

Chapter 5

Corporate Social Responsibility, Circular Economy and Sustainable Development: Business Changes and Implications in Project-Oriented Companies



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Abstract By the end of the last century, the only goal of the company's businesses was to make a profit and paid very little attention to other aspects that were outside the obligations prescribed by law. However, constant social, environmental, and economic changes have affected the dynamics of changes in the business environment, which contributed to companies starting to apply the new concepts as Corporate Social Responsibility, Circular Economy, and Sustainability. Hence, this research aims to investigate the implementation of Circular Economy through Corporate Social Responsibility practice to achieve sustainable development in project-oriented companies in various industries. For this purpose, an adequate measuring scale was developed for assessing the respondents' opinions. The respondents were the employees of all levels and the management structures in companies from Serbia, Russia, and Bulgaria. For analyzing of results, the Shenon Entropy Method was used for estimating criteria weights. For the final ranking of five types of industries in surveyed countries, the TOPSIS method was used. Given that does not exist a research framework that is systematically dealing with the analysis of the Corporate Social Responsibility and Circular Economy in order to sustainability development in project-oriented companies, this research is contributed to theoretical and practical implication.

Keywords Corporate Social Responsibility · Circular Economy · Sustainability · Project-oriented organizations

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5.1 Introduction

Modern capitalism and globalization should establish and implement universal business principles, which will contribute to creating a sustainable world. Corporate Social Responsibility (CSR) is a business practice that emerged first in developed countries, originally in the USA, while more recently, CSR and Sustainability have begun to gain attention in other emerging and developing markets (Doh et al., 2015; Stojanović et al., 2020). European business ground had a substantial contribution to the development of the CSR concept. However, within the continent, given that not all countries are at the same economic and social development level as well as historical and cultural oriented, it should be expected that CSR has been understood and implemented in various ways.

Corporate Social Responsibility is established as an instrument to manage organizations facing different economic and ecological environment issues created by the linear economy model. However, the linear economic model on which the previous industrial development was based has shown that the sustainability of economic prosperity and environmental protection requires a new model that will eliminate the weaknesses of the previous model. This model is called in the literature and practice the model of the Circular Economy (CE). Therefore, in line with the contemporary development of organizations, Corporate Social Responsibility is being modernized by a Circular Economy.

CSR is a broadly adopted social phenomenon, especially in the resources, financial, and services sectors, where the business activities create substantial benefits for stakeholders (Xia et al., 2018; Stojanović et al., 2020). Given the various business drivers of CSR, there is a broad spectrum of industry and organization features that influence whether and how CSR practice is adopted in order to reach sustainability (Doh et al., 2015; Đorđević et al., 2020). Sustainability arises from the idea of managing an organization without compromising the economic, ecological, and social environment while meeting current and future society demands (Crane & Matten, 2007). Sustainability has become one of the central matters and essential indicators of business success (Goni et al., 2017). The more financially stable and profitable an organization is, the more likely it is to invest in CSR activities (Doh et al., 2015). Corporate operations should be managed at a strategic level and performed with measurable impact on objectives in mind if the organization wants to be successful and sustainable (Plessis & Grobler, 2014).

Many countries have a long history of developing CSR culture and Sustainability. Others, which have passed the transition process, proactively accept the responsible business concept and ensure that companies behave socially acceptable.

Considering CSR in terms of Circular Economy and Sustainability, the gap in academic literature dealing with the elements of Circular Economy in various industries among different countries research is spotted. Hence, this paper aims to investigate the application of Circular Economy elements through CSR practice in order to achieve sustainable development in companies in various industries in Serbia, Russia, and Bulgaria. In this study, five types of industries according to the

elements of the Circular Economy were ranked by integrated Entropy-TOPSIS methodology.

The research is presented as follows. The first section is the introduction. The second section gives an overview of the relevant scientific literature of Circular Economy, the third section deals with the connection between Corporate Social Responsibility and Circular Economy. The fourth section gives highlights of the application of CSR and CE in project management, while the fifth section is given the application of Corporate Social Responsibility and Circular Economy in various industries. The sixth section presents the basics of the methodology as well as data analysis and discussion of results. Finally, the conclusion section with recommendations and limitations are present in the last section.

5.2 Circular Economy

The industrial evolution has been dominated by a linear (one-way) model of production and consumption called take (from nature), make (in the process of production), use, and discard (waste). However, due to the increase of the global economy and the growing consumption of resources, there was a need for an innovative economic model. That has started companies to explore new ways to reuse products or their components and restore more of their precious material, energy, and labor inputs. As an alternative to an unsustainable linear production-consumption system, the Circular Economy has emerged. The Circular Economy is an umbrella concept that addresses how humanity produces and consumes goods and services (Schöggl et al., 2020; Suárez-Eiroa et al., 2021). The main aim of the Circular Economy is to extend the useful life of products, components, and materials in circulation and without loss of value and reduce waste as much as possible. From that point of view, the Circular Economy represents a regenerative economic system based on business models that continue the end of life of materials through a maintenance process, recycling, and reuse (Machado & Morioka, 2021). The basic premise of the Circular Economy is that achieving sustainable development at the global level. It does not mean a change in people's quality of life, nor a decline in production and profits on the part of producers, but that the circular model has to be profitable such as the linear model, and that consumers enjoy in products and services. The Circular Economy concept changes economic logic because it replaces production with sufficiency: reuse what you can, recycle what cannot be reused, repair what is broken, remanufacture what cannot be repaired (Stahel, 2016).

The Circular Economy business models are realizing in two directions. The first approach is pointed at a business model that fosters reuse and extends service life through repair, remanufactures upgrades, and retrofits. The second business model focused on turn old goods into new resources by recycling materials (Stahel, 2016).

The concept of Circular Economy is not limited to company size, specific industries, or regions, already for its successful implementation, the underlying logic and patterns of business must be suitably understood. This concept can be implemented

in companies in different ways, such as introducing internal structural changes in the company, business model adaptations, product development and design, or changing framework conditions (Zhu et al., 2014; Moreno et al., 2016; Lewandowski, 2016; Leal Filho et al., 2019; Stumpf et al., 2021).

The first country in the world to adopt a law for the Circular Economy was China in 2008. Later, in 2012, the European Commission published a document called the “Manifesto for a Resource-Efficient Europe,” in which it is clearly emphasized growing pressure in the world, due to the lack of more natural resources, hence the European Union has no choice but to move to a resource-efficient and ultimately regenerative model of the Circular Economy (https://ec.europa.eu/commission/presscorner/detail/en/MEMO_12_989). The application of this concept is to enhance the sustainability of production and consumption and to provide to achieving “a cleaner and more competitive Europe” (European Commission, 2020). The European action plan about the Circular Economy is based on promoting the changes that lead to the strengthening of the Circular Economy (Stumpf et al., 2021). Korhonen et al. (2018) highlighted that the European Commission estimated that implementing the CE model of business could create 600 billion euros annual economic gains for the EU manufacturing sector alone. For example, McKinsey (2014) and Finland’s Independence Celebration Fund (FICF, SITRA) considered that Finland, through a Circular Economy, can get annual gains of 2.5 billion euros. Next to the EU national governments, the CE concept is used in the UK, Japan, China, Canada, and some advanced international companies worldwide.

The Circular Economic concept has gained momentum among scholars and practitioners and has become an important academic research field with a steep increase in the publication number (Lewandowski, 2016; Kirchherr et al., 2017; Geissdoerfer et al., 2017; Govindan & Hasanagic, 2018; Daú et al., 2019). Findings by Kirchherr et al. (2017) indicate that the Circular Economy is most frequently depicted as a combination of reducing, reuse, and recycling activities, whereas it is often not highlighted that CE necessitates a systemic shift. The previous studies indicate that the CE concept has some barriers that vary considerably concerning industrial focus and level of implementation. However, in their systematic review research, Govindan and Hasanagic (2018) indicate that cross-sectoral and empirical studies relating to CE barriers are still relatively scarce.

The Circular Economy is recommended as an approach to economic growth that aligns with sustainable environmental and economic development (Korhonen et al., 2018; Suárez-Eiroa et al., 2021). Sustainability refers to benefiting the environment, the economy, and society (Elkington, 1997), while the primary beneficiaries of the CE are the economic actors that implement this concept (Geissdoerfer et al., 2017). In this rapidly changing economic and social environment, thinking about sustainability and social and environmental management is a way for companies to positioning and thriving (Stoyanova, 2019). Therefore, the strategic approach of Corporate Social Responsibility, which focuses on Circular Economy, is becoming increasingly crucial for the competitiveness of companies. The benefits are multiple and contribute to cost reduction, human resources management, risk management, customer relations, and innovation capacity.

5.3 Corporate Social Responsibility and Circular Economy Towards Sustainability

The concept of CSR has been developing as a business practice for years, while the Circular Economy appears as a concept in the contemporary literature, all under the umbrella of Sustainability.

There are many pending questions concerning the impact of CSR activities on Sustainability. CSR and Sustainability enter all areas of business. Those are supported by the fact that they are gaining more importance in companies running in various industries. The possibility for a process or a certain situation, to be maintained at a high level without resource restrictions is a goal to be achieved. The existing dominant technologies that companies use to perform business functions to meet their needs are slowly but surely exhausted. In that sense, the direction of thinking and eventual solution of the problem of preservation of the natural environment is the notion of sustainable development, i.e., Sustainability as one of the basic concepts of the economics of natural resources and environment (Silvius, 2017). It can say that many human activities are directed and maintained through Sustainability. People's way of life creates a complex set of values, goals, and activities and certainly implies social, economic, and environmental dimensions (Elmualim, 2017). Nowadays, Sustainability is one of the most significant challenges of modern companies, in which project management has a vital role in the realization of more sustainable business practices.

Sustainable development represents an ethical standard according to the World Commission on Environment and Development (Brundtland, 1987). Therefore, the sustainability scientists defined the framework for strategic development (FSSD), which defines four general sustainability principles (Robèrt et al., 2002; Baumgartner, 2014). These principles refer to a sustainable society such as (1) in a sustainable society, nature is not subject to systematically increasing concentrations of substances extracted from the Earth's crust; (2) nature is not subject to concentrations of substances produced by society; (3) nature is not subject to degradation by physical means; (4) in that society, people are not subject to conditions that systematically undermine the efforts to meet their needs (Brundtland, 1987).

Sustainable development can reflect on the innovation, profitability, and success of the companies. To achieve sustainability, companies need a framework they can implement on in order to identify internal and external factors of the business and improve corporate sustainability strategies to be more successful on the market. Hence, sustainability programs can be divided into internal and external dimensions. Internal sustainability programs are primarily directed at environmental concerns that are taken care of by implementing measures within the company, while the external sustainability programs are referred to as supply chains and invest the collaborative efforts to address environmental issues (Gimenez et al., 2012).

The global economy has been created with the idea of a high level of welfare, justice, and equality. However some of the instruments used for achieving those goals are failed and short-term interest prevailed, bringing with them products and

innovations that are not environmentally friendly, societies that are not ruled by democracy, human rights violations, the free market illusion, and business actors that are not willing partners for establishing sustainable development. As a result of the problems and inequalities, the public's conflicting feelings towards business emerged. On the one hand, companies provided people with the necessary goods, services, and jobs. On the other hand, people believe that companies conduct their operations with the sole purpose of increasing their profits without taking into account the needs of others in the vicinity. In order to be able to balance the needs of the environment and achieve long-term sustainability of their business, companies were forced to mitigate the confrontation with society by introducing a new business model of Corporate Social Responsibility in their business strategies.

CSR in the global economy is an inevitable issue. Considerable development of society and information technologies cause greater attention directed towards improving social and environmental conditions, human rights, and significant pressure on companies to balance people, planet, and profit elements in their business (Kanji & Chopra, 2010).

Many concepts, definitions, and elements have been proposed to define corporate behavior that complies with the needs of the environment in which a company operates. However, none of them are generally accepted and comprehensive, therefore in literature can be found terms such as Sustainable Development (SD), Corporate Responsibility (CR), Corporate Sustainability (CS), Corporate Citizenship (CC) (Martens & Carvalho, 2016). Therefore, Corporate Social Responsibility is relevant for achieving sustainable development goals (Xia et al., 2018).

Despite the different views, Corporate Social Responsibility is considered the company's involvement in minimizing the unfavorable effects on the environment and society, going beyond minimum legal requirements, therefore undertaken voluntarily. Therefore, many definitions emphasized the voluntary moment as a qualification whether specific company behavior can be characterized as CSR.

Carroll (1979) introduced a model of four company responsibilities: economic, legal, ethical, and discretionary (philanthropic) responsibility. They form a well-known Pyramid of Corporate Social Responsibility which served as a base for many proposed models (Carroll, 1991). The base of the Pyramid is economic responsibility, where the role of business is fundamental, creating value for owners and shareholders. The next level is legal, where it is assumed that some issues encompassed in the frame of CSR can be imposed with regulations, but the moral implication of companies in that way can be omitted. Ethical responsibility comes as a consequence of embedded high values and norms in a company's business and significantly exceeds the legal level. At this point, the activities are being undertaken to prevent any social harm. Carroll's third level of the Pyramid of Corporate Social Responsibility, named ethical responsibility, precisely defines the voluntariness in applying CSR as a high standard of social involvement (Carroll, 2016). The most elevated position in the Pyramid belongs to altruism. This discretionary responsibility encompasses voluntary actions that are not directly connected to business and even not expected to deal with it. However, companies are guided with a desire to

take an active role in a dynamic social environment. If helping society at this level is missing, that is not considered unethical behavior.

Authors often argue that economic responsibility is cardinal, especially in business survival, and goes even to the attitude that this responsibility is the only one that matters (Stojanović et al., 2021a). This rigorous understanding of the purpose of the business began with Friedman, in which opinion the company's sole obligation is to generate profits for owners and shareholders (Friedman, 1970). Carroll (2016) pointed out that it maybe seems unusual to perceive economic responsibility as Corporate Social Responsibility. However, society expects that a company provides products and services at a certain quantity and quality level. Consequently, the company is expected to ensure financial effectiveness even more in today's global business, where long-term sustainability is becoming prerogative (Carroll, 2016). Companies that fail in fulfilling economic responsibility will not be able to fulfill any other responsibilities. Therefore this is the prerequisite for all others.

Managers and shareholders of the company determine the level of CSR involvement in the company. Therefore, CSR can be the way to fine adjust companies' activities to gain some additional benefits, such as special political benefits, social license to operate, comparative advantage, etc., and economic gains (Milne, 2002).

It should be pointed out that social-oriented activities are not mandatory and set by any law; instead, they come from the ethical sense of the companies that should return something to the society in which they operate. Those aspirations can be expressed in various forms. For example, the company can donate financial incentives to local sports, educational, or civil organizations to enforce community development. Also, under the same frame, the company can allow and encourage employees to participate in socially engaged activities. Managers should understand the broader social environment and decide and act according to morals, ethics, and base values that do not depend on the nation, state, or religion (Freeman et al., 2010). Given that social responsibility is discretionary, it is closely connected to the voluntariness aspect.

The stakeholder aspect of Corporate Social Responsibility presupposes responsibilities for the needs of wider stakeholders, not only shareholders and customers. For companies, the first responsibility to stakeholders deals with satisfying the clients' needs following ethical methods in performing business operations (Hanzaee & Rahpeima, 2013). By going beyond, companies built even stronger relations with stakeholders directly involved in the business (suppliers, customers, business partners, financial institutions). By promoting ethical attitudes and values, they spread good business practices even wider. Stakeholder theory becomes a central concept around which a new way of organizing the fulfillment of social responsibilities is formed. However, attempts to integrate responsibilities to different stakeholders into business operations can be very difficult in practice. It must be borne in mind that stakeholder demands are often conflicting, and resources that the company has to allocate for CSR are limited, so procedures to determine the priority of certain claims over others need to be established. Therefore, managers need to understand relationships with their stakeholders and make decisions that will not satisfy only one group of stakeholders while cause harm to another. Careful selection of

stakeholders according to their power, legitimacy, or urgency is not uncommon, especially in developing countries where resource constraints are even more expressed, competitive pressures are intensified, and the CSR context is less developed (Jamali, 2008). Devotion to managing stakeholders is voluntarily continuously seeking solutions to be more responsive to stakeholders, rather than leaving it to the regulatory institutions (Freeman et al., 2010).

In stakeholder theory, the business is seen as an alliance among stakeholders where the common goal is achieving certain values. In that sense, the company management faces numerous challenges embodied in the diversity of stakeholder requirements locally and globally.

However, viewed from the company's strategic position, it is necessary to achieve positive economic results, and strategically, the focus of CSR is shifting towards finding common ground with economic results. In that sense, the dependence of the companies and the environment is established. But, on the other hand, the values and strategic goals of the company are harmonized with the needs of society, which achieves a win-win situation for business and society (Porter & Kramer, 2006).

The aspects that most often come out in CSR models and definitions are environmental responsibility, social responsibility, and economic responsibility. Increased productivity and development followed by enormous consumption brought welfare in many countries. On the other hand, growing industrialization meant the use of local resources and their devastation, which resulted in the degradation of the environment and endangering human health. This caused more and more attention being paid to global warming, CO₂ emission, overconsumption and depletion of natural resources, severe consequences of natural disasters, environmental accidents, and major corporate scandals. Recently, renewable energy, clean air, decreasing emission, recycling, and water protection have attained more prominence and have become inevitable topics for policymakers and scientists. The role of the companies, especially big multinational companies in the mentioned problems couldn't be neglected. Companies are forced to take responsibility for the environmental changes they cause by their actions, and on that occasion, they usually obey local regulations or customs in business practice. Regulations usually prescribe restrictions, i.e. safe limits, but the problem of global environmental degradation remains. Steffen et al. (2015) proposed a "planetary boundaries" framework which provides "science-based analysis of the risk that human perturbations will destabilize the Earth system at the planetary scale." Two core boundaries are climate change and biosphere integrity and an additional seven others, which need to be embedded in sustainable development goals to provide clean energy and sufficient food supply for upcoming generations.

The world's expectation is focused on the governments of the most developed countries and the management of large multinational companies to embed in the emerging economic system a new change that will integrate economic growth and environmental protection and strive to a Circular Economy (Vazquez-Burst et al., 2014).

This process requires investments in resource conservation, green management, and a focus on sustainable development to reduce the destruction of nature and

produce environmentally friendly products. Environmental behavior expected from companies means control of environmental aspects through the whole product or service life cycle (Hrbáčková et al., 2019). It is supposed that investments in environmental protection have been made by companies in order to fit in the contemporary model of the Circular Economy. The ability of the company to incorporate in business operation constraints concerning natural resources is based on three connected environmental strategies: pollution prevention, environmental management system, and sustainable development (Hart, 1995; Hrbáčková et al., 2019). On the other hand, the raising question is whether this has financial benefits for the companies. The answers are double-sided, but by following environmental strategy companies develop assets and human resources capable of green innovations, product differentiation, and long-term sustainability (Porter & van der Linde, 1995; Clarkson et al., 2011).

In recent years, awareness of the need for industrialization to be carried out in an environmentally sustainable way has been developed, rejecting the linear model that assumes production, use, and disposal of used products (Kirchherr et al., 2018). As a result, the influential concept such as Circular Economy gains importance, striving to redesign business activities so that used products turn into resources for other industries. In this way, a unique approach to the connection between the economy, the environment, and society is defined. Research using indicators to monitor the Circular Economy indicates that the focus is on resource conservation through recycling programs, monitoring and redesigning of processes through the so-called Life Cycle Thinking (LCT) approach, programs based on sharing platforms, plans for surplus products, and multifunctionality of product, upcycling, etc. (Moraga et al., 2019).

5.4 Corporate Social Responsibility and Circular Economy in Project Management

Project management includes planning, organizing resources, monitoring and collaborating with stakeholders, and motivating employee teams. Project management planning has to focus on harmonizing team members in employing Corporate Social Responsibility strategies. It embraces being socially aware during all project phases in order to deliver ongoing ecological and economic sustainability. Sustainability should be embedded into project management methods and concepts to support the organizations in achieving competitive advantage, known as sustainable project management (Chofreh et al., 2019). Silvius and Schipper (2014) defined sustainable project management as the practices of “ensuring profitable, fair, transparent, safe, ethical, and environmentally friendly project delivery aiming at a project deliverable that is socially and environmentally acceptable throughout its lifecycle.” Silvius and Schipper (2014) identified several opportunities for taking sustainability principles into project management. The four-dimensional framework in project

management that includes sustainability in the triple bottom line perspective (environment, society, and economy) was defined by Marcelino-Sádaba et al. (2015). Hwang and Ng (2013) consider that the project manager needs to satisfy the traditional roles of project management and operate with the project in order to achieve effective and efficient sustainability business.

One of the main challenges for project managers is integrating a Corporate Social Responsibility strategy into sustainability project management to ensure that all projects comply with global CSR recommendations (Schieg, 2009). In the project, the project manager has a central position and can affect many aspects during the project realization (Silvius, 2016). Therefore, project managers should implement Corporate Social Responsibility and ethical orientation for all company stakeholders to provide corporate governance during all business and project actions. Also, the project manager has to affect the application of sustainability principles during the realization of the project (Goedknecht, 2013; Maltzman & Shirley, 2013).

Corporate Social Responsibility strategy in project management must be focused on ensuring that the project is carried out by meeting the wider social community's social, economic, and environmental interests. This means integrating Corporate Social Responsibility activities into all aspects and phases of the project activities in order to comply with all international guidelines. The basic elements of the project management concept are time, resources, and costs on the one hand and planning, monitoring, and control of individual project phases on the other hand. The success of the functioning of projects related to sustainable development as a system depends on how the defined goals are realized and achieved their purpose in a dynamic environment (Zhang et al., 2017). Corporate Social Responsibility guidelines need to be included in all projects in order to ensure compliance with the laws because the implementation of the Corporate Social Responsibility strategy becomes mandatory throughout to provide global long-term sustainable development. The guidelines and legislation of Corporate Social Responsibility sustainable development present an overall framework for project managers to ensure that they are dedicated to sustainable development and responsibility. These initiatives can enable managers in project-oriented organizations to be committed to raising their organizations' ethical standards and sustainability practices. Incorporating norms socially responsible business in project management operations and processes ensures the execution of and monitoring of social responsibility through all phases of operation of the project-oriented organization.

The perception of project-oriented companies as a factor in society is constantly changing to reflect the changing societal expectations represented by the community groups, governments, and other stakeholders (Plessis & Grobler, 2014). In traditional business, organizations are seen as responsible only for delivering products and services to the marketplace, contributing employments and workers' security, complying with legislation, rewarding investors with profit, and paying taxes to the government. In addition, the assignment of project management is to recognize environmental systems, identify the internal and external dimensions of Corporate Social Responsibility, and examine defined CSR standards for their use in various projects. Therefore, CSR in project-oriented companies contributes to establishing

values such as integrity, reputation, and credibility. For the prosperous performance of Corporate Social Responsibility activities, it is necessary to harmonize the dedication of the project-oriented organization to its objectives and business operations.

The integration of Corporate Social Responsibility into strategic project plans should provide a range of social, economic, and environmental guidelines that can help project-oriented organizations meet all stakeholders' needs. An essential idea of project-oriented organizations is to connect competencies and different stakeholders to solve and overcome obstacles and problems better and more quickly. Therefore, the idea of knowledge combination and cooperation of key stakeholders, as an important dimension of the Corporate Social Responsibility concept, is central to project management (Hou et al., 2010; Stojanovic et al., 2021a). A partnership between project managers, hierarchical levels, and external stakeholders should be a primary value (Beringer et al., 2013). It is required that the organization views itself as project-oriented and all stakeholders have clearly defined key values of a project-oriented organization (Gareis & Huemann, 2000; Eskerod et al., 2015; Gemünden et al., 2018). It is, therefore, necessary that all project plans have a clear and detailed explanation of how each phase of the project will comply with global Corporate Social Responsibility regulations in order to inform all stakeholders, including customers, suppliers, distributors, and partners, about implementing a sustainability strategy for project management. Then everyone would understand how much an organization is socially aware, which will significantly help them become and remain sustainable in the future. This will set a positive example for all other market participants who will follow the positive examples of social sustainability and encourage the implementation of Corporate Social Responsibility strategy in all project-oriented organizations. In addition to the orientation towards social responsibility, the project management culture should also contain an additional value, such as the orientation towards sustainable development as well as towards Circular Economy (Huemann, 2015).

Today, integrating the Corporate Social Responsibility concept in project management is one of the most prominent global project management trends (Alvarez-Dionisi et al., 2016). This relationship indicates that project-oriented organizations assume responsibility for their actions to increase social impact, leading to changes in the organization's products, processes, services, practices, and resources (Magano et al., 2021). It is very important to make project management sustainable. In project-oriented organizations, employees are assigned to projects, processes are changed and adjusted, new stakeholders are hired, all to monitor changes in the environment. These changes are especially related to the Circular Economy, which is not short-term but has a long-term character (Magano et al., 2021).

Therefore, for project management, the Circular Economy is important because the principles of the CE must be a fundamental part of the project management process. These principles include product recovery management, life cycle assessment, adaptability, product design to be easier to use and later for recycling, which leads to sustainability (Sanchez & Haas, 2018). Furthermore, considering that the Circular Economy is recognized as a high-impact strategy helping society be aware of the limits of economic growth (Leipold & Petit-Boix, 2018), the project-oriented

organization has to adopt this practice. However, they require a high initial investment. Therefore, in project-oriented organizations, managers should respect the principles of Circular Economy and be socially responsible for achieving the set goals, and have a responsibility towards society and the environment (Bănaciu et al., 2016).

5.5 Application of Corporate Social Responsibility and Circular Economy in Various Industries

Sustainable development can be a source of success, innovation, and profitability for companies. Hence, the network between sustainability and project management is intensively developed. An increasing number of scholars and professionals are dealing with this topic which is still a challenge in the field of project management (PM) (Silvius et al., 2013; Martens & Carvalho, 2016; Martens & Carvalho, 2017; Carvalho & Rabechini, 2017). According to Marcelino-Sádaba et al. (2015), many unresolved questions still exist related to project management and sustainability. Chofreh et al. (2019) analyzed the literature in sustainability, project management, and sustainable project management. Carvalho and Rabechini (2017) considered the relations between project sustainability management and project success and discovered a low degree of commitment to social and environmental aspects in the surveyed projects. Also, the significant positive connections between project sustainability management and project success in reducing social and environmental negative impact were determined. Therefore, sustainability principles need to be incorporated in the project management concept by controlling various projects, programs, and portfolios (Chofreh et al., 2019). The application of Corporate Social Responsibility activities is widespread in many industries that base their business on projects, as evidenced by numerous research studies around the world.

Corporate Social Responsibility in the mining industry is increasingly represented because the mining industry is very important in the economic development of countries (Velasquez, 2012). In the world, over 20 million people depend on exploiting mineral resources as a basis for their living. Therefore, Narula et al. (2017) suggested a three-stage model that provided an innovative framework for sustainable rural livelihoods in mining areas in the context of the changing CSR regime.

The implementation of Corporate Social Responsibility also is prevalent in the construction industry. Analyzing the state of the art in the construction projects, Xia et al. (2018) identified four research topics of Corporate Social Responsibility comprising CSR perception, CSR dimensions, CSR implementation, and CSR performance. Corporate Social Responsibility is more complex in the construction industry because of its project-based nature. The construction industry has some contradictions, at the same time is building a new environment but having an adverse effect on the environment (Wang et al., 2016). Based on that, Corporate Social Responsibility activities are more flexible and dynamic than in other industries (Evangelinis, 2016; Loosemore & Lim, 2017; Xia et al., 2018).

Corporate Social Responsibility in the Information Technology (IT) sector is formed as voluntary engagement of the companies and is supported by public policies and regulations (Martinuzzi et al., 2011). Institutional regulatory initiatives such as EU directives are aimed at ecological problems such as waste creation, disposal and recycling, hazardous substances, and chemicals. The role of CSR is to provide the locus for the European Information and Communication Technology (ICT) sector on the global market (MacGillivray et al., 2006). The authors argue that the European ICT companies need to put environmental and social concerns at the forefront of their business in order to gain a competitive advantage in the market. Dhanesh (2014) dealt with Corporate Social Responsibility as a possible strategy for managing to strengthen relationships between companies and their employees. Results revealed strong, significant, and positive associations between Corporate Social Responsibility and organization-employee relationships.

The service industry has more important environmental effects than companies realize. The problem with environmental impacts in the service industry is that ecological issues are generated across many different places. The application of CSR requires changes in many other business areas and establishing sustainability teams. Implementation of the CSR concept, in such a way, may increase the value of the companies' products or services for its clients (Camilleri, 2009; Bello et al., 2017; Fandos-Roig et al., 2020). Also, the CSR concept is positively linked to consumer trust and loyalty (Choi & La, 2013). Considering the services are intangible and used at the time of purchase, a high level of confidence in the suppliers is required in order to perform the buying process effectively (Wu et al., 2018). Fandos-Roig et al. (2020) investigated how service companies, through their CSR actions, can improve their client's loyalty and determined that CSR becomes a critical strategic asset for determining trust and loyalty among consumers. For companies that are oriented on services, it is harder to evaluate CSR efforts. Casado-Díaz et al. (2014) state that service company owners need to react more positively to CSR activities because the nature of services is specific.

As production requires a high degree of interaction with the environment, whether it is the acquisition of resources, labor, or target market, CSR practices need to focus on environmental issues in manufacturing industries (Handayani et al., 2017). That requires actively building and developing relations with the environment and establishing environmental management practices. A wide range of resources is used in production activities, so it is necessary to put sustainable development at the center when defining business strategies. According to Nagyová et al. (2016), the embracing of Sustainability and Circular Economy is important because it creates a special relationship between the manufacturing industry and the environment. Those relations are essential for continuous supply with high-quality raw materials and, on the other hand, contributing to the preservation of limited natural resources. Cherian et al. (2019) also suggested that monitoring the manufacturing industry is of vital importance compared to other industries since manufacturing cause notable devastation to nature, resulting in great environmental pollution. However, implementing environmental practices can generate numerous benefits for the industry, such as green innovation, high-quality products, greater customer satisfaction, lower production cost, and in the frame of Circular Economy,

energy-saving, product reusing, and recycling. Sardana et al. (2020) examined the impact of environmental responsibility and supplier sustainability practices on companies' performance within the manufacturing industry. The study revealed that environmental sustainability had a direct influence on companies' performance. The effect of supplier sustainability on the performance of an organization was indicated to be positively moderated by organization ability. Xia et al. (2018) suggested that small and medium manufacturing enterprises also need to change the traditional business practices. They have to improve attitudes related to environmental responsibility and increase CSR implementation in their production activities to effectively be involved in the Circular Economy wave.

5.6 Methodology

The methodology used in this research consists of several steps and represents in Fig. 5.1. First, defining the research problem and analyzing previous literature research, a survey on Corporate Social Responsibility was conducted regarding the

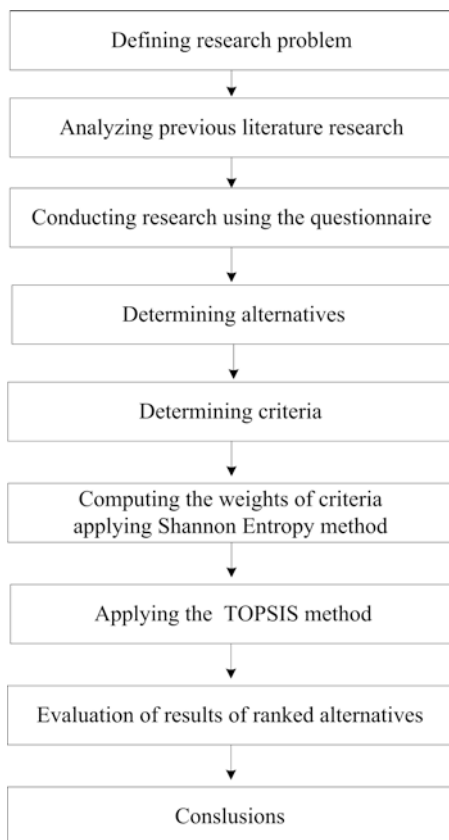


Fig. 5.1 Defined research model

Table 5.1 The statements that were evaluated

	Item
Q1	Energy saving
Q2	Waste recycling
Q3	Mobility management
Q4	Sustainable packaging
Q5	Develop of environmental friendly product
Q6	Life cycle assessment processes
Q7	Management of environmental system
Q8	Use of renewable resources

environmental aspect of sustainability. Then, a multi-criteria model was defined to determine the level of environmental impact practiced by project-oriented companies from different business sectors. The alternatives represent the combination of industry sectors and countries in the specified model, while the criteria are defined through selected questions about the Circular Economy. The next step is to determine the weights of the proposed criteria using the Shenon Entropy method. Finally, the ranking of the proposed alternatives using the TOPSIS methodology was performed.

The survey method, used for data collecting, enables gathering standardized data towards understanding the application of measures to reduce the environmental impact in project-oriented companies. In order to measure corporate environmental responsibility, eight questions from the questionnaire were used (Table 5.1), which referred to the Circular Economy thought activities carried out in order to reduce company's environmental impact. These statements were evaluated by employees of project-oriented companies operating in various industries such as Mining, Construction, Manufacturing, Services, and IT. The research was conducted in Serbia, Russia, and Bulgaria. Respondents rated the acceptance of specific environmentally responsible measures by their company on a scale of 1 to 5 (Likert scale) where a value of 1 meant "the measure is never implemented in the company I work for" while a value of 5 indicated "a measure is always implemented in the company I work for."

5.6.1 Entropy Method

Up to now in scientific research, many methods have been proposed for determining criterion weights in multicriteria models, including subjective as well as objective ones. Subjective weight methods, for example, AHP (Analytic Hierarchy Process) and the Delphi method, depend on experts' experience and judgments (Du & Gao, 2020). This can be considered as an advantage as well as a drawback. According to Li et al. (2011), evaluation of the weights of criteria using subjective methods such as due to subjective factors could deviate the criteria weights. One person's opinion

is highly reliable, and weights are correctly estimated if the person is a real expert in the field. However, the opinion of experts can often be biased or under the influence of some circumstances. Also, in situations where fewer experts participate in defining the importance of criteria, group decision-making and fuzzy methods can be employed (Lamata et al., 2016). Objective methods reflect the weights that are contained in data itself. They are especially useful in situations where it is difficult to accurately determine the respondents' preferences, or the number of collected data is significantly large.

In this research, the Shannon Entropy method determines the magnitude of the diversity found in the data (Hamsayeh, 2019; Arsić et al., 2021). This means that if the entropy is low, the weight of the criteria will be higher because of the greater amount of information the data carries and vice versa (Du & Gao, 2020; Stojanović et al., 2021b).

Shannon (1948) was the first who developed the concept of the entropy of the system in his theory of communicators and proposed the function of entropy represented by the Eq. (5.1):

$$H(p_1, p_2, \dots, p_n) = -K \sum_{i=1}^n p_i \log(p_i) \quad (5.1)$$

where (p_1, p_2, \dots, p_n) represents the probability of random variables calculated from the probability function P a K and represents a positive constant.

Calculating the weight of the criteria $W = \{w_1, w_2 \dots w_n\}$ using the entropy, where $C = \{C_1, C_2 \dots, C_n\}$ is the criteria, $A = \{A_1, A_2 \dots, A_m\}$ alternatives of the decision matrix, and x_{ij} indicators of the alternative value according to criterion j , can be done in a few steps (Hafezalkotob & Hafezalkotob, 2016). First, the normalization of the value of the decision matrix is determined using Eq. (5.2):

$$p_{ij} = \frac{x_{ij}}{\sum_{i=1}^m x_{ij}} \quad (5.2)$$

Then, the measure of entropy is calculated using the Eq. (5.3):

$$E_j = -k \sum_{i=1}^m p_{ij} \ln(p_{ij}) \quad (5.3)$$

where $k = 1/\ln(m)$. The objective values of the weight of the criterion are obtained by Eq. (5.4):

$$w_j = \frac{1 - E_j}{\sum_{j=1}^n (1 - E_j)} \quad (5.4)$$

The lower the entropy value is the lower is the degree of disorder of the system, which indicates that if the difference in the value between the evaluated object for the same criteria is high, the criteria will provide more useful information (Zhang et al., 2014; Arsić et al., 2021).

5.6.2 TOPSIS Method

TOPSIS (Technique for Order Preference by Similarity to Ideal Solution) was proposed by Hwang and Yoon (1981), enabling the determination of the positive ideal solution (A^+) and negative ideal solution (A^-). Based on this, alternatives can be ranked by estimating the shortest distance from the positive ideal solution and the farthest from the negative ideal solution. This method is one of the most popular methods in MCDM (The Multi-criteria Decision Making) (Dymova et al., 2013). For further improvement, it is often integrated with fuzzy logic or other MCDM methods to reduce biases in results (Cato, 2009).

The first step in the implementation of the TOPSIS methodology is the normalization of the initial matrix, using Eq. (5.5):

$$r_{ij} = \frac{x_{ij}}{\sqrt{\sum_{i=1}^m x_{ij}^2}} \tag{5.5}$$

Each element of the normalized matrix is multiplied by the corresponding weight criteria w_j , and thus, the elements v_{ij} of the weight matrix V are obtained, using Eq. (5.6):

$$V = v_{ij} = W_j^* r_{ij}, \quad \sum_{i=1}^n w_j = 1 \tag{5.6}$$

The next step is to form an ideal positive and an ideal negative solution. For each alternative A_i , the components A^+ of the positive ideal solution and A^- of the negative ideal solution are determined by the Eqs. (5.7) and (5.8):

$$A^+ = \left\{ \left(\max_i v_{ij} \mid j \in J' \right) \text{ and } \left(\min_i v_{ij} \mid j \in J'' \right) \right\} = \{v_1^+, v_2^+, \dots, v_j^+, \dots, v_n^+\}, i = 1, 2, \dots, m \tag{5.7}$$

$$A^- = \left\{ \left(\min_i v_{ij} \mid j \in J' \right) \text{ and } \left(\max_i v_{ij} \mid j \in J'' \right) \right\} = \{v_1^-, v_2^-, \dots, v_j^-, \dots, v_n^-\}, i = 1, 2, \dots, m \tag{5.8}$$

where

$J' \subseteq J \rightarrow J'$ is a subset of the set J when it consists of max type criteria

$J' \subseteq J \rightarrow J''$ is a subset of the set J when it consists of min type criteria

Calculation of the separation measure (Euclidean distance) by using Eqs. (5.9) and (5.10):

$$S_i^+ = \sqrt{\sum_{j=1}^n (v_{ij} - v_j^+)^2} \quad (5.9)$$

$$S_i^- = \sqrt{\sum_{j=1}^n (v_{ij} - v_j^-)^2} \quad (5.10)$$

Finally, the relative closeness C_i to the ideal solution is determined using Eq. (5.11).

$$C_i = \frac{S_i^-}{S_i^- + S_i^+}, 0 \leq C_i \leq 1 \quad (5.11)$$

A larger index value C_i indicates a better position of the alternative.

5.6.3 Results

Primary data analysis was performed to obtain the sample's descriptive statistics using the SPSS v.25 software package.

Regarding the involvement of the company in CSR activities in general and a given management commitment, the question was asked at what level the activities of socially responsible behavior are implemented in project-oriented companies. The implementation of CSR and environmental activities in the company can be carried out from several levels. The top-down approach implies a focus on developing management strategies and initiatives that are spread through the company. In contrast, following the global economic and technological changes, employees are becoming more informed and aware of environmental problems and therefore want to engage in the direction of ensuring productivity, quality, and sustainability. This approach involves bottom-up initiation of environmental activities and behavior of employees following the principles of Circular Economy. Most answers were given to the Strategic/CEO level, 50.0% in Bulgaria, 34.5% in Russia, and 47.0% in Serbia, which implies that the engagement in socially responsible business is directed by the highest management level (Fig. 5.2).

The obtained results about considered industries are depicted in Fig. 5.3. In the Manufacturing industry, 48.5% of respondents think that planning and implementing CSR activities is the duty of higher management levels, 28.4% think it is the obligation of executive levels, while 22.4% of respondents consider that CSR activities are the bottom-up initiated. In the Construction industry top-down level is presented as the most important for CSR implementation with 48.4%, followed by

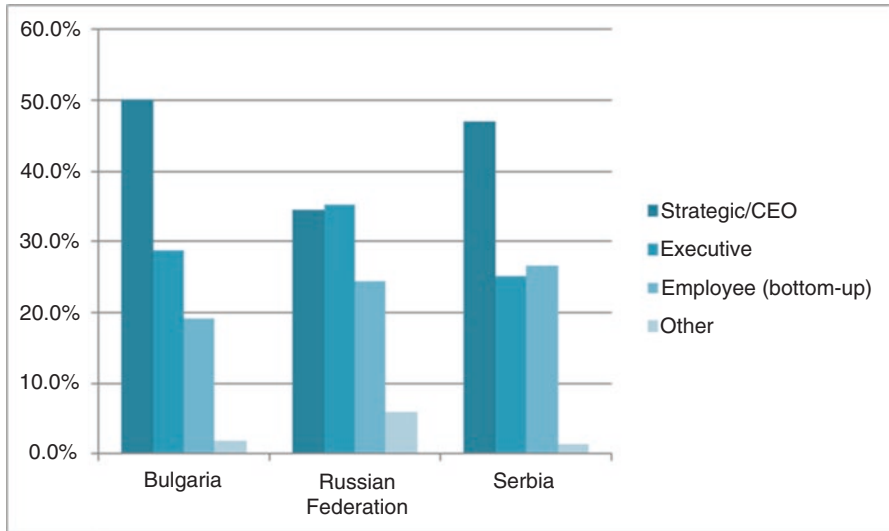


Fig. 5.2 Company's level on which CSR is managed, by countries

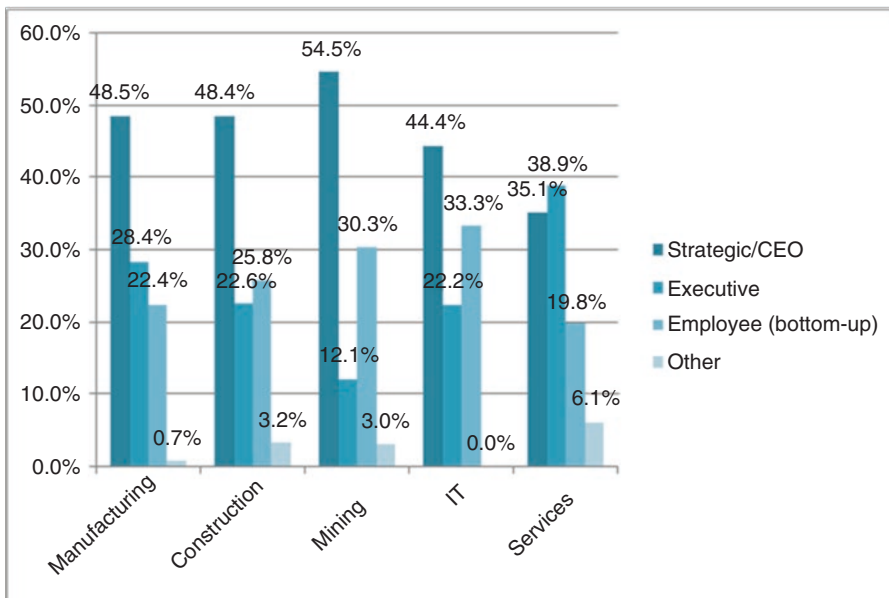


Fig. 5.3 The level of the company at which the CSR is managed

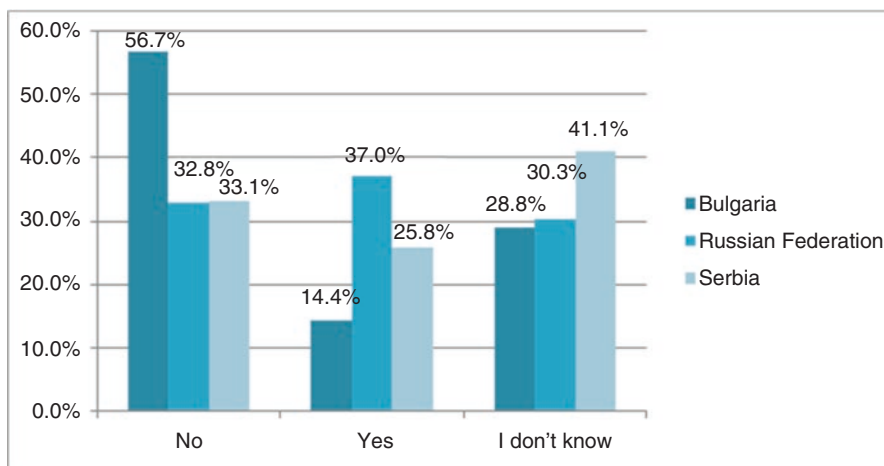


Fig. 5.4 Does the company have an in-charge unit/person for CSR within the organizational structure?

employee initiatives 25.8%, and executive-level 22.6%. CSR's highest level of obligation is on the Strategic/CEO level in the Mining industry, even 54.5%, then employee initiatives with 30.3% and executive-level with 12.1%. When observing the IT industry results, the highest management levels are the most responsible for CSR 44.4%, followed by employee level 33.3%, and executive-level 22.2%. The Service industry showed a little bit different results where the highest percent for managing CSR practice have executives 38.9% than Strategic/CEO 35.1%, and finally employees 19.8%.

At an organizational level, the respondents gave various answers to questions about how implemented CSR practices in companies they work.

Considering that project-oriented organizations have a specific organizational structure, the issue of the existence of a particular unit or person who deals with planning and monitoring the implementation of CSR and environmental activities was considered. Observed by country, only respondents from Russia mainly gave positive answers to this question with 37.0%. On the other hand, the majority answer of the respondents from Bulgaria is that a particularly obliged unit or person does not exist at the organizational level, 56.7%. In comparison, most respondents from Serbia do not know 41.1% (Fig. 5.4).

Also, an important issue for determining the place of CSR in a company is the existence of a defined CSR policy. This issue is vital for CSR communication through the company itself, regardless of whether it is project-oriented or not, and for communication with other stakeholders and through the entire supply chain. The results obtained from the analysis of the answers reveal that the answer "yes" is with the lowest percentage in all considered countries. Namely, in Russia, 33.6% of respondents answered positively to the question, in Bulgaria 24.0%, while the share of Serbian respondents is 21.4% (Fig. 5.5). Thus, responses that indicate that official CSR policies either do not exist or employees do not know about them prevail.

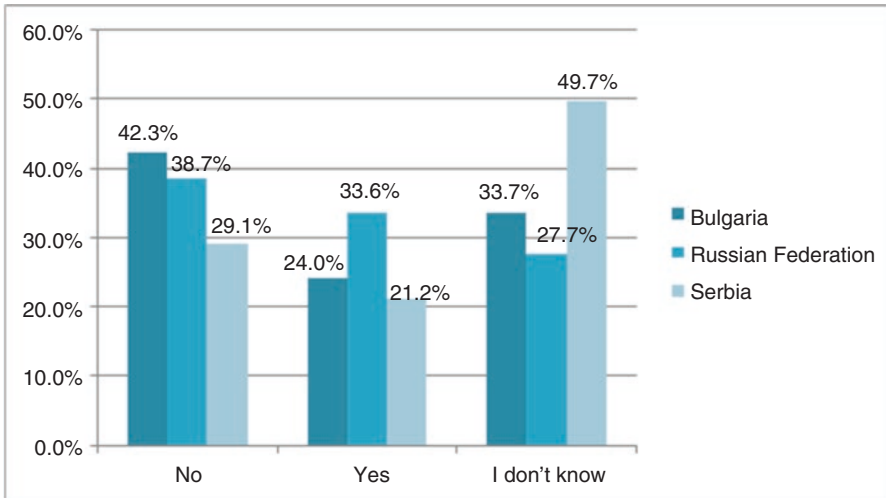


Fig. 5.5 Does the company have a CSR policy in place?

Corporate social reporting is not mandatory in many countries. Still, many companies have adopted this type of non-financial reporting as a well-established business practice and a way of communicating with stakeholders. In addition to CSR reports, sustainability reports and other forms of reporting are often used by companies. However, large companies are much more conditioned by regulations to submit environmental impact reports and sustainability and corporate responsibility reports, while small and medium-sized enterprises are, on rare occasions, conditioned by laws and are less bound by regulations (Rakić et al., 2021). Therefore, there are a large number of companies that probably don't publish this kind of report.

In the countries considered in the research, the results show a low percentage of companies reporting on their CSR practices when it comes to publishing CSR reports. In Russia, only 24.4% of respondents stated that reports on CSR practice and its impact are published in companies where they are employed. Bulgarian respondents answered in the affirmative in 22.1% of cases, while only 15.2% of respondents from Serbia answered in the affirmative (Fig. 5.6).

Earlier researches showed that managers often initiate CSR activities based on their personal beliefs, while in multinational companies, CSR activities are initiated based on directives from the company's headquarters (Jamali & Mirshak, 2007). What has also been observed is that there is no systematic measurement of social impact and that CSR reports are very rare. The general conclusion is that companies struggle with the basic elements of CSR and the impact of implemented activities and that few ask questions about the essential responsibilities that companies can take to influence changes in their environment.

By observing the results, it can be noted that there are many occurrences of answers "No" and "I don't know," when the place of systematic and organizational inclusion of CSR comes to questioning. These results impose the need to further

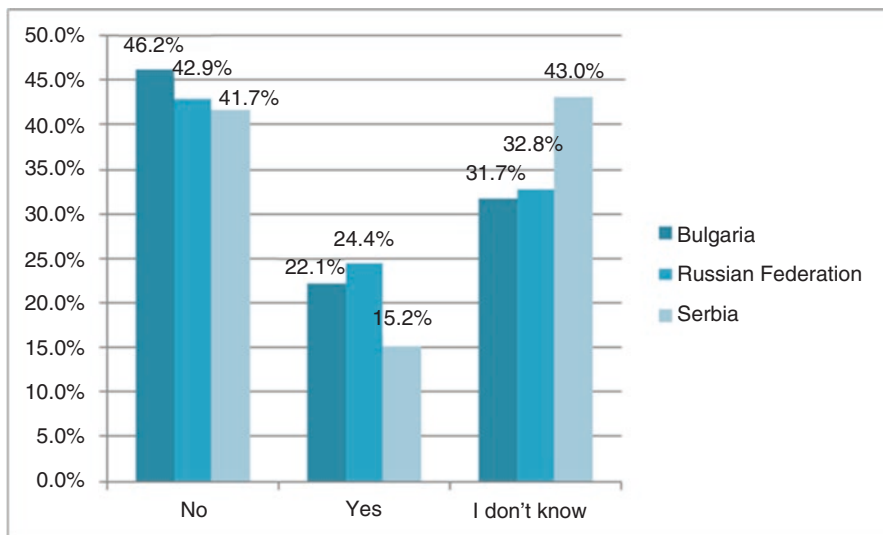


Fig. 5.6 Does the company publicly report CSR practices and their impact?

analyze the level of recognition of the companies' activities, especially in the ecological domain, which is the main interest of this research.

For this purpose, the model consisting of eight criteria and 13 alternatives is proposed, and initial data are presented in Table 5.2.

The weights obtained based on the Entropy method are objective from the information contained in the data itself. When evaluating weight (Eqs. 5.1, 5.2, 5.3, and 5.4), those criteria with lower entropy had a higher degree of variation in the data and, therefore, a higher value of the weighting coefficient. In contrast, those criteria with high entropy have a lower degree of variation expressed through the data and have a lower weight coefficient.

In the proposed model, the items "Sustainable Packaging" and "Development of Environmentally Friendly Products" had the highest values of weights, 0.22 and 0.17, respectively. High weights mean that the values obtained for Sustainable Packaging are significantly different between industries and states. Also, a similar conclusion can be made for the Production of Environmentally Friendly Products. On the other hand, the items "Waste Recycling" and "Energy Savings" are the only two items where the weight values are below 0.1 (0.07 and 0.08, respectively), which means that the attitudes of the respondents are more uniform in terms of applying these activities.

The overall result was obtained by integrating the TOPSIS methodology and entropy weights are depicted in Table 5.3. After calculating the distance of each alternative from the ideal solution (Eqs. 5.5, 5.6, 5.7, 5.8, 5.9, 5.10, and 5.11), a ranking was obtained for each observed industry/state combination.

The graphical interpretation of the obtained results is presented in Fig. 5.7.

Table 5.2 Initial data

	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8
Manufacturing/Bulgaria	3.44	3.24	3.04	2.32	2.00	2.32	2.24	2.20
Manufacturing/Serbia	3.48	3.08	2.81	3.21	3.13	2.85	3.46	3.40
Construction/Bulgaria	3.00	3.35	3.38	2.92	2.58	2.54	2.73	2.73
Construction/Serbia	2.40	3.00	3.20	1.60	2.20	1.60	2.80	2.80
Mining/Bulgaria	4.00	4.13	3.80	3.53	3.73	3.40	3.60	3.53
Mining/Russian Federation	4.25	3.75	2.17	3.42	2.75	2.50	2.50	2.67
Mining/Serbia	3.17	3.83	3.50	2.67	2.50	2.83	3.50	2.50
IT/Bulgaria	3.63	2.75	2.75	1.63	2.38	2.38	2.50	3.00
IT/Russian Federation	3.81	3.11	2.26	2.67	3.00	3.15	3.15	3.22
IT/Serbia	2.50	2.50	2.10	1.50	1.40	1.80	2.70	2.20
Services/Bulgaria	2.90	2.50	2.23	2.00	1.83	1.77	1.70	1.87
Services/Russian Federation	3.44	3.51	2.70	2.96	2.96	2.87	3.10	3.20
Services/Serbia	3.14	2.73	2.82	2.50	2.27	2.50	2.64	1.95

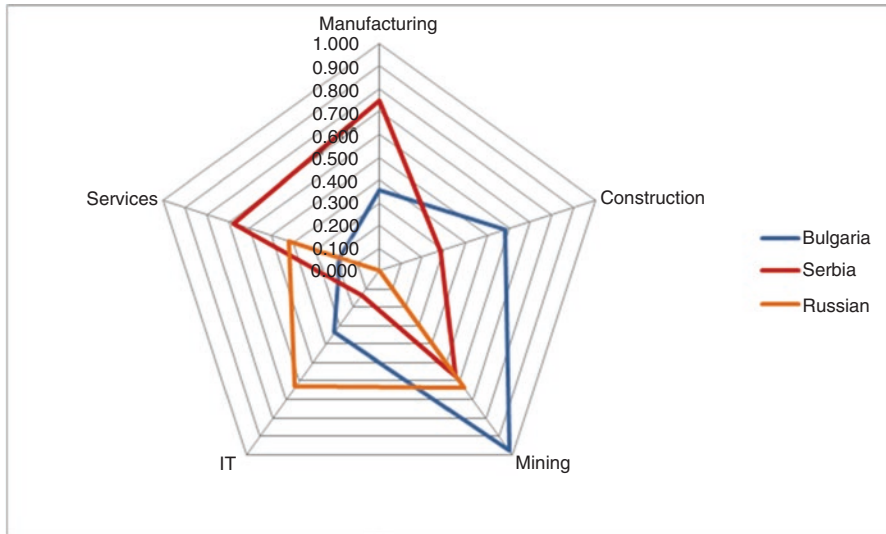


Fig. 5.7 Graphic representation of industry rankings by analyzed countries

Table 5.3 Ranking of industries by TOPSIS

	C_i	Rank
Mining/Bulgaria	0.980	1
Manufacturing/Serbia	0.749	2
Services/Russian Federation	0.680	3
Mining/Russian Federation	0.635	4
IT/Russian Federation	0.631	5
Construction/Bulgaria	0.586	6
Mining/Serbia	0.575	7
Services/Serbia	0.422	8
Manufacturing/Bulgaria	0.356	9
IT/Bulgaria	0.336	10
Construction/Serbia	0.284	11
Services/Bulgaria	0.183	12
IT/Serbia	0.136	13

Based on the obtained results presented in Table 5.3 and Fig. 5.7, it can be concluded that according to the level of implementation of environmental activities in the project-oriented companies, the best-ranked is the Mining industry from Bulgaria. At the same time, the worst position is the Services sector in the same country. When it comes to Serbia, the Manufacturing industry is the best ranked, while the IT industry took the last position. In Russia, the Services sector is the best-ranked industry, unlike the IT sector, which is the worst-ranked industry. In general,

unlike other countries, all considered industries in Russia showed a higher level of implementation of environmental activities. Also, when looking at industries in general (Fig. 5.7), it can be seen that the Mining industry is highly positioned in all countries.

5.7 Discussion

For the purpose of research, the multi-criteria model was defined to determine the level of environmental impact practiced by project-oriented companies from various industries.

The obtained results indicate that the best ranking is the Mining industry. The Mining industry is under constant surveillance globally and locally, given the specific nature of performing mining activities, where a significant amount of natural and human resources are used. Therefore, mining companies are constantly expected to monitor and manage their environmental and social impact. In order to achieve the balance between harmful activities that deplete natural resources, and during extraction and processing cause various other environmental issues such as severe air and water pollution, endangering ecosystems, and adverse effects on human health, sustainable practices are becoming a necessity that must accompany the mining process (Govindan et al., 2014). On the other hand, as an answer to public pressures, a lot of legislation and regulations are being enacted to address mining issues. One of the answers given by the mining companies is that Corporate Social Responsibility is applied beyond required legislation with the purpose to achieve high overall performances at a socially acceptable cost. The management of the mining companies is aware of the significant hazards of mining and tries to facilitate local development in communities where they operate (Esteves, 2008). However, the research conducted in developing countries showed that mining industries were lagging in fulfilling Corporate Social Responsible strategies (Govindan et al., 2014). Considering the obtained results in this research, the Mining industry has a good position in the implementation of environmental corporate social responsibilities, hence it can be said that it is in alliance with the requirements of the Circular Economy. This can be explained by numerous initiatives and strict regulations enacted in the EU affecting the mining sector. Voluntary social engagement by the mining industry has also improved lately (Esteves, 2008). CSR programs developed by the management of mining companies are initiated as answers of strong interdependence with people in the vicinity of the mining places and on the other hand with weak cooperation with local governments and lack of serious planning of economy and society. Also, one of the prevailing arguments in the literature of CSR is that “if corporate interventions to address social problems are to be substantial and sustainable, they must also be profitable” (Esteves, 2008). This study is in line with previous research findings, where the mining industry is highly positioned in CSR implementation.

Huge funds have been invested in construction projects lately, yet sustainable construction in light of expectations that deliverables be socially acceptable is still lagging (Banihashemi et al., 2017). This research results showed the opposite, where the implementation of CSR in the Construction sector from Bulgaria is highly recognized. Unfortunately, this result cannot be generalized for all countries since the Construction industry in Serbia is positioned lower, whereas there is a lack of respondents from Russia.

In this research, the IT industry is the worst ranked industry in all considered countries. It can be explained by the fact that the implementation of environmental activities in the IT sector cannot be quantified and cannot be easily measured. However, besides products and services, the IT sector encompasses technological innovations that can help all other industries incorporate environmentally acceptable behavior in their practices. In this way, the Circular Economy makes it possible to identify the possibilities of the ongoing fourth industrial revolution and sustainable business practices while Corporate Social Responsibility is seen as the link between sustainability and the IT sector. Sustainability implies striving for business processes to be realized in such a way as to enable the conservation of natural resources by eliminating intensive spending and considering all used materials as potential resources for reuse. In addition to the commitment to redesign existing business processes, further transition to a Circular Economy requires the development of information and communication technology. This can be enabled by big data storage, information and communication systems with the goal to reduce costs, establish sustainable supply chains, and reduce energy and material consumption and management assistance for more efficient, smarter, and more responsive management (Daú et al., 2019).

There is diversity in activities and business models in the Services industry, and many are not covered under the circular economy. In Russia, the services sector is the most dominant when looking at the elements of the circular economy, while for the other two countries considered in the research, the results that the Services sector showed in the ranking are average. The need for direction toward circular and more sustainable economic models has become more evident lately. Therefore, it is expected for Services to embrace these trends.

The Manufacturing industry is the best ranked in Serbia, while in Russia and Bulgaria the ranks are lower. Nowadays, after numerous theoretical clarifications of Circular Economy, the missing link seems to be the practical solution for its implementation. The manufacturing industry is dealing with significant challenges when considering the increasing product demand and already severe shortage in raw materials and energy sources. With regard to this, the Manufacturing industry has to overcome serious barriers to transition towards the Circular Economy. The Manufacturing industry is very diverse, but each segment requires effective transition and opportunity that embraces significant economic benefit through decreasing environmental impact. By combining existing production processes and smart technologies with resource efficiency, the Manufacturing industry in integration with the Circular Economy can become a leading innovative business concept that contributes to global welfare. It should be emphasized that in order to further strengthen

the Circular Economy, the manufacturing industry needs support in favoring products obtained from the chains of the Circular Economy and strategically planning production and supplying where everything and everyone is in the right place and work efficiently.

The Multi-criteria Decision Making (MCDM) methods can be a helpful instrument in the management and policy-making decisions. They could provide the flexibility and capacity to assess the opinions on the economic, environmental, social, stakeholders, and voluntariness context of CSR at the same time (Doukas et al., 2006). The managers can direct their activities to improve the perception of stakeholders and, as research proved (Reverte et al., 2015), to improve the overall results of their projects and companies.

5.8 Conclusion

The constant growth of population and consumption condition persistent depleting of natural resources. As the population grows, so does the need for products and services, and at the same time occurs an increase in waste. Thus, production and consumption activities and waste disposal significantly burden the economy and the environment. The possibility for scaling down of serious negative consequences can be seen in the model proposed by the Circular Economy. In order to reduce the deterioration of the planet, it is necessary to redesign the production and consumption cycle by carrying out certain activities aimed at achieving sustainability goals.

Sustainability, as a topic, results from raising considerations of environmental effects caused by business operations. At first, only environmental concerns are taken into account. Along with addressing ecological issues appeared the economic argumentation that companies play vital roles in the local and country economy but cannot solve all arising problems. Also, all this has reflected on relationships that companies built with their stakeholders, especially with the broader community. The Corporate Social Responsibility concept can be especially useful in implementing the new idea of a Circular Economy because it introduces a social, environmental, and ethnic dimension to a company's business. This concept offers improvement in business reflected in green business practices, greater innovation, a better reputation, and ultimately better economic performance while achieving sustainability.

Although the projects are seen as temporary ventures, project deliveries have a long-term impact on the social and natural environment, therefore, have obligation to balance between sustainability elements and primary project goals, time, scope, and costs. The research by Jovanović et al. (2019) showed that incorporating the environmental aspect in project management contributes to intangible benefits for project-oriented companies. Therefore, through better company image, the trust of stakeholders, and greater loyalty and engagement of employees, long-term sustainability can be achieved.

Considering the spotted gap in academic literature dealing with the measurement of environmental impact in project-oriented companies in different industries, the

research was carried out on this topic from the position of CSR and Circular Economy in various countries. In this way, this research is contributed to fulfilling this literature gap.

The results showed a low level of implementation of CSR activities in some industries along with a low interest in Circular Economy and Sustainability. This research can have implications on the practitioners through the need to introduce some changes to inform and educate companies' actors on what those concepts mean and how they are important and valuable for business. Organizational and policy changes made in that direction shouldn't be dramatic for the company since project organizations are flexible and already accustomed to changes and learning. Although some research identifies specific issues for managing projects in a sustainable development manner (Swain, 2018), Sustainability incorporates enhancements of human living conditions in the sense of social well-being and ecological safety (Cato, 2009). Project management should meet emerging changes in global business.

This research has some limitations. The first limitation is based on the fact that research was conducted in three countries that share similar economic development in the previous 30 years, so the results cannot be generalized until compared to the results in some Western society economies. The second limitation is based on the use of only one MCDM methodological approach and will be overcome by applying the additional analytical techniques in future research.

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