AN OVERVIEW OF CORPORATE SOCIAL RESPONSIBILITY CONTRIBUTION IN TURKEY GSM INDUSTRY

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PLAGIARISM

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ABSTRACT

This study investigates the Corporate Social Responsibility activities of mobile telecommunications industry in Turkey and its impact on business performance. For this purpose, the data obtained from the sustainability reports of 3 GSM companies operating in Turkey between 2015-2020 were examined using content analysis method. The activities of the companies were scored by determining categories and subcategories under the social impact and environmental impact headings. The market data reports of BTK (regulatory authority) were used for market share, average revenue per subscriber and subscriber growth rate values representing business performance and mobile infrastructure investments of companies. The relationship between the concepts was analyzed using descriptive statistics, correlation and regression analysis methods. Content analysis results indicate that GSM operators' social responsibility practices has been increasing in Turkey. It is found that there is a particular focus on education, investments in youth and women's empowerment. In statistical analysis, it was concluded that there was no relationship between Corporate Social Responsibility (CSR) performance and business performance. While considering the high penetration and huge income of mobile telecommunications services, it's obvious the importance of the industry's social responsibility impact. The findings of the study reveal that the sector players have a high awareness of responsibility towards the society and the environment, and this is turned into action with a managerial willness beyond necessity.

Keywords: Corporate Social Responsibility, Business Performance, Turkey, mobile telecommunications operators.

ÖZET

Bu çalışma, Türkiye'de mobil telekomünikasyon endüstrisindeki Kurumsal Sosyal Sorumluluk etkinliklerini ve bunun iş performansı üzerindeki etkisini araştırmaktadır. Bu amaçla 2015-2020 yılları arasında Türkiye'de faaliyet gösteren 3 GSM şirketinin sürdürülebilirlik raporlarından elde edilen veriler içerik analizi yöntemi ile incelenmiştir. Sosyal etki ve çevresel etki başlıkları altında kategoriler ve alt kategoriler belirlenerek firmaların faaliyetleri skorlanmıştır. İş performansını temsil eden pazar payı, abone başına ortalama gelir ve abone artış oranı değerleri ile şirketlerin mobil altyapı yatırımları için BTK'nın Pazar verileri raporlarından yararlanılmıştır. Tanımlayıcı istatistikler ile korelasyon ve regresyon analizi yöntemleri kullanılarak kavramların arasındaki ilişki incelenmiştir. İçerik analizi sonuçları, Türkiye'de GSM operatörlerinin sosyal sorumluluk alanındaki etkinliklerinin giderek artmakta olduğunu göstermektedir. Özellikle eğitim, gençlere yapılan yatırımlar ve kadınların güçlendirilmesi ile ilgili alanlara odaklanıldığı görülmektedir. İstatistiksel analizlerde, Kurumsal Sosyal Sorumluluk performansı ile iş performansı arasında bir ilişki olmadığı sonucuna varılmıştır. Mobil telekomünikasyon servislerinin ulaştığı yaygınlık ve gelirlerin büyüklüğü gözönüne alındığında, sektörün sosyal sorumluluk etkisinin önemi açıktır. Çalışmanın bulguları, sektör oyuncularının topluma ve çevreye karşı yüksek bir sorumluluk bilincine sahip olduğunu, bunun zorunlulukların ötesinde bir yönetimsel irade ile eyleme dönüştürüldüğünü ortaya koymaktadır.

Anahtar Sözcükler: Kurumsal Sosyal Sorumluluk, İş Performansı, Türkiye, mobil telekomünikasyon operatörleri

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1. INTRODUCTION

CSR is basically an element of sustainable development strategy. Today, Corporate Social Responsibility (CSR) is turned into action by companies under social, ecological and economic headings, its effects are measured and reported in terms of development. While the companies conducting CSR activities, the social stakeholders consist of their customers, employees, shareholders, suppliers, non-governmental organizations, universities, media and individuals.

In the literature, many definitions have been made for CSR with different approaches. In the classical view led by Friedman, the goal of a company is to maximize its shareholders' earnings. Companies are profit-oriented organizations, not charities. Social responsibility actions do not serve this purpose, rather they hinder them as they create costs therefore business organizations should not be interested in CSR. According to another view, Stakeholder approach, companies are not only accountable to their shareholders, but there are many stakeholders who can play a role or be affected by the achievement of their goals and their interests must also be taken into account, there must be a balance in this sense (Freeman, 1984). Finally, the discussion comes that point, of course, the main purpose of companies is to profit, but sometimes supporting socially responsible activities does not conflict with the purpose of companies. In this context, company managements take into account the benefits of both society and stakeholders, while shaping their actions with social, economic and environmental concerns. Based on the definitions made in different periods, we can summarize CSR as a strategic management form in which organizations control their performance in terms of economic, social and environmental impacts of their actions by establishing a sustainable and responsible business model.

The relationship between corporate social responsibility performance of companies and their financial performance and competitive advantages has been questioned from a theoretical and practical perspective with numerous studies in the academic literature. Although more studies have found positive relationship results, ambiguous, negative and U-shaped relationships have also been revealed. The motivation of this study is to contribute to the theory to determine the direction and extent of the impact of CSR on the business performance.

Academic studies focusing on CSR applications in the telecommunications industry have been conducted in several countries. These were mostly carried out over mobile telecommunication services. Frequently, CSR applications were directly examined in these studies. How companies advertise their CSR activities on their websites, how CSR affects end-user preferences, the effect of CSR on corporate image and similar issues were also investigated. In these studies, researchers mostly applied surveys to the end users and analyzed the survey results.

The aim of this study is to examine the CSR practices in the mobile telecommunications sector in Turkey and to investigate the relationship between the CSR performance and the business performance of the companies.

Considering the penetration of the mobile services and big size of revenues, mobile operators have considerable power to create a domain in social, economic and environmental issues. In this sense, it is worth to examine the CSR implementations of the industry.

The study differs from existing studies in the literature in two aspects: Data for CSR applications are taken from sustainability reports of companies. Data for business performance indicators are taken from the reports of BTK, the regulatory institution of the sector.

2. LITERATURE REVIEW

2.1. Corporate Social Responsibility Definition and Approaches

Many definitions have been made for CSR in different periods in the academic literature. A few of these definitions stand out from past to present. In the 1950s, Bowen defines CSR as it refers to the obligations of businessmen to pursue those policies to make those decisions or to follow those lines of relations which are desirable in terms of the objectives and values of our society (Bowen 1953). Keith Davis (1973) put forward the notion that CSR is the concern and response of businesses to issues beyond satisfying legal, economic and technological requirements. According to Caroll CSR encompasses the economic, legal, ethical and discretionary expectations that society has of organizations at a given point in time (Caroll, 1999). Baker describes the CSR as how companies manage the business processes to produce an overall positive impact on society (Baker, 2004). CSR must be defined to contain a number of minimum requirements and to entail a system of corporate accountability through regulatory intervention and enforcement of obligations (Boeger, Murray & Villiers, 2008). A more recent definition is that additional responsibilities of businesses to local and wider communities apart from its core responsibility of profit maximization (Simpson & Taylor, 2013).

In addition to the definitions in the theory, at the current practical application, World Business Council for Sustainable Development (WBCSD) definition is "Corporate Social Responsibility is the continuing commitment by business to behave ethically and contribute to economic development while improving the quality of life of the workforce and their families as well as of the local community and society at large". The EU Commission puts forward a new definition of CSR as “the responsibility of enterprises for their impacts on society”.

It is possible to gather the approaches encountered in CSR discussions in the literature under the headings of classical and modern view.

In order to understand the classical vision, it is necessary to review the arguments put forward by Friedman (1970), the most important proponent of this view. The main argument is that the main responsibility of a company is to maximize profits and CSR is not a compatible practice with this. Friedman went further and described CSR as a destructive doctrine and considered it contradictory to a free society. The business only bears liability to its shareholders, which is to increase profits by using its resources within the law. The summary of the view is that the authorities that should carry out social activities for the benefit of society are governments and social institutions, not companies. The foundations of the classical view go back to Adam Smith’s “invisible hand”. According to the classical view, the explanation for the conflict of CSR with the principle of profit maximization is as follows: If the company does CSR activity, it has a financial cost, which means that the money belonging to the shareholders is spent out of purpose. Because shareholders have invested their capital at a risk and should benefit from the return as they wish. A wave of liberalization prevailed in the 70's and Friedman contributed to the spread of liberalism with these arguments he put forward. With these policies, it is aimed to increase the validity of market rules in the economy and it has been claimed that the welfare of the society will increase. Although this view was generally accepted at the time, in real life the data did not support this theory (Madariaga, 2009) It will be helpful to use the following view to explain the contradiction here: The benefit should reach not only the rich, but also all societies globally. Market theory deals with profit maximization but does not say how to distribute the wealth produced (Phillips, Freeman & Wicks, 2003)

As we will discuss the historical developments in the next section, business world have had to face the concept of CSR with the spread of globalization in the course of time. There was pressure on company executives to support CSR related initiatives. Nevertheless, both cultural differences stand out regionally and the realities of business life can vary greatly. Thus, we meet the modern view. The classic view saw CSR as a burden on the company's competitiveness. However, the modern view sees CSR as a tool for the business success of the company. In practice, business managers adopt these two approaches at various levels, and various CSR trends continue to be observed in practice (Jamali and Sidani, 2008).

One of the important topics in CSR discussions is stakeholder theory. According to the theory led by Freeman (1984), corporate success is possible only by meeting the economic and other needs of the stakeholders (Pirsch & Gupta, 2007). The core of stakeholder theory is based on the idea of creating value for all stakeholders and the idea that all stakeholders should be given equal attention. Stakeholders refer to employees, company owners, investors, as well as customers, suppliers and non-governmental organizations (Freeman & Dmytriyev, 2017). A company management that adopts this view takes into account the effects of every action on everyone. Therefore, it is correct to adopt stakeholder theory in the management of socially responsible companies (Mohr & Webb, 2005).

2.2. Historical Perspective of CSR

Although it is accepted that the historical development of corporate social responsibility concept started in the 1950s, there is actually a history of more than two centuries. Even beyond that, views on social responsibilities have been debated since the early times of history and have changed over time.

It is not possible to mention about the social issues were handled consciously in societies until the 12th century. Laws and religious beliefs played a decisive role in social responsibility issues in this period of history (Luthans and Hodgetts, 1972). Since this period, philosophers Plato and Aristotle have made suggestions on economic issues from the perspective of social benefit and ethics. Plato explained how the approach of the authority should be in economic matters, and stated that the general benefit should be above everything else. Aristotle stated that equivalence should be considered in the exchange of goods and services and mentioned that the charging interest causes unfair profit (Özüpek, 2004)

Chaffee (2017) stated that the first traces of corporate behavior in social issues were seen in Roman Laws. During this period, there were nursing homes and hospitals for the poor, mentally ill and elderly people. Organizations also had a social identity. This approach continued with English Law in the Middle Ages. This time, academic and religious institutions took on social roles (Agudelo and Jóhannsdóttir, 2019). Hielscher and Husted (2019) review the period before the Industrial Revolution and call it proto-CSR. The practices of this period are different from modern CSR in both form and content, but formed the basis of CSR. Between the 12th century and the 14th century, the trade was conducted almost uncontrolled in a quite free environment. Low taxes and tax exemptions are mentioned (Baumol 1990). The strong influence of religious institutions was felt in all areas in the Middle Ages.

Naturally, trade has also had its share. However, the concept of corporate social responsibility does not exist yet (Aktan & Boru, 2007).

The period from the 18th century to the 2nd World War is considered the Post-Industrial Revolution Period. In 1765, with the invention of the steam engine by James Watt, the factory system was introduced and the foundation of business was formed with this system. “The Wealth of Nations” of Adam Smith in 1776 and the “French Revolution” in 1789 are known as the important factors of the Industrial Revolution (Ataman, 2001). By the end of the 1800s, there was a period when people's trust in big companies gradually decreased and they criticized them on social issues. In the face of these criticisms, companies have tried to improve their position in the eyes of the society by highlighting their CSR-like activities. (Broomhill, 2007). By the late 1800s, businessmen began to worry by establishing a relationship between workers' welfare and productivity. Jenkins (2005) describes this period as the first wave of concern about corporate action. During this period, companies, worrying about the regulations to be brought to commercial activities by the government, demonstrated some philanthropic actions. Carroll (2008) also touched on the same subject. He emphasized that they are known as "thieving barons". Sophia Muirhead (1999) described the period 1870-1930 as the preparation time of legal basis for the social actions of organizations. Prior to the 1900s, corporate social activity was viewed negatively as it was understood as spending their money without the shareholders' consent. Due to this view, there were also legal restrictions.

By 1929, we encounter the Great Depression hits US. The crisis “produced the second wave of regulation and led to Roosevelt’s New Deal in the US and nationalization and regulation by the postwar Labor government in the UK” (Broomhill, 2007). Hay and Gray (1974) called this period ' trusteeship management’' phase. Because, as a result of demands from customers, employees and society, corporate managers was expected to both maximize shareholder wealth and create and maintain a fair balance in competition (Hay and Gray, 1974). As a result of the crisis, a new regulation wave arose again. The effects of this have manifested themselves as the New Deal of Roosevelt in USA and the post-war expropriation of the Labor government in UK (Broomhill, 2007). Hanlon & Fleming (2009) says that CSR discussions started in a crisis period in the 1920s and 30s, when there is a crisis in capitalism, objections to the private sector increase.

In 1950s, Bowen made an important contribution to the historical development of CSR with his work Social Responsibilities of the Businessmen. Carroll (1999) defines Bowen as the "father of corporate social responsibility". Bowen (1953) stated that the social responsibility of company managers is to decide according to the values of the society and made the first academic definition.

Jenkins (2005) defines the period from the late 1960s and early 1970s as the third and most influential wave of concern regarding business operations. Carroll (1999) points to Davis as the second important figure in the historical development of CSR with his contributions in this period. Davis (1960) defines social responsibility as the businessmen's decisions and actions, even partially beyond technical and economic interests. During this period, it is seen that there was a great contribution to the academic literature. McGuire (1963) expresses the concept as fulfilling the requirements of social responsibility by exceeding what has to be done legally and economically. Frederick and Walton also introduced a new understanding of CSR in the academic literature in the 1960s. Friedman (1962) stated for the first time that corporate social responsibility activities will have an impact on the profitability performance of businesses. Morrell Heald provided an interesting and proactive discussion with his book written in the 1970s (Carrol, 1999). In the 1970s, corporate behavior was influenced by higher social expectations on the environment and human and labor rights. Although it has become more popular, it has been limited to optional practices such as transparency to shareholders, protecting the environment, and adherence to competition and ethics. On the other hand, this popularity has also caused to the confusion of concepts. Various international agreements were signed in the late 70s under the sponsorship of different international organizations such as the International Labor Organization (ILO) and the Organization for Economic Cooperation and Development (OECD) (Broomhill, 2007).

In the literature, it is seen that the 1980s is highly discussed within the scope of the CSR history. There is an increase in the social responsibility activities of companies for the benefit of society and the environment. During these years, Drucker revealed the relationship between the concept of social responsibility and the potential to turn into an economic opportunity. (Carroll, 1999) Epstein (1987) explains the concept of CSR as "doing things that will benefit corporate stakeholders with the decisions taken". In these years, globalization and neoliberal policies emerged around the world, and thus capital entered a highly mobile period. Companies have relocated their production facilities in countries where they would be more advantageous, like developing countries, thus taking advantage of regulatory differences between states. (Jenkins, 2005). During 1980s, the priority was no longer regulation, but rather attracting foreign direct investment. (Broomhil, 2007). The World Commission on Environment and Development was created in 1983, the UN adopted the Montreal Protocol in 1987, the IPCC was created in 1988, the European Environment Agency was created in 1990, and the UNFCCC in 1992). As a result of the change in the understanding of CSR, it started to spread globally in international organizations and companies (Agudelo, Jóhannsdóttir & Davídsdóttir, 2019).

According to Hanlon & Fleming (2009), a smoother transition to capitalism stands out in the 1990s, as opposed to the seemingly corrosive capitalism of the 1980s. It is widely accepted that the old multilateral agreements and international initiatives introduced to regulate corporate practices have little positive impact on corporate behavior (Bendell & Kearins, 2005). In this decade, there were human rights violations and environmental disasters caused by companies. Anti-globalization actions have been taken around the world. For this reason, CSR has been adopted as a common strategy among global companies. Thus, different schools of CSR emerged in the 1990s. Players such as trade unions, NGOs, Human Rights Organizations or Environmental Groups emerged (Bendell & Kearins, 2005). Carroll (1991) provided an important contribution to the literature by presenting a “Corporate Social Responsibility Pyramid” and defined the four main responsibilities of each company. Burke and Logsdon (1996) presented an innovative perspective that led to a debate about the strategic implementation of CSR by stating that the strategic use of CSR will provide economic benefits for the firm and create measurable value.

During 2000s, it was stated that companies had a new role that required the society to respond to social expectations. There is also a belief that companies should be motivated by the search for sustainability. It was emphasized that they will have to make strategic decisions in order to do this. (Husted and Allen 2007). In these years, the role of multinational corporations (MNC) has grown so much that in comparison between the world's largest MNCs and the richest states, only six countries (USA, Germany, Japan, England, France and Italy) have more revenue than the nine largest multinational companies’ sales. Wal-Mart's profits are still greater than the Canadian government's annual tax revenues" (Monshipouri, Welch & Kennedy, 2000). According to the definition of globalization by Cochrane and Pain (2000): "Cultures, economies and policies are rapidly converging through information exchange, ideas and investment strategies of global companies"

Developments in the 2000s prompted a debate about the benefits of strategic CSR, and in the 2010s it was believed that companies could gain competitiveness by implementing strategic CSR holistically so that they could generate shared value. During this period, the Paris Agreement was signed and Sustainable Development Goals (SDG) were adopted in 2015. These mean that companies are expected to work globally to reach the SDGs.

While the understanding of CSR was the personal decision of businessmen in the 1950s, it was understood as a decision-making process in the 1980s and was perceived as a strategic necessity in the early 2000s. In particular, while the purpose of companies' existence was perceived as limited to the creation of economic profits in the 1950s and 60s, it was believed to serve the society in the 1970s, and in the 2010s it was revealed that the aim was for companies to create common value. The understanding of CSR has been influenced by academic publications, government decisions, social movements, public figures and international movements. Social responsibility understanding is dynamic and it is observed that corporate behavior responds to social expectations (Agudelo, Jóhannsdóttir & Davídsdóttir, 2019).

2.3. The Link Between CSR and Business Performance

The impact of CSR on companies' performance is a vital issue in corporate governance. This is why the relationship between CSR and corporate performance has been highly researched and analyzed in the literature.

The liabilities of organizations to society go beyond their legal and economic requirements. CSR expresses these obligations. We can compare the relationship between the company and the society to the ship and the sea. The socially responsible behavior of a company benefits both the company itself and society. Making a profit is inherent in the business. Because society also represents the company's market, organizations must provide products and services that are beneficial to society and the environment. Thus, it will be possible for them to contribute to sustainability (Mishra & Nigam, 2015).

A company's high corporate reputation can provide a competitive advantage and positively affect its financial status. However, if business and CSR strategies are not well aligned, reputation could be damaged. CSR managers are usually They focus on their relationships with their stakeholders and how society perceives this. However, business managers in their decisions they prioritize financial performance and economic factors. For this reason, they can make decisions that contradict or at least ignore CSR problems (O'Brien, 2001).

The Link Between CSR and Financial Performance is also researched in the literature widely. The first research for this question conducted by Bragdon and Marlin in 1972. In the research, the relationship between pollution control and company profit was examined and it was concluded that there is a positive relationship. The research results mostly concentrate on the following results: positive correlation, weak positive correlation or no correlation. While some studies point to a negative association, fewer studies mention a U-shaped correlation between CSR and financial performance. Margolis and Walsh (2001) reviewed 80 studies in which corporate socially responsible business activities were evaluated as the causal antecedents of financial performance. They found that 53% of these studies documented a positive association, 24% did not find a significant effect, 5% showed a negative effect, and 19% gave mixed results.

Stakeholder theory determines the theoretical framework of the relationship between CSR and Financial Performance; interest groups have a claim on company resources and therefore concerns such as respect for the environment and fair work lead to appropriate company behavior (Fernandez, 2016). When companies act without concern for social responsibility, significant costs may arise and thus profitability decreases. This situation may cause companies to act with social responsibility awareness. The opposite case, if companies acting with social responsibility are more profitable, this will be an incentive to increase investments in this area (Pava, 2008). Wood and Jones (1995) stated that the reason for the variance in the results was due to a problem in alignment of the interest groups. The solution is possible by determining the most important main interest groups for the company. With the contribution of Akpınar et al. (2008), the question of whether all interest groups have the same importance has been resolved. When the relative importance of each interest group is taken into account, a positive relationship will be found. The interest groups of companies consist of customers, employees, suppliers, shareholders, and society as a whole, but according to instrumental theory, when all other factors remain constant, investors turn to companies with high social responsibility behaviour (Fernandez, 2016). Corporate social performance (CSP) is found to be positively associated with prior financial performance, supporting the theory that slack resource availability and CSP are positively related. CSP is also found to be positively associated with future financial performance, supporting the theory that good management and CSP are positively related (Waddock and Graves 1997) Stanwick and Stanwick (1998) reviewed the studies examining the effects of

CSR on FP in his study and concluded that there is a weak positive relationship. Alniacik et al (2011) found that as a result of positive information about the company's CSR, there was a desire for employment in the firm and an increase in both purchase and investment intentions.

There are also studies that conclude a negative relationship. The traditional view argues that CSR is costly as being socially responsible causes additional costs. Investments in pollution reduction, employee benefits packages, donations and sponsorships for the benefit of the community are cited as examples of these costly actions (Galant & Cadez, 2017). These expenditures spoil profitability and cause a competitive disadvantage (Alexander and Buchholz, 1978). Considering the Friedman's view that the only responsibility of the companies is to make a profit, the continuous CSR investments point to irresponsibility. However, the negative association does not require complete abandonment of CSR activity. Although it costs shareholders, there are many executives who believe in the importance of being good corporate citizens (Moser and Martin, 2012). Moreover, it is possible for shareholders to be ethical as well, and although it is known that financial performance will decrease, it does not mean that CSR action will be abandoned (Mackey, Mackey & Barney, 2007).

Another documented relationship is that there is no relationship at all. Findings in studies that point to this result are that being socially responsible does not increase profitability, but also does not spoil it. It can be interpreted as the positive and negative effects of CSR cancel each other out (Galant and Cadez, 2017). When we look at the research findings of Ullmann (1985), we see that the link between CSR and financial performance is ambiguous. Those who find a neutral relationship in the results of the research state that there are many factors that can hinder reliable results

(Kang et al., 2010). A neutral relationship can be explained when CSR is perceived as a pure marketing strategy (Trebucq & d'Arcimoles, 2002). Fauzi and Idris (2009), Mahoney and Roberts (2007), Goukasian and Whitney (2008), and Fogler and Nutt (1975) are among the researchers who found a relationship that could be called neutral or meaningless in their studies. Fiori et al. (2009) could not find a significant relationship between stock price and CSR parameters in their study. (Karagiorgos, 2010)

Another relationship seen between CSR and corporate financial performance is U-shaped. Barnett and Salomon (2012) found the following relationship in their research: Companies with low CSR performance have high CFP (Corporate Financial Performance), companies with medium CSR performance have lower CFP, companies with high CSR performance have the highest CFP.

It is possible to consider this relationship in two ways. To find out how financial performance has improved, CSR can be linked to subsequent financial performance. But it can also be linked to past financial performance to discover whether firms with high financial performance have taken CSR actions (Karagiorgos, 2010). Waddock and Graves (1997), recognized that better financial performance results in improved CSR performance and improved CSR performance leads to improved financial performance, based on "slack resources" and "good management" theories. Therefore, whether CSP is an independent or dependent variable in the relationship between CSP and CFP has been a serious controversy among researchers. In the research of Margolis and Walsh (2003), a total of 127 studies were reviewed and it was seen that CSP was considered as an independent variable in 109 cases.

Considering all these results, it appears that it fails to provide definitive evidence on the nature of the CSR-CFP relationship in the experimental literature (Galant and

Cadez, 2017). Several explanations have been made by many authors for such uncertainty findings (Surroca, Tribó, & Waddock, 2010). If we group these explanations 1- The theoretical basis is weak or lacking (Ruf, Muralidhar, Brown, Janney, & Paul, 2001); (Margolis and Walsh, 2003). 2- lack of clear causation (Waddock & Graves, 1997); and 3- problems with methodology, such as neglecting important variables in model specifications (McWilliams & Siegel, 2000); problems in measuring CSR and CFP (Davidson & Worrell, 1990; Griffin & Mahon, 1997) and sampling limitations (van Beurden & Gössling, 2008). One of the most controversial issues among researchers is whether CSP is an independent or dependent variable in the relationship between CSP and CFP. (Karagiorgos, 2010). Looking at Surroca's conclusion, while investigating the CRP-CFP link, it is necessary to simultaneously consider the measurement of CSR performance, the identification of neglected control variables, and the possibility that the causal link may work in the opposite direction.

2.4. Telecommunications Industry and Competition

GSMA's[1] ‘Mobile Economy’ global report of 2020 revealed that 5.2 billion unique mobile subscribers have been reached as of 2019. This means 67% penetration rate globally. The estimated figures for 2025 are 5.8 billion subscribers and 70% penetration (% of population). Operator revenues and investment is 1.03 trillion USD as of 2019. This figure is expected to reach 1.14 trillion USD by 2025. Penetration rate in Europe reached 86% in 2019 and 64% in MENA region where Turkey is included. The report reveals the following facts for operators: “Operators are increasingly seeking ways to grow revenue and cut costs in a low-growth environment, which is made more complicated by the demanding requirements of 5G

[1] Global System for Mobile Communications Association

services (i.e. high speed, low latency and ultrareliability). Operators therefore need to evolve their networks (using innovations such as virtual RAN, edge networking and network automation) to meet the demands of the 5G era. They will also need to diversify their revenue streams (into areas such as pay TV, media/entertainment, advertising and IoT) to seek growth beyond core telecoms services."

According to the BTK[2] Market Data Report, as of end of June 2020 the number of mobile subscribers in Turkey is 81.7 million. This number corresponds to a 98.3% penetration rate. Total revenue from mobile services was 34.9 billion TRY in 2019.

One of the important features of the telecommunications market is high competition. Tough competition is the determinant of the strength of the sector. The importance of the industry increases with competitiveness and the number of competitors (Porter 2008). There is strong competition in the telecommunications industry, creating an emerging market. Telecommunications operators are always competes with existing competitors to maintain current market share and revenue (Nekmahmud and Rahman 2016). Telecommunications industry connecting distant and under-served communities by upgrading their infrastructure, encourages economic inclusion and helps to emerge (Argon & Rahman, 2018)

2.5. CSR in Telecommunications Industry

One of the earliest studies on this topic was conducted in 2006, Switzerland. The way of the CSR implementations and managements in business practices was examined through a GSM operator in Switzerland. From a theoretical perspective, it

[2] The Information Technologies and Communication Authority (Bilgi Teknolojileri ve İletişim Kurumu - BTK)

was aimed to find out whether the stakeholder view framework is an appropriate tool for evaluating a firm's practical efforts in the field of CSR. The empirical findings provides interesting insights for CSR management from a stakeholder perspective. Also, from a practitioner's point of view, implementing a stakeholder view framework can assist in detecting and closing "blind spots" (Lenssen et. al, 2006). In 2007, a study was conducted through 3 major mobile operators of Malaysia by qualitative analysis and observation analysis through the interviews were conducted to Corporate Communications Managers. It's been found that all of the companies have high involvement in CSR activities with various constructive motives (Mohamed & Sawandi, 2007). One year later, a study was carried out in the Netherlands, with the case study of three leading companies in the telecommunications industry: British Telecom (BT), Deutsche Telekom (DT) and Telenor. These companies use many different initiatives in shaping, implementing and reporting their CSR strategies. Many of the CSR issues that these companies deal with are industry specific therefore addressed in a limited area and the Global Compact (GC) principles initiated by the United Nations are perceived by these companies as minimum requirements and therefore not an incentive for better performance (Runhaar & Lafferty, 2008). In 2010, a study was conducted in Taiwan to search CSR and corporate product image (CPI) context in the mobile telecommunications industry. Statistical analysis of a questionnaire applied to mobile phone users was made. It has been councluded that when a company targets a higher standard of social responsibility, consumers can be more confident in its products and CPI can be increased (Chiu & Hsu, 2010). In 2011, studies were conducted in the Czech Republic and Greece. The quality of corporate responsibility reports of three Czech telecommunications providers (Vodafone, Telefónica O2 and T - Mobile) has been evaluated. In addition, these providers were compared with Orange, a foreign company with high quality in corporate social responsibility. While Vodafone and Telefónica O2 naturally deal with the publication of reports on CSR, T-Mobile has been found to publish only basic information about the direction of environmental policy and the monitoring of its goals. The main finding of this article was that the level of disclosure of CSR reports by telecommunications service providers in the Czech Republic does not reflect true social responsibility (Johnova, 2011) Research in the Greek sector examined Independent Corporate Social Responsibility (CSR) reports and websites of 5 companies provide mobile and fixed services. CSR reports were analyzed by content analysis method. Annual reports are all very similar across all major and subcategories. All companies issue management systems certificates and awards. Reports are published in Greek and English. However, considering the indicators, it was observed that there were inconsistent results in company reports and independent reports (Giannarakis, 2011).

When we come to 2012, we see the studies conducted in Slovakia and Nigeria. The impact of CSR on the purchasing intentions of Slovak consumers in the telecommunications industry has been researched. With the analysis of the survey results, it was concluded that the effect on the purchasing intentions were mainly depending on the CSR awareness and the justification of the price increase (Balcova, 2012). In Nigeria, factors affecting the adoption of CSR in the telecommunications industry have been examined. The data obtained from the annual reports of the company in addition to the surveys conducted with 400 people consisting of stakeholders and Telecommunication employees were analyzed. It has been evaluated that the factors affecting CSR practices are competition, subscriber demands, pressure from civil and human rights groups, service quality, legal requirements and infrastructural deterioration. The study concluded that CSR policy is on course, but quite unsatisfactory considering the high profits achieved (Osemene, 2012). Research conducted in Lithuania in 2013 focused on the Importance of CSR in the Telecommunications and finance sectors. With the content analysis of publicly available information from 3 telecommunications companies and 6 finance companies and the analysis of the surveys participated by 95 people, the following findings have been reached: Especially in the telecommunications and financial services sector, consumers consider service quality and consumer satisfaction rather than social responsibility, but in general, consumers confirms their CSR actions (Kavaliauske, 2013). In 2014, researches on CSR in the telecommunications sector were conducted in Bangladesh and Malaysia. In Bangladesh, a survey conducted with university students and data collected from newspaper news and corporate websites, at the result of the analysis no relationship was found between corporate social responsibility awareness and consumers' purchase intention (Alam & Rubel, 2014). The findings of the Malaysian study are as follows: The increase in the level of CSR disclosure was examined and it was observed that it increased at a moderate level during the period examined. Ownership structure of the firm plays a role in the variability of the amount of information in the themes at the disclosure level (Hamid & Atan, 2011). In the same year, Wang investigated the relationship between the CSR practices of US telecommunications companies and their operational performance. He evaluated that the corporate efficiency of companies implementing CSR is higher than companies that do not (Wang, Lu, Kweh & Lai, 2014). Studies were conducted in Romania and South Korea in 2015. A survey was conducted among 1,464 mobile telecommunications customers in Romania to investigate the impact of customers' corporate social responsibility (CSR) perceptions on their loyalty to mobile telecommunications companies. A visible relationship has been found between companies' perceptions of their responsibilities towards customers, public authorities, the environment, community development and sponsorship, and the corporate brand loyalty of Romanian mobile telecom customers (Moisescu, 2015). In the same year, Lee & Park conducted a study in South Korea on "The Precursors of Behavioral Intention to Use Mobile Telecommunications Services: The Effects of Corporate Social Responsibility and Technology Adoption". When they analyzed the results of their surveys at two major universities, they confirmed the relationship between the economic, social and environmental responsibility of the corporation and customer attitude and satisfaction (Lee, Park, Kwon & Del Pobil, 2015). In 2016, Obeidat applied a 37-question survey to 350 people to investigate the relationship between corporate social responsibility, employee engagement and organizational performance in Jordanian mobile telecommunications companies. As a result of his analysis, he evaluated that corporate social responsibility has a significant effect on employee engagement and organizational performance (Obeidat, 2016). The analysis results of a survey conducted with 154 people in China in 2018 show that the existence of CSR practices has a significant effect on the revaluation of the company image in employees and customers (Arrive & Feng, 2018).

2.6. CSR in Turkish Telecommunications Industry

Several academic researchs about CSR practices in Turkey's telecommunications industry have been applied for over 15 years. Özüpek (2004) in "Social Responsibility in Corporate Image" study, thoroughly examined TURKCELL's social responsibility efforts. The findings of the research that the CSR activities with higher frequency and recurrence rate were known to be higher. It was observed that the awareness of the lower ones was lower. This means that, as much as organizing social events, importance should be given to publicizing these events. The following finding is also remarkable: "The higher the knowledge level of the people about the activities carried out, the higher the level of finding the activities done positively. For this reason, the studies to increase the knowledge level about social responsibility activities become important."

Akdemir (2008), researched the attitudes of consumers who are the stakeholders of the enterprises towards businesses that carry out corporate social responsibility practices. The research was conducted over the three GSM companies in Turkey. As a result of the research, it was concluded that, CSR practices of the GSM operator are not effective on the consumers' GSM operator preferences. “GSM users show interest in social responsibility activities, but they do not consider these applications as a priority criterion in their preference. It were not observed that the consumers contribute by paying more towards the business carrying out CSR activities or they prefer these companies (Akdemir, 2008).

Akıncı Vural & Oksuz (2009) examined how Turkish GSM operators convey their corporate responsibilities through content analysis of corporate websites. It has been revealed that Turkish GSM operators attach importance to communicating their CSR activities through websites, and they have special sections devoted to CSR theme. Bilbil, Sütçü & Kıyat (2013) has conducted a quantitative study on four companies operating in the telecommunications sector in Turkey. They examined the relationship between corporate reputation and brand loyalty. It has been that there is a relationship between brand loyalty and corporate reputation coefficient and revealed the existence of the relationship. Özdora Aksak (2015) studied overviewing the CSR practices in the telecommunications sector of Turkey. The researcher looked at the social responsibility practices of four biggest telecommunications companies in

Turkey through their websites. The study results show that all four companies communicate their CSR initiatives to some extent for constructing their identities and differentiating themselves. Öztürk & Marsap (2018) in the Telecommunications Sector Corporate Social Responsibility reporting US, UK and Turkey have a look through the report of the companies. As a result of the research, it was found that these telecommunications companies focus on social participation and environmental reporting in their corporate social responsibility reporting.

2.7. Measuring CSR

In order to evaluate CSR, it is important that its contribution to the company and stakeholders is accurately measured. It is difficult to describe quantitatively because it is a social concept. Although the Global Reporting Initiative has provided a set of performance metrics, this framework still has its weaknesses (Panayiotou, Aravossis & Moschou, 2009). Pérez & Del Bosque (2013) revealed that the measurement of CSR includes corporate responsibilities towards customers, shareholders, employees and society. CSR to social and nonsocial stakeholders, employees, customers, and government. Turker (2009) divided the measurement of CSP into social and non-social stakeholders, which is social to employees, customers and government. Various regulations provide flexibility in how companies use the GRI guidance when disclosing CSR activities (Moneva, Archel & Correa 2006). The disclosed volume of CSR activities of companies using GRI guidelines may not reflect the truth. (De Villiers & Alexander, 2014) Despite all the measurement problems described, GRI reporting is a tool that can be used in the research of CSR practices. It provides guidance in terms of strict rules and broad issues to consider. It offers topics in the economic, social and environmental fields (Karagiorgos, 2010).

CSR performance indicators can be classified according to charitable contributions, adoption of ethical rules, compliance with laws and instructions, environmental impact, scope of corporate social disclosures and stock market indicators (Jain & Jamali 2016). The performance of CSR activities is named Corporate Social Performance (CSP). It refers to the scope and level of CSR activities of the firm. CSP measurement plays a role in increasing CSR activity (Broadstock, Matousek, Meyer & Tzeremes, 2020). Measurement problems of CSR arise from its multi-dimensional structure. This measurement problems have been named "stakeholder incompatibility". Because when researchers select a single item for CSP, actually only one stakeholder was represented (Surroca, Tribó, & Waddock, 2010). Waddock and Graves introduced the KLD STATS (Statistical Tools for Analyzing Trends in Social and Environmental Performance) in 1997. This step is an improvement that has led to an increase in studies in measuring CSR and their responses. KLD STATS data provided a CSR-related dataset to Academic researchers for a wide range of firms. A wide range of actions of a company in many and categories has allowed it to be captured over several years (Carroll, Primo & Richter, 2016).

2.8. Measuring Business Performance

Business performance defines how efficiently and effectively the company uses its resources to produce economic results (Mackey, Mackey & Barney, 2007). Measuring corporate performance has traditionally been based on accounting-based metrics. However, in recent years, non-financial criteria for ensuring the effective functioning of organizations have started to be given importance. When evaluations are made only with financial measurements, these criteria will be ignored. For this reason, non-financial measures of business performance have started to gain importance both in order to motivate operational teams and in reporting to management (Neely, 2002).

Narver, Slater & MacLachlan (2000) defined the measure of business performance with dimensions such as profitability, sales growth and new product success. Palalic & Busatlic (2015) has measured the business performance with sales growth and employee growth. According to Khashman & Al-Ryalat (2015) the dimensions of business performance are sales grow, market share and profitability. In the measurement of business performance, the reflection of the financial dimension is evaluated on profitability (Davis, Mayer & Tan, 2000). Jarad et al. pointed out that business performance can represent the competitiveness of the organization (Jarad, Yusof & Nikbin 2010). Competitiveness stems from the superiority in market share and profit performance results (Day, 1999). ARPU (Average Revenue Per User) is the average revenue from each customer. Tough competition in the telecommunications industry forces companies to lower their service tariffs (Chumaidiyaha, 2012).

3. RESEARCH METHODOLOGY

3.1. Hypothesis

The research aims to demonstrate the impact of the CSR activities on business performance through GSM operators located in Turkey. In the above literature review, it is seen that the link between CSR and company's business performance is not clear. Although there are studies indicating the existence of a positive or negative relationship, it has been frequently stated that the relationship is ambiguous. In the theoretical framework, CSR is considered as a tool for the business success of the company in the modern view (Jamali & Sidani, 2008). Based on this approach the research hypothesis is established as follows:

$$H_1 = Better\ CSR\ Performance\ leads\ to\ higher\ Business\ Performance$$

This hypothesis will also accommodate some control variables. According to Callan and Thomas's (2009) model, we can formulate the theoretical model as follows:

$$BP_i = f(CSP_i, X)$$

where,

BP_i is a measure of the firm's business performance, CSP_i is a measure of the company's CSR performance, X is a vector of control variables that includes the firm's characteristics such as investments.

3.2. Sample Set and Data Collection

The research examines the impact of the CSR activities on business performance in Turkey’s mobile telecommunications industry. According to industry reports of BTK, 3 mobile operators in Turkey are listed. All 3 companies were included in the research and these are shown in Table 1.

Table 1

Mobile Operators included in the research

Company Name	Code
Turkcell İletişim Hizmetleri A.Ş.	TURKCELL
Vodafone Telekomünikasyon A.Ş.	VODAFONE TR
Türk Telekomünikasyon A.Ş.	TÜRK TELEKOM

Research data was obtained from the company reports which includes the CSR activities and from BTK reports which includes market data. TURKCELL and VODAFONE publish their CSR activities in the Sustainability reports prepared in accordance with guidelines of Global Reporting Initiative (GRI). TURK TELEKOM publishes its CSR activities in its annual reports prepared in accordance with Communiqué on Principles of Financial Reporting in Capital Markets. The Information Technologies and Communication Authority (Bilgi Teknolojileri ve İletişim Kurumu - BTK) as an independent administrative authority, carries out the function of regulating and supervising the Telecommunications sector in Turkey. BTK provides detailed information on the mobile telecommunications market of Turkey in its quarterly market data reports published within the scope of Official Statistics Program (RIP). All reports used to provide data in the research are listed in

Table 2

Sources of Data Collection

Company / Institution	**Report Title**	**Reporting Period**	**Reporting Framework**
BTK	Quarterly Market Data Report	2015-Q1 2016-Q1 2017-Q1 2018-Q1 2019-Q1 2020-Q1	Published within the Scope of Official Statistics Program (RIP)
TURKCELL	Sustainability Report	2014 & 2015 2016 2017 2018 2019	Global Reporting Initiative
TURK TELEKOM	Annual Report	2015 2016 2017 2018 2019	Communiqué on Principles of Financial Reporting in Capital Markets
VODAFONE	Sustainability Report	2014-15 2015-16 2016-17 2017-18 2019	Global Reporting Initiative

3.3. Research Design

The study is carried out in two stages. The first stage is for measuring CSP and second stage is related to analyzing the correlation of CSP and BP variables. Defining dependent, independent and control variables and analysis stages are explained in detail in the sub-sections below.

3.3.1. Measuring CSP

In order to measure CSP, companies' CSR activities reported are analyzed using content analysis method. Content analysis is a research technique for making repeatable and valid inferences from data according to their context (Krippendorff (1980). The simplest way to determine the existence of social responsibility is content analysis (Patten & Crampton, 2004). Content analysis is a technique for compressing a text of many words into a small number of content categories based on defined coding rules. Coding in a systematic and repeatable way is the defining feature of the technique (Berelson, 1952). This method has been used by many researchers to measure CSP (Karagiorgos, 2010). It is a preferred method because of its convenience when processing large volumes of text data. Content analysis technique should be evaluated beyond counting the frequency of words (Stemler, 2000). In our research the evaluation of CSR performance of companies is based on Karagiorgos' (2010) rating systems. Companies present their CSR activities under separate social and environmental titles in their reports. Social performance content of the related reports is classified into four main categories: Employees, Society, Responsible Business and Value Chain. The 14 sub-categories of these main categories are shown in Table 3.

Table 3

Social Performance Indicators

Main Category	Sub Category
Employees	Equal opportunity, inclusiveness and diversity
	Employee happiness
	Employee health and safety
	Talent management and young talents
	Training and Education
Society	Programs for social development
	Women’s Empowerment
	Creating social value with public collaboration
Responsible Business	Customer Health and Safety
	Products and Services
	Respect for Privacy
Value Chain	Transparent Supply Process
	Occupational Health and Safety
	Supporting local suppliers

Environmental performance content of the related company reports is classified into 2 main categories and 6 sub-categories. Environmental performance indicators are shown in Table 4.

Table 4

Environmental Performance Indicators

Main Category	Sub Category
Direct Impact	Energy Use Efficiency
	Water Use Efficiency
	Waste Generation and Management
Business Impact	Environmental Impact of Supply Chain
	Environmental Impact of Products and Services
	Cell Towers

In our study, Graves and Waddock's (1997) studies are referenced for the scale score. All social and environmental indicators are graded on a scale of 0 to 3. Definitions of the scale of scoring the indicators are presented in Table 5.

Table 5

Score Scale

Description	Score
the indicator is not observed at all	0
the indicator is only named	1
indicator is poorly described	2
the indicator is described with a satisfactory explanation	3

If an indicator is not considered in the report, the score is 0. An indicator is scored by 1, 2 or 3, depending on the content of CSR activities reported by the company. If only the name of the indicator is mentioned, but what kind of activity the company is doing in this area, scor 1. If only the name of the indicator is mentioned but there is no mention of what activity the company has done in this area, the scor is 1. If the activities carried out by the company in this area are described in the report, they are scored as 2 or 3 according to the number, power, impact and importance of the activities. Therefore, the maximum value of the social performance score can be 42 and the maximum value of the environmental performance score can be 18. The CSP score is calculated as the sum of the social performance score and the environmental performance score, and the maximum value of CSP can be 60. CSP Score is the independent variable of the research.

3.3.1.1. Validity and Reliability of the Data

It is necessary to admit that a methodology is always used for a research question. Therefore, based on the data obtained by an analysis, the findings found are verification with sources of information is recommended. If possible, the investigator should somehow apply a validation study. (Stemler, 2000)

Stemler discussed Reliability in the following terms: Stability and Repeatability. What is meant by stability is: Does the same encoder get the same results when re-encoding at a different time? Repeatability means the following: Do coding schemes allow the same text to be encoded in the same way?

Values obtained as a result of content analysis and scoring represent Corporate Social Responsibility Performance data. This data is the independent variable of the research. For this reason, the scoring process was performed again by the researcher at another time in order to verify the reliability of the data. Reliability was calculated with = consistency number / (consistency number + inconsistency number) and was found to be 93%. Since it is over 70%, it carries a high level of acceptability.

3.3.2. Business Performance

In BTK reports, mobile market data on the basis of operators are presented over the following parameters: Market share, ARPU and subscriber increasing, These metrics are accepted as Business Performance indicators in our research and their definitions in the BTK report are presented below:

- Market Share: Describes the market shares of mobile operators according to the number of subscribers.
- ARPU: Average Revenue Per User. ARPU means monthly income per subscriber on average. ARPU information is one of the most prominent indicators used by an operator. It refers to the information of how much subscribers spend on mobile services on average in a month.
- Subscriber Increasing: Describes the increase in the number of subscribers in the time period compared to the previous one.

These Business Performance Indicators listed above are the dependent variables of the research.

3.3.3. Control Variable

In the literature, various factors affecting companies' business performance and CSR performance level were mentioned. The most prominent of these factors in the telecommunications industry is the technological infrastructure investment. “Investments in innovation in terms of relative R&D expenditures were also related to higher performance. Finally, significant interaction effects between investments in innovation and competitive strategies and performance were found.” (Dowling &

McGee, 1994) It's been concluded that strategic investment in technological innovations has a positive impact on the business performance of telecommunications service providers. (Yang & Lee, 2016) The causality relationship between investment in telecommunications infrastructure and the country's total factor productivity has been revealed, and it also suggests that telecommunications developments cause a measurable increase in sectoral productivity. (Cronin & Colleran, 1993) BTK included mobile investment amounts of each operator in its market data report. In our model, the annual total mobile investment figure of the previous year is used as the control variable.

3.3.4. Research Model

The aim of the study is to examine the impact of the CSR performance on the business performance of 3 GSM operators was operating in Turkey during the period 2015-2020.

Based on the hypothesis and dependent, independent and control variables described previous sections, alternative models are created as follows:

Model 1 : $MS_t = b_0 + b_1\ CSP_{t-1} + b_2\ MI_{t-1} + u_t$

Model 2 : $ARPU_t = b_0 + b_1\ CSP_{t-1} + b_2\ MI_{t-1} + u_t$

Model 3 : $SI_t = b_0 + b_1\ CSP_{t-1} + b_2\ MI_{t-1} + u_t$

where,

MS_t is the market share

$ARPU_t$ is average revenue per user

SI_t is the subscriber increasing

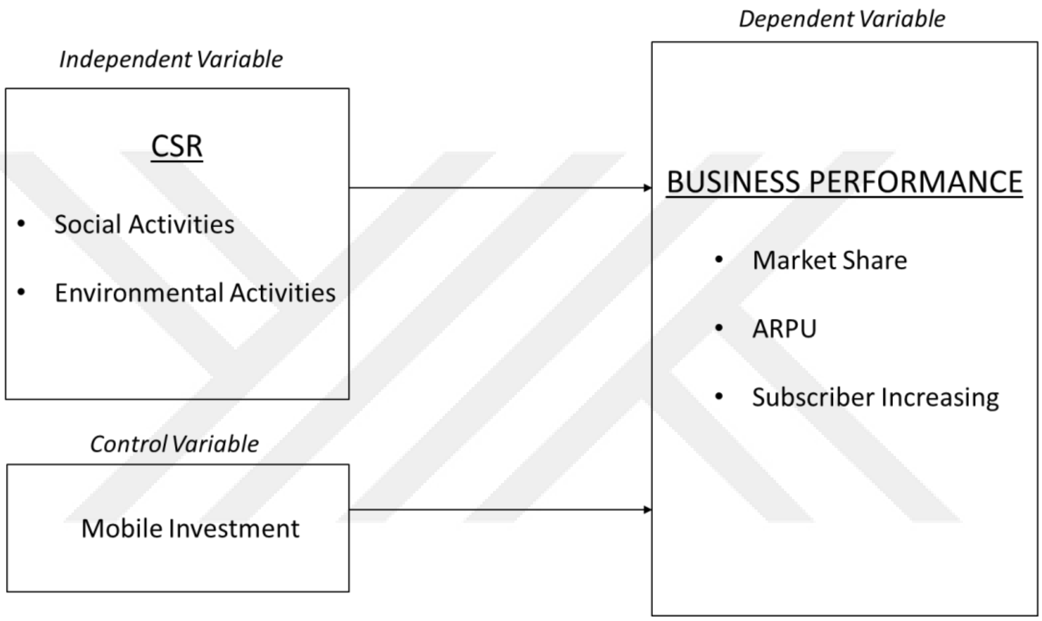
CSP_{t-1} is the index for CSR performance

MI_{t-1} is the mobile investment

u_t is a disturbance term

(t = 2016, 2017, 2018, 2019 and 2020)

Figure 1
Research Model



4. RESULTS

Brief information about the operators, the content analysis results, descriptive statistical information about the data we collect and the findings obtained from the analysis of this data are presented and discussed under the following subheadings.

3.4. Information About Mobile Operator Companies

TURKCELL: Turkcell is a converged telecommunication and technology services provider, founded and headquartered in Turkey. It serves its customers with voice, data, TV and value-added consumer and enterprise services on mobile and fixed networks. Mobile communication in Turkey began when Turkcell commenced operations in February 1994. Turkcell then signed a 25-year GSM license contract with the Ministry of Transportation on April 27, 1998. Since then, it has continuously increased the variety of its services based on mobile voice and data communication, as well as on its quality levels, and as a result, its number of subscribers. 26,2% of TURKCELL shares belongs to TVF (TVF Bilgi Teknolojileri İletişim Hizmetleri Yat. San. ve Tic. A.Ş.), 19,8% belongs to IMTIS Holdings S.A.R.L. The remaining 54% is publicly traded. Turkcell's shares have been traded on the Borsa Istanbul (BIST) and New York Stock Exchanges (NYSE) since July 11, 2000, and it is the only Turkish company to be listed on the latter exchange. Turkcell is also quoted on the Borsa Istanbul Sustainability Index (https://www.turkcell.com.tr/en/aboutus/company-overview).

TURK TELEKOM: Türk Telekom, with 180 years of history, is the first integrated telecommunications operator in Turkey. In 2015, Türk Telekomünikasyon A.Ş. adopted a “customer-oriented” and integrated structure in order to respond to the rapidly changing communication and technology needs of customers in the most powerful and accurate way, while maintaining the legal entities of TT Mobil İletişim Hizmetleri A.Ş. and TTNET A.Ş. intact and adhering to the rules and regulations to which they are subject. Having a wide service network and product range in the fields of individual and corporate services, Türk Telekom unified its mobile, internet, phone and TV products and services under the single “Türk Telekom” brand as of January 2016. 55% of Türk Telekom shares belongs to LYY (LYY Telekomünikasyon A.Ş.), 25% belongs to Republic of Turkey Ministry of Treasury and Finance and 5% belongs to Turkey Wealth Fund. The remaining 15% is publicly traded. Turk Telekom shares are traded at Borsa Istanbul (BİST) as of May 2008 (https://www.turktelekom.com.tr/en/aboutus/pages/turk-telekom-at-a-first-glance.aspx).

VODAFONE: A part of the Vodafone Group, which operates as one of the world’s leading technology communications providers, Vodafone Turkey offers a range of telecommunications technologies including fixed, mobile and content services to individuals and enterprises in line with its vision of “building a digital future for everyone”. As one of Turkey's largest foreign direct investors, Vodafone Turkey’s total investments have amounted to TRY 24 billion until today. As of 30 June 2020, Vodafone Turkey had 23.6 million mobile customers and 1.1 million fixed broadband customers (https://www.vodafone.com.tr/VodafoneHakkinda/tarihce_home.php).

3.5. Content Analysis Findings

Content analysis was applied to the reported contents of CSR actions by companies regarding the CSR indicators described above. According the scoring at the result of content analysis, VODAFONE has the highest score between 2015 and 2018 and TURKCELL has the highest score in 2019. The 5-year total Social scores of the companies are as follows: VODAFONE 230, TURKCELL 195, TURK TELEKOM 176.

3.5.1. Social Impact

The reported content of CSR activities in the social domain is categorized into 3 themes: Employees, Responsible Business and Value Chain. According the scoring at the result of content analysis, VODAFONE has the highest score between 2015 and 2018 and TURKCELL has the highest score in 2019. The 5-year total Social scores of the companies are as follows: VODAFONE 166, TURK TELEKOM 134, TURKCELL 132.

3.5.1.1. Employees

Equal opportunity, inclusiveness and diversity: All companies stated in their reports that they have created and implemented human resources policies in accordance with human rights, ethical principles and laws. They stated that there was no discrimination in terms of age, gender, ethnic origin, religious belief, marital status, physical capacity, health status, sexual orientation. They stated that they are against child labor and forced labor. They stated that they are against all kinds of discrimination and harassment against employees. Considering the entire 5-year period, Türk Telekom has the highest total score in this sub-category according to report contents.

Employee Happiness: Companies have reported the activities they carry out to ensure the motivation and loyalty of their employees as follows: Modern offices, gyms, dietician services, health checks, special days off, employee satisfaction surveys, flexible working opportunities, private pension plans. Vodafone highlights the themes of ‘feedback culture’ and ‘being proud of working at Vodafone’ in this subcategory. Türk Telekom prioritized communication and integration and carried out its activities under the name of 'Culture and Values Program'. In this sub-category, The 5-year total scores of all 3 companies are almost equal. It is found that companies are aware of the importance of employee happiness.

Employee Health and Safety: The companies included the following in their reports: Establishing Occupational Health and Safety (OHS) boards, holding regular meetings and reporting, making the OHS culture sustainable with trainings and certification, sharing information on the portal, creating a safe working environment in network field operations and tower sites. Thus, the themes of preventive approach, risk control and safety culture were discussed. In addition, Vodafone covered themes such as encouraging employees and their families to live a healthy life, living without smoking, safe driving trainings, first aid trainings and emphasis of not using mobile phones while driving. Though all companies are successful in this area, Vodafone receives full points in total scoring of 5 years.

Talent Management and Young Talents: All 3 companies have strong initiatives in this field to support inclusion of young people in the socioeconomic life by giving them required trainings and opportunities for welfare and sustainable development. Generally, the following objectives are reported: Providing long-term career opportunities to employees, supporting personal development, goals and evaluations, filling new management positions with company employees, career enrichment with rotation. New generation hiring is implemented with the Turkcell Young Talent Program. Turkcell also developed Flex Performance System and YUPO (High Potential) program to evaluate the talents that make a difference. Türk Telekom has a program called 'START' that offers career opportunities to young talents. Orkestra integrated talent management process is also defined. University-industry cooperation is realized with Türk Telekom's 'Telecommunication Certificate Program from the Master' program. Vodafone provides participation in global talent programs such as “Inspire” and “Columbus”. Vodafone also implements ‘Discover Young Talent Program’, ‘Corporate Mentoring Program’ and International Development Program (IDP) that allows an employee from any country of the Vodafone Group to work in a different Vodafone country for 4 to 10 weeks.

Training and Education: All operator companies attach great importance to and prioritize the training of employees. A corporate university was established with the Turkcell Academy program and this initiative received more than 40 international awards. Turkcell has C-Lounge, IMD Global Leadership, Mini MBA, Digital

Business Transformation and Reverse Mentorship programs. With the internal mentorship program, experienced managers share their experience and expertise with the employees who need it, to provide their development and to create a common management culture. Under the roof of Türk Telekom Academy, there are Business Schools in specialized fields such as leadership, technology, marketing, sales customer service, human resources and finance. These are designed specifically for the core business functions for employee development have continued their activities. TURK TELEKOM also have leadership and talent development programs, Orientation Program for new employees, Coaching and Internal Mentoring Program and Foreign Language Skill Development programs. Vodafone conducts training activities in various fields of expertise within the scope of Vodafone Red Academy and also contributes to the development of the employees with the Executive Coaching Program, Internal Coaching Program, and ReConnect Coaching Programs.

3.5.1.2. Society

Programs for social development: All mobile operators companies in Turkey states they aim to contribute to social and economic development of the country. They demonstrate that they do not hesitate to use their technological power for activities that benefit everyone. They provide opportunities to access technology for women, disabled people, refugees, youth and children. They also cooperated with non-governmental organizations and official institutions for programs targeting social equality.

TURKCELL reported Snowdrops Project initiated in 2000 to contribute to the empowerment of girls, their inclusion in economic and social life, and to creating equal opportunities and gender equality throughout society. Tens of thousands of girls were supported that cannot continue their education due to economic reasons with the scholarships provided. Emergency communication needs of customers are met by TURKCELL in natural disasters and extraordinary events in Turkey and abroad, free calls, SMS and internet are provided to reach their relatives. ‘Hello Hope’ mobile application and ‘Hello Hope Education Center’ was established for meeting the training, communication and access to information needs of the refugees in Turkey. Support has been provided for the "Accessible Education Program" under the auspices of the Ministry of National Education. Workshops and technology classes are provided for disabled people. TURKCELL has also sponsored Istanbul Modern and Sakıp Sabancı museums with communication and technology programs. In addition to football, basketball and sailing sponsorships, it also sponsored athletics and swimming national teams. The “Stone in My Heart” project was implemented under the umbrella of the Barrier-Free Project for the development of children with autism spectrum disorders, under the auspices of the Ministry of National Education and in cooperation with the Tohum Autism Foundation. Turkcell implemented the “Whiz Kids” project with the goal of being “a generation that does not consume technology, but generating “the potentials of intelligence, creativity, leadership capacity, and “special talent” students with high performance when compared to their peers in one or a few specific academic fields.

TURK TELEKOM’s “Life is Simple with Internet” project aims to help people who cannot use the potential of the internet and who do not know it, to get to know the online world by providing internet literacy training. The project is carried out in cooperation with international support programs and reached out to immigrants living in Turkey as well with the addition of Arabic language support in 2017. Türk Telekom Internet Houses Aiming to give everyone equal opportunity in accessing information, Türk Telekom has built about 1,000 internet houses across Turkey and handed them over to local authorities. Phone Library, Unobstructed Tivibu, Loud Steps, Türk Telekom Schools, Türk Telekom Amateur Sports Clubs and many other social responsibility projects carried out nationally. Local social responsibility activities organized by provincial directorates of Türk Telekom are also carried out within the scope of ‘Value to Turkey’ project. Within the scope of ‘Turkish Mobilization’ project the correct use of the Turkish language is supported. ‘Day Light’ project allows children with low vision to actively engage in life.

VODAFONE Istanbul Marathon is organized in partnership of Istanbul Metropolitan Municipality and Spor A.Ş. Marathon is not only a sports competition, but also a social platform where people participate for a "reason" and collect donations for the associations and foundations of their choice. International Entrepreneurship Centre (IEC) was established by the Turkish Ministry of Development, UNDP, Habitat Development and Governance Association, and Vodafone Turkey Foundation, in collaboration with the Turkish Union of Chambers and Commodity Exchanges (TOBB) Youth and Women Entrepreneur Boards. EC operates in collaboration with more than 120 active stakeholders within the entrepreneurship ecosystem, including technology companies, public institutions, international organizations, non-governmental organizations, and initiatives. IEC is co-coordinator of the Global Entrepreneurship Week with Endeavor which is simultaneously celebrated in 157 countries for the aim of structuring the perception of entrepreneurship and creating an entrepreneurship culture so that innovative, creative, responsible and extensive initiatives and environmentally friendly businesses can be developed throughout Turkey. IEC also sponsors G3 Forum, which is the biggest event in the Global Entrepreneurship Week. Within this scope, Boston-based MassChallenge, the third biggest entrepreneurship eco-system has met together with

Turkey entrepreneurship ecosystem in November 2015 as IEC being the host. The team also had the right to organize the Global Entrepreneurship Congress in Istanbul in 2018, which is organized at a different place every year and where approximately 3,000 entrepreneurs are hosted. With the collaboration of IEC and Çukurova Development Agency, the third Entrepreneurship Eco-System Meeting was held in Adana which brought the public agencies, universities, non-governmental organizations, investors and related individuals active in the field of entrepreneurship together. Vodafone built a coding class in Sakarya Aycan Çaltekin Primary School of Mardin with the income obtained from recycling more than 370 kg electronic waste that the employees brought from their homes to the boxes in Vodafone offices. This coding class is built within the scope of the ‘Coding Tomorrow’ project carried out with the cooperation of Vodafone Turkey Foundation and Habitat, so gives all the children in Mardin and surrounding cities a chance to receive coding training. Dreams Academy helps disabled and socially disadvantaged individuals for economic and social participation. It is carried out in cooperation with national and international programs. Under this program, which is Turkey's most comprehensive educational sign language application ‘Sign’ has been developed. Vodafone stated that they aimed to include their employees within ‘Vodafone Volunteers’ program to the projects they have implemented as ‘Vodafone Turkey Foundation’. In this context, they supported the women's project and the aid campaign for children in Soma, the aid campaign for animal shelters and the 'Reading Audio Book' project that Vodafone volunteers read and recorded books for visually impaired students at the ‘Dreams Academy’. Vodafone also supports e-sports, they are the name sponsor of the League of Legends Championship which is one of the Turkey’s largest e-sports organization.

Women’s Empowerment: Turkcell and Vodafone are aware that participation of women in economic life and improving the role of women in social life are important for the development of the country and sustainable growth. By the year of 2015, the rate of female employees in the telecommunications sector is 23.2%, this rate was 42% in VODAFONE and 31% in TURKCELL.

TURKCELL launched projects supporting women under the ‘Strong Women Strong Turkey’ program. TURKCELL provided training and employment support to women developers as part of the 'Women Who Write the Future' project. Women entrepreneurs were supported with micro loans.

VODAFONE supported women entrepreneurs with 'Women First' program. The "Early Rescue" mobile application was launched to combat violence against women. ‘Equalmeter’ application which uses artificial intelligence technology, has been developed with Hürriyet Newspaper to prevent the use of sexist language. With the Vodafone Gold Club program, it is aimed to facilitate the lives of women staying at home by improving their access to communication technologies. 'Corporate Diversity and Inclusion' training was organized for the participation of managers. Mentoring work was carried out in the technology department, which has the lowest number of female employees. Seminars supporting the career development of female employees were organized and the internship applications of female students from engineering departments were prioritized.

TURK TELEKOM limited its activities in this sub-category to the theme of bringing convenience to women's lives and helping them to be socialized, conducted a technology campaign in this context. "Women Board Members Policy" has been established in order to give priority to women in the selection of Board Members in TURK TELEKOM.

Creating Social Value with Public Collaboration: Turkey's mobile operators carry out a large number of projects in collaboration with government agencies by providing access to technology, trainings and employment opportunities to women, children, young and disabled people. They also provide contribution with sponsorships to sports, arts and culture.

3.5.1.3. Responsible Business

Customer Health and Safety: In the mobile telecommunication sector, the most important issue concerning public health is the electromagnetic effect of base stations. The operators are implementing those applications in this context: EMC (Electromagnetic Compatibility) certificate is requested from the manufacturers for radio equipment used in network facilities. CE certificate is required for imported products. In addition, they require that all products used in their networks comply with international 3GPP standards. Within the scope of the EMC practice, trainings and audits are carried out. One of the frequent discussions in this area is the negative impact of RF signals exposed during the use of smart phones on human health. The World Health Organization has examined thousands of scientific studies and announced that no negative effects of mobile phone use on health have been detected so far. Nevertheless, due to the sensitivity of its stakeholders, VODAFONE manages the issue and informs its stakeholders on its website. VODAFONE has made the strongest reporting in this sub-category.

Products and Service: The operators report that they have developed their products and services within the framework of the concept of sustainable business. The prominent themes are digitalization, innovation, research & development; the prominent technology topics are 5G and IOT.

Respect for Privacy: This is one of the issues that stakeholders are most sensitive to mobile telecommunications operators. Customer privacy means that operators protect their customers' personal information and mobile contact information. In order to achieve this, the operators have created policies that comply with international standards and laws and they make their practices accordingly. In this process, they deliver trainings to their employees and conduct audits. They also apply technology solutions to ensure information security.

3.5.1.4. Value Chain

Operators reported that they have established the necessary infrastructure, systems and processes that regulate their relations with suppliers to provide those themes: Transparent Supply Process, Occupational Health and Safety, Supporting local suppliers.

3.5.2. Environmental Impact

The reported content of CSR activities in the environmental domain is categorized into 6 themes: Energy Use Efficiency, Water Use Efficiency, Waste Generation and Management, Environmental Impact of Supply Chain, Environmental Impact of Products and Services, Cell Towers. According the scoring at the result of content analysis, VODAFONE has the highest score in 2015 and 2016. VODAFONE and TURKCELL share the first place with equal score in 2017.TURKCELL has the highest score in 2018 and 2019. The 5-year total Social scores of the companies are as follows: VODAFONE 64, TURKCELL 63, TURK TELEKOM 42.

Base stations are the most important factor in environmental impact in the mobile telecommunications industry. Base stations make the majority of energy consumption. In addition, they cause damage to the environment due to the electromagnetic field effect. Companies have reported that they are making measurements in accordance with legal regulations and determined international standards and taking necessary precautions.

Another environmental issue specific to the mobile telecommunications industry is waste management. Operators frequently renew the network devices in their infrastructures due to technological developments. This situation results in a large amount of electronic waste. Companies have reported that they have established the necessary waste management procedures for recycling activities in line with laws and international guidelines.

Turkcell contributes to environmental sustainability with its products and services. It offers the "Filiz" application to farmers in order to protect the limited water resources in the world and to support sustainable agricultural activities. “Turkcell Kopilot” enables a reduction in fuel consumption. 'Dergilik' application allows magazines and newspapers to be read digitally from a single platform. Turkcell supports the reduction of environmental impacts with M2M solutions it offers. Türk Telekom and Vodafone contribute to sustainability with their smart city solutions. Vodafone aimed to raise awareness in the ecosystem with the 'Respect for the Environment' smartphone mobile application and to carry the sustainability approach to the mobile world with the 'Respect Green' Mobile Application.

3.6. Descriptive Statistics

The descriptive statistics are given in Table 6, 7, 8, 9, 10 and 11. First it’s seen at Table 6 that the descriptive statistics of each CSR indicators. If the indicators are reviewed through the Sum values, it is possible to see the CSR headers that Turkish mobile operators give priority. It’s seen that the “Training and Education” is the social responsibility category that given the most importance by mobile operators in Turkey, with the highest CSR score. Following this, the second place is shared by a social and an environmental indicator: “Talent management and Young Talents” is taking quite high importance by the mobile operators. “Energy Use Efficiency” also shares the second place. The third place is shared by two indicators again: “Programs for social development” and “Creating social value with public collaboration”.

"Customer Health and Safety" is seen as the title with the lowest score. It is followed by these 2 categories, " Supporting local suppliers" and “Water Use Efficiency” sharing the second place with lowest scores.

Table 6

Descriptive Analytics of CSR Indicators

	Equal opportunity, inclusiveness and diversity	*Employee happiness*	*Employee health and safety*	*Talent management and young talents*	*Training and Education*	*Programs for social development*	*Women’ s Empowerment*	*Creating social value with public collaboration*	*Customer Health and Safety*	*Products and Service*	*Respect for Privacy*	*Transparent Supply Process*	*Occupational Health and Safety*	*Supporting local suppliers*	*Energy Use Efficiency*	*Water Use Efficiency*	*Waste Generation and Management*	*Environmental Impact of Supply Chain*	*Environmental Impact of Products and Services*	*Cell Towers*
Mean	1,8667	2,0000	2,4000	2,8000	2,9333	2,7333	2,2667	2,7333	0,8667	2,0000	2,0000	1,8667	1,3333	1,0000	2,8000	1,0000	2,0667	1,9333	1,9333	1,5333
Std Error	0,2153	0,1690	0,2138	0,1069	0,0667	0,1817	0,2840	0,1533	0,2906	0,2390	0,2390	0,2906	0,3333	0,2182	0,1069	0,2390	0,2482	0,3446	0,2667	0,3362
Median	2	2	3	3	3	3	3	3	0	2	2	2	1	1	3	1	2	3	2	2
Mode	1	2	3	3	3	3	3	3	0	2	2	2	0	1	3	1	3	3	3	3
Standard Deviation	0,8338	0,6547	0,8281	0,4140	0,2582	0,7037	1,0998	0,5936	1,1255	0,9258	0,9258	1,1255	1,2910	0,8452	0,4140	0,9258	0,9612	1,3345	1,0328	1,3020
Sample Variance	0,6952	0,4286	0,6857	0,1714	0,0667	0,4952	1,2095	0,3524	1,2667	0,8571	0,8571	1,2667	1,6667	0,7143	0,1714	0,8571	0,9238	1,7810	1,0667	1,6952
Minimum	1	1	1	2	2	1	0	1	0	0	0	0	0	0	2	0	0	0	0	0
Maximum	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
Sum	28	30	36	42	44	41	34	41	13	30	30	28	20	15	42	15	31	29	29	23
Count	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15

According to the scoring of the content analysis, the categories in which all 3 operator companies (TURKCELL, TURK TELEKOM, VODAFONE) received full points are presented below on the basis of years:

- 2015 : Employees - Training and Education
  Society - Creating social value with public collaboration
- 2016 : Employees - Training and Education
  Society - Women's Empowerment
- 2017 : Employees - Training and Education
  Society - Programs for social development
  Society - Creating social value with public collaboration
- 2018 : Employees - Talent management and young talents
  Society - Programs for social development
  Environment - Energy Use Efficiency
- 2019 : Employees - Employee health and safety
  Employees - Talent management and young talents
  Employees - Training and Education
  Society - Programs for social development
  Environment - Energy Use Efficiency

The results in Table 7 show that performance of Turkish GSM operators on CSR activities in social categories increases year over year.

Table 7

Social CSR Performance Descriptive Statistics

Social Indicators Score	**2015**	**2016**	**2017**	**2018**	**2019**
Mean	27,666666	27,66666	28,66666	29	31
Standard Error	4,2557151	4,255715	2,185812	2,309401	1,732050
Median	25	25	27	29	31
Standard Deviation	7,3711147	7,37111	3,78593	4	3
Sample Variance	54,333333	54,33333	14,33333	16	9
Minimum	22	22	26	25	28
Maximum	36	36	33	33	34
Sum	83	83	86	87	93
Count	3	3	3	3	3

The year by year descriptive statistics of the environmental CSR score are presented in Table 8. Interestingly, the minimum and maximum values of Environmental CSR activity scores are the same in 2015 and 2019. However, a noticeable decrease is observed in the minimum values in the intervening years, especially in 2016 and 2017.

Descriptive statistics of CSR performance, which is our variable in the focus of our study, are shown in Table 9 year by year.

Table 8

Environmental CSR Performance Descriptive Statistics

Environmental Score	**2015**	**2016**	**2017**	**2018**	**2019**
Mean	12,33333	10,33333	9,333333	11,33333	13
Standard Error	1,855921	3,28295	2,666666	0,88191	1,732050
Median	11	12	12	11	13
Standard Deviation	3,214550	5,68624	4,618802	1,527525	3
Sample Variance	10,33333	32,33333	21,33333	2,333333	9
Minimum	10	4	4	10	10
Maximum	16	15	12	13	16
Sum	37	31	28	34	39
Count	3	3	3	3	3

Table 9

CSR Performance Descriptive Statistics

CSP	**2015**	**2016**	**2017**	**2018**	**2019**
Mean	40	38	38	40,33333	44
Standard Error	6,027713	6,658328	4,041451	1,855921	3,464101
Median	35	34	38	39	44
Standard Deviation	10,44030	11,53256	7	3,214550	6
Sample Variance	109	133	49	10,33333	36
Minimum	33	29	31	38	38
Maximum	52	51	45	44	50
Sum	120	114	114	121	132
Count	3	3	3	3	3

Mean has increased from 40 to 44, minimum 33 to 38, median 35 to 44, but the maximum CSR score value has decreased from 52 to 50.

In 2018 and 2019, the maximum value was even lower, dropping to 45 and 44. Year-by-year descriptive statistics of ARPU, which is one of the most important indicators of efficiency for a service provider company, are presented in Table 10.

Table 10

ARPU Descriptive Statistics

ARPU	2015	2016	2017	2018	2019
Mean	24,46666	27,23333	29,43333	32,46666	36,96666
Standard Error	0,433333	0,466666	0,726483	1,334582	2,863758
Median	24,5	27,1	29,6	32,2	36,6
Standard Deviation	0,750555	0,808290	1,258305	2,311565	4,960174
Sample Variance	0,563333	0,653333	1,583333	5,343333	24,60333
Minimum	23,7	26,5	28,1	30,3	32,2
Maximum	25,2	28,1	30,6	34,9	42,1
Sum	73,4	81,7	88,3	97,4	110,9
Count	3	3	3	3	3

Mean and median increased from 24 to 36, minimum 23 to 32, and maximum 25 to 42. The unit of ARPU is TL and it is necessary to explain the dramatic increase in these values in relation to the increase in business performance as well as inflation. It can be observed in Table 11 that mobile investments of Turkish GSM operators have decreased from 2015 to 2019. Mean, median, minimum and maximum values all dropped dramatically on TL basis.

Table 11

Mobile Investment Descriptive Statistics

Mobil Investment	**2015**	**2016**	**2017**	**2018**	**2019**
Mean	4910	1430	1347,666	1596,666	2625,666
Standard Error	933,0237	225,9055	362,1677	400,7411	1154,473
Median	4110	1240	987	1292	1668
Standard Deviation	1616,044	391,2799	627,2928	694,1039	1999,606
Sample Variance	2611600	153100	393496,3	481780,3	3998424,3
Minimum	3850	1170	984	1107	1285
Maximum	6770	1880	2072	2391	4924
Sum	14730	4290	4043	4790	7877
Count	3	3	3	3	3

Table 12 presents summary statistics for all dependent, independent and control variables. Market share, ARPU and subscriber increasing values belong to year (t). CSP and Mobile Investment values belong to year (t-1).

Table 12

Descriptive Statistics Summary

	Social Indicators Score (t-1)	Environmental Score (t-1)	CSP (t-1)	Market share (t)	ARPU (t)	Subscriber Increasing (t)	Mobile Investment (t-1)*
Mean	28,8	11,266666	40,066666	33,333333	30,113333	1,0866666	2382
Standard Error	1,2313368	0,9178996	1,8859547	1,9583682	1,2816234	0,2927743	449,36975
Median	28	12	38	31	29,6	1,1	1668
Standard Deviation	4,7689471	3,5550098	7,3042714	7,5847277	4,9637063	1,1339102	1740,4015
Sample Variance	22,742857	12,638095	53,352380	57,528095	24,638380	1,2857523	3028997,7
Minimum	22	4	29	24	23,7	-1,98	984
Maximum	36	16	52	45,2	42,1	2,67	6770
Sum	432	169	601	500	451,7	16,3	35730
Count	15	15	15	15	15	15	15

(*): million TRY

3.7. Correlation Matrix

The correlation matrix between the variables we use to examine the effect of corporate social responsibility performance on business performance is given in Table 13.

Table 13

Correlation Matrix

	Social Indicators Score (t-1)	**Environmental Score (t-1)**	**CSP (t-1)**	**Market share (t)**	**ARPU (t)**	**Subscriber Increasing (t)**	**Mobile Investment (t-1)**
Social Indicators Score (t-1)	1						
Environmental Score (t-1)	0,53001	1					
CSP (t-1)	0,91085	0,83274	1				
Market share (t)	-0,18562	0,40945	0,07808	1			
ARPU (t)	0,264753	0,29689	0,31735	0,26535	1		
Subscriber Increasing (t)	0,125485	0,03142	0,09722	-0,53527	0,07716	1	
Mobile Investment (t-1)	-0,123951	0,31332	0,07156	0,45879	-0,0968	-0,35005	1

When the correlation matrix results are examined, finding for Model 1 as follows: It is observed that there is a medium level and positive relationship between Environmental CSR performance and market share since the correlation coefficient is calculated as 0,40945. However, there is a weak negative relationship between Social CSR performance and market share in the regard of corelation coefficient is equal to -0,18562. Although it is seen that the relationship between total CSR performance and market share is positive, it is very weak due to the correlation coefficient less than 0.1. A medium level positive relationship was also observed between the control variable, mobile investment amount and market share, as the correlation coefficient is 0.4587 which is the highest value in the matrix.

The findings for Model 2 are as follows: There is a weak positive correlation was observed between CSP and ARPU. Corelation coefficients for social, environmental and total CSR performance are 0.2647, 0.2968 and 0.3173. The effect of mobile investment on ARPU was observed as weak and negative.

Finally, the findings for Model 3 are as follows: It’s observed that a weak positive link between CSP and subscriber increasing. The correlation coefficients for social, environmental and total CSR performance are 0.1254, 0.0314 and 0.0972. Interestingly, there is a weak negative relationship between mobile investment and subscriber increasing as the coefficient is -0.35.

3.8. Regression Analysis

To test the Model 1, 2 and 3 we applied regression analysis and Anova variant analysis to multivariate relationship between CSR performance and market share, ARPU and subscription increasing variables. Mobile investment is included the analysis as control variable.

However, as can be seen in analysis results R square <0.5, F>0.05, p>0.05 and the significancies of models are not good according ANOVA results. The analysis results of Model 1 are shown in Table 14.

Table 14

Regression Analysis for Model 1

Regression Statistics	
Multiple R	0,461033
R Square	0,212551
Adjusted R Square	0,081310
Standard Error	7,269836
Observations	15

ANOVA

	df	*SS*	*MS*	*F*	*Significance F*
Regression	2	171,18723	85,59362	1,61954	0,23842
Residual	12	634,20610	52,85051		
Total	14	805,39333			

	Coefficients	*Std Error*	*t Stat*	*P-values*	*Lower 95%*	*Upper 95%*
Intercept	26,711955	10,987575	2,431106	0,031668	2,772086	50,651825
CSP	0,047234	0,266685	0,177114	0,862373	-0,533823	0,628291
Mobile Investment	0,001985	0,001119	1,773741	0,101461	-0,000453	0,004424

The Model 2 analysis results are shown in Table 15 .

Table 15

Regression Analysis for Model 2

Regression Statistics	
Multiple R	0,339255
R Square	0,115094
Adjusted R Square	-0,032390
Standard Error	5,043454
Observations	15

ANOVA

	df	*SS*	*MS*	*F*	*Significance F*
Regression	2	39,700204	19,850102	0,780381	0,480157
Residual	12	305,237129	25,436427		
Total	14	344,937333			

	Coefficients	*Std Error*	*t Stat*	*P-values*	*Lower 95%*	*Upper 95%*
Intercept	22,054844	7,622639	2,893335	0,013492	5,446541	38,663147
CSP	0,221511	0,185013	1,197271	0,254317	-0,181598	0,624619
Mobile Investment	-0,000343	0,000776	-0,441566	0,666655	-0,002035	0,001349

The analysis results of Model 3 are shown in Table 16.

Table 16

Regression Analysis for Model 3

Regression Statistics	
Multiple R	0,370896
R Square	0,137564
Adjusted R Square	-0,006175
Standard Error	1,137406
Observations	15

ANOVA

	df	*SS*	*MS*	*F*	*Significance F*
Regression	2	2,4762280	1,2381140	0,9570392	0,4114915
Residual	12	15,5243053	1,2936921		
Total	14	18,0005333			

	Coefficients	*Std Error*	*t Stat*	*P-values*	*Lower 95%*	*Upper 95%*
Intercept	0,879114	1,719067	0,511390	0,618357	-2,866410	4,624639
CSP	0,019080	0,041724	0,457278	0,655639	-0,071830	0,109989
Mobile Investment	-0,000234	0,000175	-1,335125	0,206611	-0,000615	0,000148

3.9. R Square Results

R Square results between dependent and independent variables are summarized in Table 17. R square < 0.1 for all variables except for the following relationships: The R square value is 0,21 for Mobile investment and Market share relationship. The value of r square is 0.12 for the relationship between the mobile investment and subscriber increasing, and 0.1 for CSP and ARPU.

Tablo 17

R Square Results

	Market Share	*ARPU*	*Subscriber Increasing*
CSP	0,00609786	0,100715693	0,0094523
Social CSR Perf	0,034456774	0,070094186	0,015746672
Environmental CSR Performance	0,167654028	0,088147683	0,000987383
Mobile Investment	0,210492605	0,009387601	0,122535984

4. CONCLUSION

In the research, we aimed to investigate the relationship between CSR and business performance of Turkish mobile telecommunication companies. Regarding the theoretical framework , we searched the empirical findings for the impact of CSR performance improvement. The evaluation of CSR performance was made using the content analysis method according to the performance indicators of the Sustainability reports with GRI guidance and annual reports. The CSR score was calculated as the sum of social and environmental activities' scores and it is the independent variable of the research. Our dependent variables to represent business performance are market share, ARPU and subscriber increasing. The mobile investment has been added to our model as a control variable. Data were collected for a 5-year period. While building our models, dependent variables and independent variables were taken into account with a difference of 1 year period.

4.1. Discussion

As a result of the content analysis of CSR activities, it has been concluded that three mobile telecommunications companies operating in Turkey, TURKCELL, TURK

TELEKOM and VODAFONE, are quite sensitive and active in terms of corporate social responsibility. It has been observed that the intensity of activity has been increasing gradually over the years. The social responsibility approaches of the industry players are beyond just an effort to fulfill a responsibility. It is obvious that CSR is approached with a high level of managerial commitment within all 3 operators.

With the prominence of titles such as Training and Education, Talent management and Young Talents, Women's Empowerment, it is understood that the operators assume responsibility for the development of the society they serve and adopt a pioneering role in these themes. The fact that one of the prominent categories in the last two years is “Energy use efficiency” shows that all companies in the sector have a high level of awareness in this area and they are striving beyond their obligations.

Findings regarding our research question are evaluated as follows. Although it has been observed that there is a weak positive relationship between CSR performance and business performance according the correlation matrix, the analysis results found are not sufficient to prove that there is a causal relationship between CSP and business performance because the results are not valid for the all variables and the corelations are not at the consistent level. According to the regression analysis and R square values, it is not possible to mention any link between CSR performance and Business Performance. In this sense, there is a complete uncertainty. This result has frequently appeared in our literature review in many experimental studies.

4.2. Limitations and Suggestions for Future Research

In previous studies, it was seen that stock values were also included in the analysis. However, Vodafone is not a company trade on the stock exchange in

Turkey. Therefore, as stock values cannot be included in the analysis, the relationship between CSR performance and financial performance could not be analyzed.

As a result of our study, a strong positive relationship between CSR and Business Performance could not be demonstrated. So, what are the factors that motivate companies in the sector for CSR activity? Future research may focus on this question.

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Appendix A: List of Abbreviations

3GPP	: 3rd Generation Partnership Project
5G	: 5th Generation Mobile Network
ANOVA	: Analysis Of Variance
ARPU	: Average Revenue Per User
BIST	: Borsa Istanbul
BP	: Business Performance
BT	: British Telecom
BTK	: The Information Technologies and Communication Authority (Bilgi Teknolojileri ve İletişim Kurumu)
CE	: Conformité Européenne (European Conformity)
CFP	: Corporate Financial Performance
CPI	: Corporate Product Image
CSP	: Corporate Social Responsibility Performance
CSR	: Corporate Social Responsibility
DT	: Deutsche Telekom
EC	: European Commission
EMC	: Electromagnetic Compatibility
EP	: Environmental Performance
EU	: European Union

G3	: Geleceğin Gücü Girişimciler (Power of The Future Entrepreneurs)
GC	: Global Compact
GRI	: Global Reporting Initiative
GSM	: Global System for Mobile communications
IDP	: International Development Program
IEC	: International Entrepreneurship Centre
ILO	: International Labor Organization
IOT	: Internet Of Things
IPCC	: Intergovernmental Panel on Climate Change
KLD STATS	: Statistical Tool for Analyzing Trends
MENA	: Middle East/North Africa
MNC	: Multinational Corporation
NGO	: Non-Governmental Organization
NYSE	: New York Stock Exchanges
OECD	: Organization for Economic Cooperation and Development
OHS	: Occupational Health and Safety
RIP	: Official Statistics Program (Resmi Istatistik Programı)
SDG	: Sustainable Development Goals
TOBB	: Turkish Union of Chambers and Commodity Exchanges
TRY	: Turkish New Lira (ISO currency code)

UK	: United Kingdom
UN	: United Nations
UNDP	: United Nations Development Programme
UNFCCC	: United Nations Framework Convention on Climate Change
USA	: United States of America
USD	: United States Dollar
WBCSD	: World Business Council for Sustainable Development