Chapter 11
Sustainability, Corporate Social Responsibility and Renewable Energy: The Key Takeaways

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11.1 Introduction

The developments on a global scale, which started with the Industrial Revolution, have put the world into a very complex process. This multi-layered process, which has economic, social, environmental effects and legal reflections, has basically emerged from the mutual relationship between businesses and the environment. The effects of environmental problems, which arise as a result of practices implemented by businesses with purely profit-oriented goals and policies that do not sufficiently consider any parameters other than the economy, have reached international dimensions over time.

While the gigantic development of the industry and the innovations in the field of technology offer endless opportunities for businesses to make a profit, on the other hand, they have created serious dangers on the world and human life. Businesses whose ultimate goal is profit under all circumstances have used natural resources, human and machine power and technology uncontrollably. In the last quarter of the twentieth century, the aim of profit-centered economic growth was fueled by the liberal economic policy adopted by developed and developing countries. With neoliberalism led by Thatcher and Reagan in the 1980s, the borders in front of the circulation of capital became transparent. Neoliberalism, known as modern or late capitalism, has been seen as a solution to transform the vicious circle of capitalism. In the new world order surrounded by neoliberal policies, the borders between the markets have disappeared, thus allowing the circulation of capital in a global market. While neoliberalism brought a new breath to capitalism, it aimed to include the individual and all his actions, natural resources and technology in the market area.

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This was seen as a way of making it possible for businesses to achieve their advanced goals at a time when capitalism was redesigned. As a result of global capital policies, profit has become a concept with an international impact for businesses. Rapid economic growth in the new world order is supported by the policies adopted. While preparing a ground for businesses to have a presence in the international arena and make a profit, on the other hand, global competition requires taking into account many variables for a long-term business life. While the free capital economy suppresses rapid growth, as a result of this, businesses have endangered the nature from which they obtain raw materials in the production process of goods and services. Many reasons such as developing technology, global market, increase in population, change in size of needs have created ecological, social and economic problems for businesses to continue their existence. These reasons have assigned the mission of being a corporate citizen to businesses. To put it more clearly, businesses that use all kinds of resources uncontrollably for a long-term operating life, profit and growth purposes need to act responsibly to compensate for the damage they cause. This situation has made it a necessity for businesses to include sustainability strategies in their management policies in order to fulfill their ecological, economic and social responsibilities.

Sustainability is a policy that requires meeting the needs of the present while respecting the ability of future generations to meet their needs. Corporate sustainability defines a management function in which this policy is integrated into business activities. Accordingly, businesses should not only consider their commercial goals while carrying out all their activities from production to sales, but also include environmental and economic impacts in the plans on the axis of social benefit. Corporate social responsibility, which is one of the elements of corporate sustainability, can be explained as one of the intermediate goals that should be achieved by businesses whose main goal is sustainability. Accordingly, businesses that achieve their living space and life, economic development form and dimension with what they get from the environment and society, have to display a responsible attitude towards the environment and society. To put it more clearly, corporate social responsibility is a management paradigm that adopts giving back what is obtained from the environment to the environment and what is obtained from the society back to the society. The corporate social responsibility understanding of enterprises can exist in a wide range from social aids to be made on behalf of the enterprise to environmental policies.

Ecological problems such as global warming, climate changes and the risk of depletion of natural resources in recent years have placed some responsibilities on businesses in the eyes of society and in the legal arena. Solutions to ecological problems are produced in international initiatives such as the initiatives of the United Nations, the Kyoto Protocol, and the Paris Agreement. Renewable energy is interesting among the solutions offered (Martínez et al., 2022; Sun et al., 2022; Kafka et al., 2022; Mukhtarov et al., 2022). In particular, corporate social responsibility activities of enterprises are starting to gain momentum in this new solution point: renewable energy context (Dong et al., 2022; Dinçer et al., 2022, 2022, 2022; Zhang et al., 2022; Yüksel & Dinçer, 2022).

11.2 Corporate Sustainability

Sustainability is one of the concepts that has been used frequently in the twenty-first century. In its most basic form, sustainability, which means the conscious use of all social, ecological, cultural and human resources, can be defined as a process in which the principle of mutual understanding and respect is adopted (Gladwin et al., 1995). The developments after the industrial revolution, the effects of business policies that do not take the environment into account, have prepared the ground for ecological results that will reach global dimensions in time. With the 1970s, businesses faced social expectations and legal measures regarding the solution of environmental problems they caused (Aktaş, 2017).

The concept of sustainability was first addressed by the United Nations at the conference on "Human and Environment" held in Stockholm in 1972. At the conference, the use of natural resources and the ecological effects of economic growth strategies were evaluated, the protection and improvement of the environment for the future of human life, thus leaving an undisturbed environment for future generations were discussed as an agenda item, and the basis of the sustainability policy was built (Chasek, 2022).

The oil crisis between 1973 and 1978 slowed down the economic growth and put capitalism into a crisis. In the following years, consumer movements started and legal regulations brought obligations to businesses to be sensitive to the environment and society (Aktaş, 2017). In the 1980s, neoliberal policies began to be implemented in developed and developing countries, especially United Kingdom and United States of America, as a solution to save capitalism from the bottleneck it was in. With neoliberalism, national borders in front of the circulation of capital have disappeared. In the market where the state has taken a few steps back, free capital has created a global scale market (Harvey, 2015).

Neoliberal economic policies, which provide businesses with the opportunity to grow rapidly with a global profit, on the other hand, have created multi-scale competition that will necessitate the consideration of many variables. Fueled by the aim of rapid growth and making huge profits, businesses continued to struggle to exist in an international market (Castells, 2008). Businesses aiming to stand out from their competitors have faced the necessity of fulfilling the mission of being a corporate citizen. This situation is shaped by legal regulations as well as being an element of competition.

An important regulation regarding the activities of enterprises is the Brundtland Report prepared by the World Development and Environment Commission in 1987. In this report, the concept of sustainability is considered as a key concept for the healthy continuation of the world order. The Commission defined sustainability as "meeting the needs of the present without compromising the ability of future generations to meet their own needs" (United Nations). Here, sustainability is expressed as a strategy that will not only protect the environment by preventing destruction, but also save humanity from extinction in the long run.

Sustainability is not just a concept that covers the environment. It is a strategy in which economic development and the environment are considered as a whole and the society is involved in every sense. The cornerstone of sustainable development is society. The extraordinary effect of businesses that determines the world order makes the individual passive in the face of all this power. An individual or business alone does not have the power to reverse this order and moreover cannot be held responsible for it. All businesses have to put the environment and society at the base of their economic strategies. This is the foundation of a successful sustainability strategy. In short, there are three basic elements of sustainable development: Environment, economic development and society (VanLoon et al., 2005). According to the Global Reporting Initiative, which prepares standardized sustainability reporting for businesses, the economic dimension of sustainability is related to economic performance, market presence, rapid growth and indirect economic effects in the economic development process. The social dimension is about observing the social balance in all the actions of the enterprise, ensuring the continuity of cultural systems, labor, product responsibility, human rights and people. The environmental dimension is related to maintaining the balance of natural ecology, biodiversity and physical systems, being sensitive to energy, water, waste, compatibility with products and services (Pazienza et al., 2022). The concept of sustainability has become an important element of successful competitive strategies, especially in recent years (Carayannis et al., 2022; Li et al., 2022a, 2022b; Yüksel et al., 2022; Mikhaylov et al., 2022). For hundreds of businesses operating in the same product category in a global market, traditional parameters such as price, quality and promotion are not sufficient to provide competitive advantage. For this reason, businesses fulfill their corporate citizen mission before the society by incorporating sustainability strategies into their corporate governance policies, while catching the advantage of being able to compete in the global market.

Today, only the performance of the enterprises in the production and sale of goods and services is not enough for them to achieve success. Businesses should be in a position that is sensitive to the environment, aware of their responsibilities towards society, sensitive to economic development and making efforts in all these issues. Therefore, the management understanding of businesses whose sole purpose is economic growth and profitability has transformed in the face of the conscious society, more specifically, differentiating consumer expectations (Kör, 2017). The concept of sustainability is in the middle of this transformation. In the traditional management approaches of the enterprises, the environment, energy and natural resources were used in an uncontrolled manner with the aim of economic growth (Eti et al., 2023; Li et al., 2022a, 2022b; Haiyun et al., 2021; Yuan et al., 2021). Communication with the consumer was built with a marketing approach aimed at increasing consumption. With an understanding of corporate sustainability, businesses pay attention to increasing the quality of life, paying attention to the use of low energy and natural resources, and getting maximum efficiency by giving as little damage to the environment as possible. Consumer policy, on the other hand, is designed with a marketing approach aimed at raising awareness in direct proportion to the increasing level of awareness.

There are issues that a business needs to pay attention to in order to successfully implement its sustainability policy. First of all, implementing sustainability requires considering many stakeholders and analyzing various factors. It is a long and complex process. Different areas such as mission and vision, organizational structure, decision-making processes, financial reporting, strategic planning should be integrated and organized under the umbrella of sustainability. In addition, for a successful sustainability practice, it is necessary to manage a healthy communication process inside and outside the enterprise. Implementing sustainability requires fundamental changes in the management approach and activities of the enterprise. All stakeholders should internalize and effectively communicate these changes. (Hoessle, 2013).

Corporate sustainability basically has two characteristics: First, it recommends a new business model. The second requires businesses not only to focus on their current gains but also to invest in the future (Tokgöz & First). Wilson defines corporate sustainability as the new and evolving management function of institutions. Corporate sustainability is a concept that should be taken into account in terms of the growth and maximum profit of a business. Businesses have reached this level of awareness today. According to Wilson, corporate sustainability consists of 4 concepts that businesses and literature are already familiar with (Wilson, 2003): Sustainable Development, Corporate Social Responsibility, Stakeholder Theory and Institutional Accountability Theory. Sustainable development means meeting the need for economic development and growth by balancing environmental protection and social equality. Corporate social responsibility is a concept that emphasizes the social role of an enterprise, which is fed from the moral philosophy. Stakeholder theory emphasizes the necessity of carrying out a correct and healthy relationship with the parties that are affected and affected in a wide range from production to sales process in all activities of enterprises. The purpose of stakeholder theory is to underline the necessity of giving importance to relations with other parties in order to provide a competitive advantage to businesses. Corporate accountability, under the umbrella of sustainability, explains the situation where businesses are held accountable for the environmental, economic and social impacts of business activities and are held accountable when necessary, not only when they are a party to a crime under the law (Wilson, 2003).

11.3 Corporate Social Responsibility

Corporate social responsibility, which is one of the elements of corporate sustainability, has an older history in terms of concept and practice. The first definition of the concept in the literature was made by Bowen in 1953. According to Bowen (1953), corporate social responsibility is “the obligations of businessmen to pursue those policies, to make those decisions, or to follow those lines of action which are desirable in terms of objectives and values of our society”. About 20 years after Bowen’s work, Davis used the term corporate social responsibility for the first time

in his work, defining corporate social responsibility as the responsibilities of businesses beyond their economic interests, legal obligations and technical requirements (Davis, 1973).

Considering the historical development of corporate social responsibility, there was a very limited attempt to define the concept in the 1950s. Since the 1960s, there has been a significant increase in efforts to explain what corporate social responsibility is (Carroll, 1999). The reason for the effort in the 60 s can be explained by some changes in the society in the same years. Worker and consumer rights, ecological regulations, and the emergence of environmentally-friendly production methods have imposed some requirements on businesses in terms of responsibility. Since the 1970s, the concept of corporate social responsibility has gained a global dimension and has turned into a management function that requires businesses to take responsibility in solving problems caused by serious effects on nature and humanity (Türker & Altuntaş Vural, 2016). According to Carroll (1979), corporate social responsibility is the obligation of society to meet the economic, legal, ethical and discretionary expectations that it may demand from businesses at any time. Conceptualizing this definition with a pyramid years later, Carroll divided corporate social responsibility into four categories as economic, legal, ethical and philanthropic. Accordingly, while businesses realize their economic responsibilities for their own development policies, they strive to meet the expectations of the society in legal, ethical and philanthropic categories (Carroll, 1991).

Kotler and Lee points out that corporate social responsibility is an obligation undertaken to improve the well-being of society through discretionary business practices and contributions from corporate resources. Here, the main element that defines the nature of corporate social responsibility is that it is voluntary. To put it more clearly, businesses should implement their activities on a voluntary basis rather than a legal and moral sanction (Kotler & Lee, 2013). A similar definition is made by McWilliams and Siegel (2001). They also define corporate social responsibility activities as actions that should be carried out by considering the social benefit beyond the economic interests and legal obligations of the enterprises.

The purpose of existence of enterprises is naturally to obtain maximum profit in the axis of a long operating life and production consumption cycle. All other purposes are based on realizing this main purpose. There are also definitions that deal with corporate social responsibility from this perspective. Milton Friedman makes the definition of social responsibility under the title of a doctrine that breaks its foundations. According to him, the only social responsibility of businesses is to use all resources and activities to maximize their profits without breaking the rules (Friedman, 1970).

Based on the definitions above, it would not be wrong to say that social responsibility activities are carried out as an obligation or a voluntary requirement for businesses. At this point, it has become a necessity for businesses to take responsibility for their commercial activities, regardless of the intention to be realized. Business activities of businesses create two effects: market and non-market. Although they have incorporated market power and influence into their strategy, non-market impacts such as environmental pollution have traditionally been covered

by the community or government. The term social responsibility incorporates these external influences into the management strategies of businesses (Sethi, 1979). To put it more clearly, businesses have to undertake and compensate for the economic, social and environmental effects and even damages of their activities.

Corporate social responsibility is one of the strategies of a successful sustainability policy. The point that brings the two terms closer together is that the activities implemented under the umbrella of corporate social responsibility focus on environmental, social and economic benefits. As stated before, sustainability also refers to a complex process consisting of these three layers. There is a hierarchical relationship between sustainability and corporate social responsibility. Accordingly, corporate social responsibility is an interim application, an interim goal for businesses to realize their sustainability policies (Panapanaan et al., 2003; Wilson, 2003). Businesses that have adopted a corporate sustainability policy also take care to act responsibly about the effects of their activities, along with other parameters. Corporate social responsibility is shaped by the incorporation of practices into management paradigms that will protect the benefit of society and the environment. This can take place in a wide range from regular economic assistance to enterprises to green innovation.

Climate changes, global warming, increase in consumption of energy and natural resources reflect the existence of problems related to the ecological system. The fact that enterprises are held responsible for environmental destruction due to their production activities has created the obligation to act sensitively within sustainable policies (Fang et al., 2021; Kayacık et al., 2022; Eti et al., 2022; Dinçer et al., 2023). Within the scope of sustainable environmental policies, businesses have put issues such as energy efficiency, reduction of hazardous wastes, recycling, and minimizing the use of natural energy resources in their corporate social responsibility practices (Karabulut Temel, 2017).

Following the first step taken with the United Nations Framework Convention on Climate Change, precautionary suggestions and solution efforts regarding global climate policies with the Kyoto Protocol, Copenhagen Agreement and Paris Agreements draw attention. In these efforts, it has been adopted to encourage the use of renewable energy by reducing the use of fossil fuels (Jimenez, 2021). Increasing attention to renewable energy in reducing ecological impacts has caused this sector to start to attract attention in corporate social responsibility initiatives of enterprises.

11.4 Renewable Energy in Sustainability and Corporate Responsibility Context

Although non-renewable energy like oil, coal and natural gas has advantages as having a high energy density, ease of storage, being affordable, and being able to be efficiently converted to the required energy type; reasons such as producing greenhouse gases, causing acid rain, posing a potential threat to human health, causing

air/water/soil pollution, being limited and exhaustible resources, reveal the importance of clean energy use. Renewable energy resources do not run out over time, contribute efficiently to the reduction of greenhouse gases, especially CO_2, and any country can meet all its energy needs with renewable energy from the sun, water or wind (Xu et al., 2022; Bhuiyan et al., 2022; Kou et al., 2022; Ermiş & Güven, 2022).

Renewable energy offers climate-safe solutions while simultaneously supporting various socioeconomic benefits as job creation, improved health, and more social inclusion. Since employment is necessary for income generation and consequently for the well-being of both individuals and their families, creation of jobs and retention are crucial indicators of socioeconomic growth. Wage and salary income, particularly from well-paying occupations, enables people to purchase, which result in consistent demand for goods and services, therefore contributing to the health of local and national economies. Thus, the employment metric extends far beyond direct jobs in the renewable energy sector and indirect jobs in the supply chain, to include so-called induced jobs in the broader economy (IRENA, 2017). Renewable energy sources are typically seen to have a significant impact on increasing employment, particularly among the local people where a certain renewable source is located. There are three major phases to adequately illustrate the impact of a power plant life cycle on the quality and quantity of employment, the location and duration of employment, and the indirect development of the "green" economy: (1) technological development, (2) power plant installation/uninstallation, and (3) operation or management and maintenance of technological plants (Maradin, 2021). Another advantage of using renewable energy sources is that it promotes economic development, specifically the development of the energy sector and all linked activities. Renewable energy sources have a substantial multiplier effect on countries whose industries are capable of producing energy machinery and equipment based on technological advancements, particularly in their exports (Granić, 2010; Maradin, 2021). Investment in renewables and energy efficiency, as well as enabling policies such as carbon pricing and the recycling of revenue from decreased income taxes, all contribute to a rise in economic activity. IRENA discovered that reducing global carbon dioxide emissions in accordance with the Paris Agreement will raise GDP in an analysis done under Germany's G20 presidency. However, metrics such as GDP do not represent the whole range of human wellbeing gain. A more comprehensive accounting of benefits includes employment, health, education, reduced greenhouse gas emissions, and changes in material consumption (IRENA, 2017). Renewable energy provides electricity availability in locations where grid extension is either prohibitively expensive or physically impossible. Access provides a variety of socioeconomic advantages, such as increased communications (mobile phone charge), which assist the progress of economic transactions, aids in the development of rural marketplaces, and generates jobs. Improved illumination in homes and schools benefits education and skill development. Furthermore, energy access is critical for enhancing health care (cold storage for medicines, usage of medical equipment that requires electricity), and the use of clean energy instead of highly polluting fuels minimizes indoor air pollution (IRENA, 2012). As indicated in IRENA (2017) report, renewable energy's multifaceted socioeconomic benefits

are gaining prominence as a crucial consideration for decision makers. The effects of the energy transition on the economy as a whole - employment, income generation, welfare improvement, and local industrial growth - are becoming obvious. Aside from the environmental and climate benefits of renewable energy deployment, maximizing the social benefits is critical to ensuring a just, timely, and economically efficient transition. An equitable transition disseminates the benefits of renewable energy and increases its adoption in local communities and throughout countries.

Companies are now taking control of their corporate social responsibility efforts in order to better plan their future projects by utilizing a balanced global climate effort, defining ecologically friendly long-term objectives, transparency improvement and encouragement of market-based strategies to minimize costs (Secinaro et al., 2020). As Strielkowski et al. (2022) notes, organizations can show their commitment to social responsibility by supporting and adopting renewable energy. As indicated by the Paris Agreement, several of the world's largest countries are putting in place the costly but necessary plan to generate 100% renewable energy by 2050. Public policies have the potential to play a critical role in fostering a favorable climate for corruption and risk reduction, as well as the growth of sustainable energy development in general. This is owing to the necessity to account for carbon emissions and water purification, which normally occur as the usage of renewable energy increases, as well as the environmental effects of climate change. In latest years, an increasing shift in corporate social responsibility and green energy goals have been observed with corporations such as Google, Facebook, and Microsoft, establishing aggressive targets for sustainability and renewable energy while increasingly placing emphasise on corporate social responsibility targets (Strielkowski et al., 2022).

As Tiep et al. states (2021), in today's global arena, it is critical that resources be used efficiently, and the same is important for energy input. Sustainable energy is defined as energy that is consumed in a negligible proportion to its supply and has manageable side effects, particularly on the environment. A sustainable energy system is one that meets the demands of the present without jeopardizing the needs of future generations. Sustainable energy supply is a primary priority in terms of energy security, energy efficiency, and environmental protection for governments, regions, and the entire world. Sustainable development is a major principle for sustainability that spans four interconnected fields such as ecology, economy, politics, and culture. Sustainable energy development seeks to boost economic development, improve energy security, increase energy access, and minimize climate change. Renewable energy sources include hydroelectricity, solar energy, wind energy, wave energy, geothermal energy, bioenergy, and tidal energy. To that end, encouraging the use of renewable energy and assuring citizens' access to sustainable, reliable, affordable energy help to drive sustainable development (Rajesh & Majid, 2020; Tiep et al., 2021).

Altering the energy structure by increasing the renewable energy resources usage and decreasing the non-renewable energy resources usage is critical for security, the economy, the environment, and society (Tiep et al., 2021). Saad and Talep indicates (2018) that, nonrenewable energy usage has a variety of detrimental effects on the

economy, environment, and society. It has been demonstrated that using nonrenewable energy resources will damage not only the environment and public health due to pollutants emitted from the combustion of fossil fuels, but also the economy as a result of air emissions that lead to environmental and health costs at multiple levels such as personal, local, regional, national, and global.

11.5 Conclusion

There is no doubt that a sustainable energy model must be based on renewable technologies. It is clear that renewable energy is inexhaustible, does not contain greenhouse gas emissions, and, by its very nature, will ensure the welfare, progress and development of societies. Renewable energy is obtained from natural resources that are continuously or repeatedly accessible from the natural environment. Since these resources are self-existing and inexhaustible resources, they are included in our lives as clean energy. Investment in the renewable energy sector in a country provides a wide range of socio-economic benefits, for example, it improves regional and rural development, provides job opportunities and moreover contributes to the diversification of energy supply. However, environmental awareness has increased in societies. Individuals care about the ecosystem balance. Many companies consider this sensitivity and transform their production and other processes into environmentally friendly practices. As the world becomes more environmentally conscious, most consumers develop a positive attitude towards companies adopting the green movement. Because they are aware that clean energy is a sustainable way to meet the energy demands without harming the environment.

Well-known businesses in the industry are taking the lead in using renewable energy not only for the environment but also for their own benefits. The world is shifting towards renewable energy sources as one solution to the issue of rising energy consumption and environmental concerns. As a result, alternative energy sources are expected to surpass fossil fuels, even if not in the near future. Individuals around the world want to live more sustainable and it is businesses task to enhance their understanding of the advantages of corporate social responsibility to attain sustainable development goals for wellbeing of both the environment and the society. In order to ensure sustainable development and social welfare, all shareholders must cooperate and coordinate to develop the right energy policies. Countries should acknowledge the importance of corporate social responsibility values for clean energy.

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