Fisher Chi-square	0.55882	0.7562	1	4
PP - Fisher Chi-square	0.51752	0.7720	1	4

** Probabilities for Fisher tests are computed using an asymptotic Chi -square distribution. All other tests assume asymptotic normality.

Panel unit root test: Summary
Series: **Stakeholder Rating (STR)**
Sample: 2015 2019
Exogenous variables: Individual effects, individual linear trends
Automatic selection of maximum lags
Automatic lag length selection based on SIC: 0
Newey-West automatic bandwidth selection and Bartlett kernel
Balanced observations for each test

Method	Statistic	Prob.**	Cross-sections	Obs
Null: Unit root (assumes common unit root process)				
Levin, Lin & Chu t*	-6.24960	0.0000	19	76
Breitung t-stat	1.72425	0.9577	19	57
Null: Unit root (assumes individual unit root process)				
Im, Pesaran and Shin W-stat	0.74197	0.7709	19	76
ADF - Fisher Chi-square	24.4707	0.9562	19	76
PP - Fisher Chi-square	42.1087	0.2976	19	76

** Probabilities for Fisher tests are computed using an asymptotic Chi -square distribution. All other tests assume asymptotic normality.

Control Variables:

Panel unit root test: Summary
Series: **Firm Size (FS)**
Sample: 2015 2019
Exogenous variables: Individual effects, individual linear trends
Automatic selection of maximum lags
Automatic lag length selection based on SIC: 0
Newey-West automatic bandwidth selection and Bartlett kernel
Balanced observations for each test

Method	Statistic	Prob.**	Cross-sections	Obs
Null: Unit root (assumes common unit root process)				
Levin, Lin & Chu t*	-10.7682	0.0000	73	292
Breitung t-stat	8.57500	1.0000	73	219
Null: Unit root (assumes individual unit root process)				
Im, Pesaran and Shin W-stat	-0.10699	0.4574	73	292
ADF - Fisher Chi-square	112.457	0.9820	73	292
PP - Fisher Chi-square	194.327	0.0046	73	292

** Probabilities for Fisher tests are computed using an asymptotic Chi -square distribution. All other tests assume asymptotic normality.

Panel unit root test: Summary
Series: **Growth Rate (GR)**
Sample: 2015 2019
Exogenous variables: Individual effects, individual linear trends
Automatic selection of maximum lags
Automatic lag length selection based on SIC: 0
Newey-West automatic bandwidth selection and Bartlett kernel
Balanced observations for each test

Method	Statistic	Prob.**	Cross-sections	Obs
Null: Unit root (assumes common unit root process)				
Levin, Lin & Chu t*	-217.105	0.0000	73	292
Breitung t-stat	3.41474	0.9997	73	219
Null: Unit root (assumes individual unit root process)				
Im, Pesaran and Shin W-stat	-15.6546	0.0000	73	292
ADF - Fisher Chi-square	161.116	0.1855	73	292
PP - Fisher Chi-square	239.154	0.0000	73	292

** Probabilities for Fisher tests are computed using an asymptotic Chi -square distribution. All other tests assume asymptotic normality.

Panel unit root test: Summary
Series: ***ln*Listed Years**
Exogenous variables: Individual effects, individual linear trends
Automatic selection of maximum lags
Automatic lag length selection based on SIC: 0
Newey-West automatic bandwidth selection and Bartlett kernel
Balanced observations for each test

Method	Statistic	Prob.**	Cross-sections	Obs
Null: Unit root (assumes common unit root process)				
Levin, Lin & Chu t*	-77.0124	0.0000	73	292
Breitung t-stat	9.83301	1.0000	73	219
Null: Unit root (assumes individual unit root process)				
Im, Pesaran and Shin W-stat	-244.198	0.0000	73	292
ADF - Fisher Chi-square	1334.17	0.0000	73	292
PP - Fisher Chi-square	1344.71	0.0000	73	292

** Probabilities for Fisher tests are computed using an asymptotic Chi -square distribution. All other tests assume asymptotic normality.

Panel unit root test: Summary
Series: **Leverage**
Sample: 2015 2019
Exogenous variables: Individual effects, individual linear trends
Automatic selection of maximum lags
Automatic lag length selection based on SIC: 0
Newey-West automatic bandwidth selection and Bartlett kernel
Balanced observations for each test

Method	Statistic	Prob.**	Cross-sections	Obs
Null: Unit root (assumes common unit root process)				
Levin, Lin & Chu t*	-38.7096	0.0000	73	292
Breitung t-stat	8.95829	1.0000	73	219
Null: Unit root (assumes individual unit root process)				
Im, Pesaran and Shin W-stat	-3.61945	0.0001	73	292
ADF - Fisher Chi-square	174.056	0.0564	73	292
PP - Fisher Chi-square	272.761	0.0000	73	292

** Probabilities for Fisher tests are computed using an asymptotic Chi -square distribution. All other tests assume asymptotic normality.

Appendix-3: VIF Tests

Model 1

Variance Inflation Factors
Sample: 2015 2019
Included observations: 365

Variable	Coefficient Variance	Uncentered VIF	Centered VIF
CSR	0.000139	2.745526	1.715014
CGL	6.27E-06	1.805354	1.174339
FS	1.36E-05	354.3669	1.545016
GR	1.16E-05	1.084872	1.028556
LNLY	6.99E-05	32.28690	1.053738
LEV	0.000430	8.359697	1.190528
C	0.006614	347.7206	NA

Model 2

Variance Inflation Factors
Sample: 2015 2019
Included observations: 365

Variable	Coefficient Variance	Uncentered VIF	Centered VIF
CSR	0.000139	2.742971	1.713417
STR	0.000107	1.812542	1.178624
FS	1.37E-05	355.0477	1.547984
GR	1.16E-05	1.083183	1.026955
LNLY	6.99E-05	32.27703	1.053417
LEV	0.000430	8.352677	1.189528
C	0.006622	348.1368	NA

Model 3

Variance Inflation Factors
Sample: 2015 2019
Included observations: 365

Variable	Coefficient Variance	Uncentered VIF	Centered VIF
CSR	0.008224	2.745526	1.715014
CGL	0.000371	1.805354	1.174339
FS	0.000805	354.3669	1.545016
GR	0.000687	1.084872	1.028556
LNLY	0.004133	32.28690	1.053738
LEV	0.025424	8.359697	1.190528
C	0.390931	347.7206	NA

Model 4

Variance Inflation Factors
Sample: 2015 2019
Included observations: 365

Variable	Coefficient Variance	Uncentered VIF	Centered VIF
CSR	0.008211	2.742971	1.713417
STR	0.006315	1.812542	1.178624
FS	0.000806	355.0477	1.547984
GR	0.000685	1.083183	1.026955
LNLY	0.004129	32.27703	1.053417
LEV	0.025386	8.352677	1.189528
C	0.391148	348.1368	NA

Model 5

Variance Inflation Factors
Sample: 2015 2019
Included observations: 365

Variable	Coefficient Variance	Uncentered VIF	Centered VIF
CSR	1.293369	2.745526	1.715014
CGL	0.058286	1.805354	1.174339
FS	0.126650	354.3669	1.545016
GR	0.108002	1.084872	1.028556
LNLY	0.649938	32.28690	1.053738
LEV	3.998452	8.359697	1.190528
C	61.48298	347.7206	NA

Model 6

Variance Inflation Factors
Sample: 2015 2019
Included observations: 365

Variable	Coefficient Variance	Uncentered VIF	Centered VIF
CSR	1.292415	2.742971	1.713417
STR	0.994066	1.812542	1.178624
FS	0.126918	355.0477	1.547984
GR	0.107855	1.083183	1.026955
LNLY	0.649865	32.27703	1.053417
LEV	3.995869	8.352677	1.189528
C	61.56849	348.1368	NA

Appendix-3: Hausman Tests

Model 1

Correlated Random Effects - Hausman Test

Test cross-section random effects

Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Cross-section random	29.618815	6	0.0000

Cross-section random effects test comparisons:

Variable	Fixed	Random	Var(Diff.)	Prob.
CSR	-0.002771	0.024833	0.000081	0.0022
CGL	-0.002790	0.000760	0.000229	0.8145
FS	0.024460	-0.002943	0.000248	0.0821
GR	0.002514	0.004006	0.000002	0.2322
LNLY	0.023614	0.006948	0.002031	0.7116
LEV	-0.465372	-0.219958	0.003835	0.0001

Model 2

Correlated Random Effects - Hausman Test

Test cross-section random effects

Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Cross-section random	29.598795	6	0.0000

Cross-section random effects test comparisons:

Variable	Fixed	Random	Var(Diff.)	Prob.
CSR	-0.002857	0.024879	0.000080	0.0020
STR	-0.010638	0.002903	0.004073	0.8320
FS	0.024498	-0.002940	0.000248	0.0815
GR	0.002532	0.004010	0.000002	0.2380
LNLY	0.023672	0.006927	0.002032	0.7103
LEV	-0.465123	-0.220036	0.003849	0.0001

Model 3

Correlated Random Effects - Hausman Test
Test cross-section random effects

Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Cross-section random	14.588133	6	0.0237

Cross-section random effects test comparisons:

Variable	Fixed	Random	Var(Diff.)	Prob.
CSR	-0.085442	-0.053542	0.000711	0.2317
CGL	-0.014338	0.036152	0.004336	0.4432
FS	-0.237568	-0.200839	0.004416	0.5804
GR	0.014925	0.009949	0.000009	0.0997
LNLY	-0.138209	-0.103371	0.037685	0.8576
LEV	0.289929	0.272013	0.052925	0.9379

Model 4

Correlated Random Effects - Hausman Test
Test cross-section random effects

Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Cross-section random	13.991916	6	0.0297

Cross-section random effects test comparisons:

Variable	Fixed	Random	Var(Diff.)	Prob.
CSR	-0.094085	-0.056088	0.000694	0.1492
STR	0.113607	0.188202	0.077546	0.7888
FS	-0.236454	-0.203209	0.004404	0.6164
GR	0.014777	0.009575	0.000009	0.0850
LNLY	-0.139707	-0.101456	0.037687	0.8438
LEV	0.279290	0.269193	0.053219	0.9651

Model 5

Correlated Random Effects - Hausman Test
Test cross-section random effects

Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Cross-section random	26.638820	6	0.0002

Cross-section random effects test comparisons:

Variable	Fixed	Random	Var(Diff.)	Prob.
CSR	-0.953812	-0.010757	0.153905	0.0162
CGL	0.066970	-0.304499	0.856400	0.6881
FS	5.089026	0.824435	0.880230	0.0000
GR	0.175358	0.143692	0.002074	0.4869
LNLY	-3.320957	2.285816	7.460761	0.0401
LEV	-10.294613	-7.238073	11.067530	0.3582

Model 6

Correlated Random Effects - Hausman Test
Test cross-section random effects

Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Cross-section random	26.688039	6	0.0002

Cross-section random effects test comparisons:

Variable	Fixed	Random	Var(Diff.)	Prob.
CSR	-0.961114	-0.020242	0.150472	0.0153
STR	0.447842	-1.197095	15.302081	0.6741
FS	5.089163	0.825900	0.878455	0.0000
GR	0.174655	0.144915	0.002075	0.5138
LNLY	-3.324415	2.294078	7.463333	0.0397
LEV	-10.314227	-7.211373	11.128062	0.3523

RESUME

Shakhida Zaitova

Career Objective:
Entry Position in
Business Administration

CONTACT

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Current City: Istanbul

ADDITIONAL SKILLS

Languages:
Russian (native)
English (proficient)
Turkish (intermediate)

Computer:
Proficiency in Microsoft Office

HOBBIES

Painting

Yoga and Fitness

Self-education on wellbeing, positive thinking and psychology

EDUCATION

MBA-CURRENT
Istanbul Aydin University
Istanbul, Turkey
Class of 2020

BACHELORS IN FINANCE AND ACCOUNTING
Canadian University of Dubai
Academic Excellence Scholarship
GPA 3.94/4
Dubai, UAE
Class of 2018

BILINGUAL IB DIPLOMA
Jumeira Baccalaureate School .
Dubai, UAE
Class of 2014

EXPERIENCE

ASSISTANT TO INVESTMENT ANALYST-INTERN
WOMENA, Dubai 03.2017-05.2017

Assisting with deal sourcing
Researching projects related to performing due diligence on startups
Communicating with entrepreneurs in regards to investment

BRAND AMBASSADOR OF NESTLE PRODUCTS
Retailer Outlets, Dubai 2014-2017

Introduced new products to consumers
Carried out sales reports and presented them to managers
Provided customer service (warranty, complains and recommendations)
Served 50+ customers a day

EVENT PARTICIPATION

FOREX INTER-UNIVERSITY TRADING COMPETITION (WINNERS)
American University of Sharjah 03.11.2017

BACKSTAGE AT BOSCH (MANAGER SHADOWING)
Robert Bosch, Middle East, Dubai 05.04.2017

ACADEMIC RESEARCH

MBA thesis - Relationship of CSR and Finincial Performance of Public companies in Turkey
Created a Model on Indices and Mutual Funds in UAE
Wrote an Extended Essay (1 year of research on Russian Art)

CORE COMPETENCIES

Communications skills
All-round IT skills
Time Management
Punctuality and Accuracy
Conflict Resolution
Analytical and logical problem solving
Self Motivated
Ambitious
Self-Taught
Fast Learner