

STRATEGIC BUSINESS SUSTAINABILITY: STUDY OF CRITICAL SUCCESS FACTORS

SUSTENTABILIDADE EMPRESARIAL ESTRATÉGICA: ESTUDO DE FATORES CRÍTICOS DE SUCESSO

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ABSTRACT

Objective: This study aims to identify which are the Critical Success Factors (CSF) that permeate management practices and determine business sustainability, contributing to the achievement of the Sustainable Development Goals (SDGs).

Methodology: The research has as characteristics: qualitative approach, exploratory objective and descriptive and explanatory design. The sampling of the research was intentional and involved bibliographic and documentary analysis.

Results: The 51 selected documents indicate that there is a predilection for the environmental and economic dimensions, even though the social pillar is gaining ground as a strategic factor of sustainability.

Final considerations: When comparing the results with the SDGs, it was found that fundamental topics for the maintenance of living conditions on Earth and for human prosperity were not contemplated in the Critical Success Factors in Sustainability (CSFS) with high repetition index. It is advocated that the SDGs are important paths for the implementation of sustainable actions in companies and, therefore, as CSFS.

Keywords: Sustainability, Sustainable Development Goals, Critical Success Factors, Critical Success Factors in Sustainability, Strategy.

RESUMO

Objetivo: O presente estudo tem como objetivo identificar quais são os Fatores Críticos de Sucesso (FCS) que permeiam as práticas de gestão e determinam sustentabilidade empresarial, contribuindo para o alcance dos Objetivos de Desenvolvimento Sustentável (ODS). **Metodologia:** A pesquisa tem como características: abordagem qualitativa, objetivo exploratório e delineamentos descritivo e explicativo. A amostragem da pesquisa foi do tipo intencional e envolveu análise bibliográfica e documental.

Resultados: Os 51 documentos selecionados apontam que há uma predileção pelas dimensões ambiental e econômica, ainda que o pilar social esteja ganhando espaço como fator estratégico de sustentabilidade.

Considerações finais: Ao comparar os resultados com os ODS, verificou-se que tópicos fundamentais para a manutenção das condições de vida na Terra e para a prosperidade humana não foram contemplados nos Fatores Críticos de Sucesso em Sustentabilidade (FCSS) com índice de repetição alto. Defende-se que os ODS sejam importantes caminhos para a implementação de ações sustentáveis nas empresas e, por conseguinte, como FCSS.

Palavras-Chave: Sustentabilidade, Objetivos de Desenvolvimento Sustentável, Fatores Críticos de Sucesso, Fatores Críticos de Sucesso em Sustentabilidade, Estratégia.

1 INTRODUCTION

The social, political, economic and environmental frameworks that characterize contemporary societies reveal that the impacts of human beings on the environment are becoming increasingly complex both quantitatively and qualitatively (Jacobi, 2007). Faced with this reality, the problem of sustainability assumes, at the beginning of this century, a central role in the evaluation around the criticism of the contemporary way of life, which spread from the Stockholm Conference in 1972, when the environmental issue gained public visibility (Barcelos, 2019).

As driving forces of economic development, organizations have actively participated in this system that, again, degrades nature and exploits its resources (Castro et al., 2018). Society expects and demands a high level of commitment and adequacy of organizational activities to the sustainable mode of production (Figge & Hahn, 2021).

Studies show that there have been efforts by many organizations to solve this impasse (Barbieri, 2020). Faced with this new reality, many organizations that did not practice sustainability reoriented their positions after realizing this need. Others, being more effective in seize the opportunity, develop skills that contribute more directly to the consolidation of competitive advantages, in a scenario in which social and environmental issues are on the agenda (Neves et al., 2020). In part, this is due to the understanding that the company that does not adapt its activities to the concept of sustainable development may lose competitiveness in the short or medium term (Martins et al., 2021).

Despite this evolution, Moçato et al. (2019) demonstrate that the real promotion of sustainability will only be possible when organizations decide to incorporate the concept of sustainability into organizational strategies in order to achieve the best sustainable mode of production. It is essential to establish strategies for problem solving, since several issues are related to people management and organizational processes. However, Silva Filho et al. (2019) state that it is not possible to understand such issues from a one-dimensional perspective, since they involve, simultaneously, economic, ecological and social phenomena.

The concern to achieve sustainable development expands, consequently, the way organizations operate, becoming involved beyond merely economic considerations, environmental and social concerns (Lara & Oliveira, 2017). Thus, it is essential to participate in the strategy in the solution of problems, considering that they involve management, organizations, process and economic dimension (Sarabia-Cavenaghi & Munck, 2019).

As the main guiding element of business practices guiding sustainability in the 21st century, we mention the 2030 Agenda for Sustainable Development and its Sustainable Development Goals (SDGs) (Almeida Filho & Lauer 2021), promulgated by 193 Member States of the United Nations, including Brazil.

Based on the above, this study aims to answer the following question: what are the Critical Success Factors (CSF) for business sustainability in the light of the Sustainable Development Goals (SDGs)? Therefore, the objective of this research is to identify which are the Critical Success Factors (CSF) that permeate management practices and determine business sustainability, contributing to the achievement of the Sustainable Development Goals (SDGs)

In Brazil there is a large gap in research on the subject. Despite the information available in corporate sustainability reports, Brazilian companies do not currently have any instrument available for the identification of CSF for the Sustainable Development Goals (Silveira et al., 2021). For these reasons, it is essential to further analyze the weight and commitment of the Brazilian business sector to the operationalization of sustainable commitments made to the international community.

2 SUSTAINABLE DEVELOPMENT AND SUSTAINABILITY

The term sustainability has provoked many discussions, without, however, consensus. The word “sustainable” comes from latin *sustentare*, a verb that symbolizes the action of defending, favoring, supporting, conserving or caring. In dictionaries the word sustentability is conceptualized as the ability to sustain or support one or more conditions (Oliveira et al., 2017). There are studies that consider the terms sustainability and sustainable development as synonyms and others that consider them different (Feil & Schreiber, 2017).

Thus, observing sustainability in a broader sense requires its understanding in multiple dimensions, which vary according to the study, report or academic work and, also, with the application that is intended to be given to it (De Benedicto et al., 2020).

Dealing with the dimensions of sustainability, Sachs (2002), a Polish economist respected for what he writes on the subject, believes that there are eight fundamental pillars that compose the concept of sustainability: social, cultural, ecological, environmental, territorial, economic, political-national and political-international. However, the study by Feil and Schreiber (2017) demonstrates that this is not the only way to understand the conception of sustainability and its respective dimensions.

In September 2015 negotiations were concluded that culminated in the document “Transforming Our World: The 2030 Agenda for Sustainable Development”. In the writing of the Sustainable Development Goals (SDGs), also known as the Global Goals, a “plan of action for people, for the planet and for prosperity” was established (United Nations Brazil, 2015, s. p.).

The launch took place during a United Nations Summit for Sustainable Development, with the participation of representatives from 193 UN member countries and global social actors committed to sustainable development. The SDGS, the core of the 2030 Agenda, succeeded and updated the Millennium Development Goals. This set of universal and transformative long-range actions and policies was given the mission of guiding national policies and international cooperation activities during the fifteen years following January 1, 2016, therefore, until December 31, 2030 (United Nations Brazil, 2015). Figure 1 shows the icons of the SDDs translated into Portuguese.

Figure 1: Official icons of the Sustainable Development Goals (SDGs).



Source: United Nations Brazil (2015).

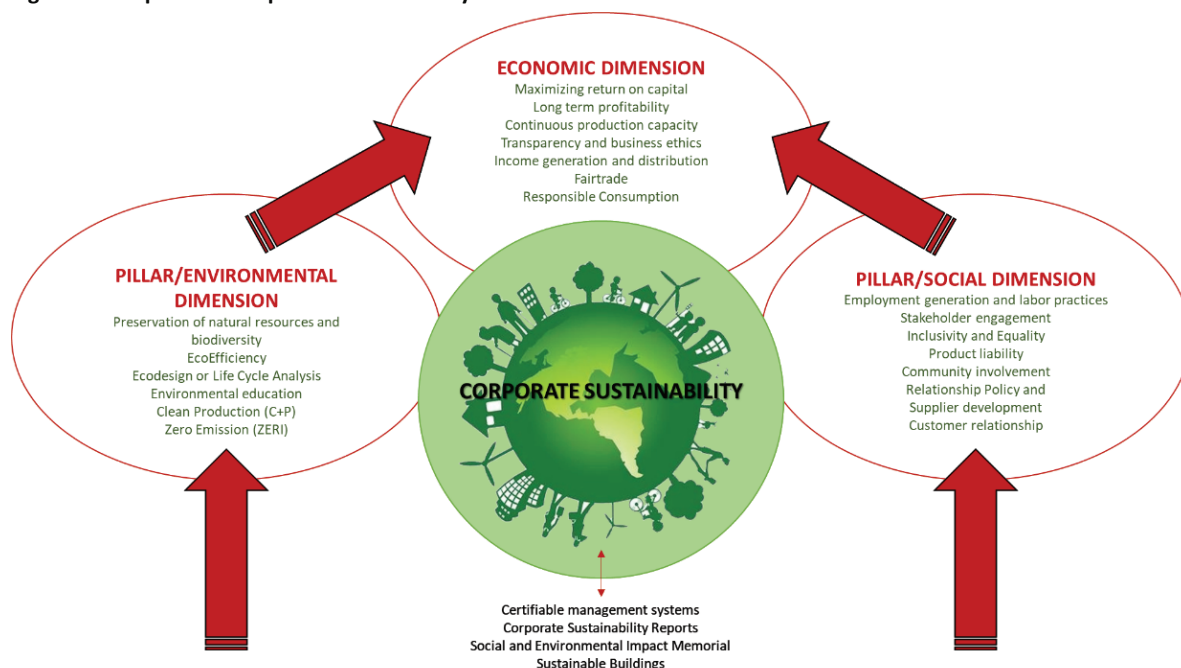
At first, it is emphasized that the SDGs should not be understood as isolated parts, but as complementary tools, integrated and systematized, aimed at addressing complex problems, which require various perspectives. Each objective works in a broad and strategic way, indicating what is intended to be achieved (Sugahara et al., 2022).

Considering the 2030 Agenda for Sustainable Development, there are five key elements, known as “5 P’s of the 2030 Agenda”: Planet, People, Prosperity, Peace, and Partnership. The first three pillars demonstrate the environmental, social and economic dimensions of sustainability, while the last two highlight the political and institutional dimensions that guide the effectiveness of governance of the global agenda (Rosati & Faria, 2019). Thus, governments, Civil Society organizations and companies have established priorities to combat harmful behaviors to the planet, going on to allocate resources to reduce negative impacts on the ecosystem (Silva, 2021). For the private sector, in particular, there is a specific set of pillars that make up sustainability, something that will be addressed in the next subtopic.

2.1 Sustainability in the context of organisations

In the context of the organizations, the British consultancy SustentaAbility created, in the 1990s, the triple bottom line, known as “tripod of sustainability”, in the face of the popularization given by one of the company’s partners, John Elkington. The construct deals with a model of social change, which provides for the integration between the environmental, social and economic dimensions as foundations of sustainability. The central purpose is to provide care, in a balanced way, to the planet, to people and to profit (Ipiranga et al., 2011; Lovisek, 2021). Figure 2 shows the elements present in this archetype.

Figure 2: The pillars of corporate sustainability.



Source: Amorim (2009).

According to Elkington (1994), sustainability is a management model that has as its main objective financial return for shareholders, with social development and protection of natural resources. Although the model received criticism for having been adopted very quickly, including by multinational corporations that did not have good history of environmental practices (Loviscek, 2021), “this does not invalidate it as a management model to implement practices consistent with sustainable development” (Barbieri, 2020, p. 59), in view of the multiple facets that, combined, demonstrate the transversal character of the method.

The economic dimension of sustainability is limited to the company’s profit. The approach to this dimension requires long-term pursuits of economic sustainability. Therefore, it is necessary to evaluate the impacts of the organization on the *economic conditions of its stakeholders* and their economic systems at the local, national and global levels (Elkington, 2018).

The environmental dimension is related to the organization’s impacts on living and non-living natural systems, including ecosystems, land, air and water. It comprises performance related to supplies, such as material, energy, water, and production, in this case, emissions, effluents, waste (Elkington, 2018).

The main approaches to the social dimension permeate quality of life and human well-being. It aims to ensure that all people have equal conditions of access to goods and services of good quality for a dignified life, based on the development for the expansion of substantive freedoms. That is why it is important to remove the main sources of deprivation of liberty: poverty and tyranny, lack of economic opportunities and systematic social destitution (Elkington, 2018; Sen, 2010).

2.2 Companies in the 2030 Agenda for Sustainable Development

As part of the new sustainable development agenda, which replaced the Millennium Development Goals in 2015, the United Nations Summit on Sustainable Development defined new Sustainable Development Goals (SDGs), consisting of 17 goals and 169 targets, to be achieved by the year 2030 (Agenda 2030). (United Nations Brazil, 2015).

The study, conducted by Silva (2021), shows that, in this document, companies and civil society acquire a fundamental and crucial role for the success of the proposed objectives and goals. The term “company” is mentioned several times, as shown in Table 1, with the respective objectives and goals.

Table 1: References to the business scope in the Sustainable Development Goals and Objectives.

GOAL	GOAL
8. Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for everyone and everyone.	8.3 promote development-oriented policies that support productive activities, decent job creation, entrepreneurship, creativity and innovation, and encourage the formalisation and growth of micro, small and medium-sized enterprises, including through access to financial services.
9. Build resilient infrastructure, promote inclusive and sustainable industrialisation and foster innovation.	9.3 increase access for small industries and other enterprises, particularly in developing countries, to financial services, including affordable credit and to promote their integration into value chains and markets.
12. Ensure sustainable production and consumption patterns.	12.6 encourage companies, especially large and transnational companies, to adopt sustainable practices and integrate sustainability information into their reporting cycle.
17. Strengthen the means of implementation and revitalize the global partnership for sustainable development.	17.17 encourage and promote effective public, public-private, private, and civil society partnerships based on the experience of the strategies for mobilising resources of these partnerships.

Source: Prepared by Silva (2021), based on United Nations in Brazil (2015).

Silva (2021) points out that the cutout shown in Table 1 does not necessarily mean that business performance is restricted only to the points mentioned. All 17 Objectives, and most of the 169 targets, can also integrate the strategies that guide the activities of private organizations. In this sense, the 2030 Agenda emphasizes business participation in promoting “non-sustainable consumption and production change”, “mobilising financial resources, as well as capacity building and transferring environmentally friendly technologies to developing countries under favorable conditions”, “international development” and boosting “productivity, inclusive economic growth and job creation” (United Nations Brazil, 2015, s. p.).

Companies need to have a responsibility that goes beyond that of offering products to their consumers, to pay salaries to their employees (Silva (2021). There must also be a guarantee of preserving the environment and generating well-being and quality of life for people. However, this depends on accurate information and techniques, considering that managers need parameters for their actions, so that they can envision a horizon of reliable action to reality (Silva & Siena, 2020).

According to Rome (2019, p. 39), achieving the goals and targets of the 2030 Agenda “requires a coordinated effort not only at the level of government spheres, but also in private initiative, NGOs and the whole of Brazilian society.” Cooperation will contribute to achieving the potential of the global agenda, inducing sustainable development and achieving the benefits desired by society.

When addressing the effects of sustainability effectiveness, Dias and Marques (2017) point out that, in several countries, many organizations have incorporated sustainability principles. Debates and sustainable practices are already present in the daily life of organizations. In addition to traditional financial sustainability, many managers have carried out actions focused on diversity, social responsibility, human rights, transparency, with emphasis on ethical posture, promotion and stimulation of participation in social and environmental projects, among other actions. Hence the relevance of monitoring the initiatives of organizations, in view of their respective contributions to a more sustainable world.



Carroll (2015) argues that the sustainable company is the one that, in addition to generating profit for shareholders, protects the environment and improves the lives of the people with whom it maintains interactions. Sousa Filho et al. (2010, p. 307) highlight that there are a number of variables that influence such behavior of companies: “Organizational values, the relationship with stakeholders, the external environment and the competitive context, internal resources, the ideologies of senior management and community expectations”.

Faced with this reality, many organizations invest in a sustainable and socially responsible culture, driven by real commitment to social and environmental agendas, going beyond simple marketing, purely superficial (Abramovay, 2012). Many companies “are responsible because they believe they should be responsible, not because others demand them to be” (Baraibar-Diez & Sotorrio, 2018, p. 15). Thus, the apparent contradiction between sustainability and the corporate world gives way to a clear need for both of them to move together to build an egalitarian, innovative and developed society, as well as to generate opportunities and prosperity, “within the framework of a decentralized economy in which markets play a decisive role, even if, not exclusive” (Abramovay, 2012, p. 22).

According to Dias and Marques (2017), it is already possible to say that, currently, it has become something inconceivable to stop relating sustainability with the organizational context and business performance. Although there are companies that fall from the sustainable scenario, the non-application of sustainability in their actions, operations, can cause several problems. The absence of the effectiveness of sustainability can even cause threats to the perpetuity of its activities in the market.

Thus, in the face of realities marked by the detection of problems, the formulation of solutions, implementation of results and the evaluation of activities becomes fundamental. Therefore, the use of sustainability indicators (Fahy & Rau, 2013), considering that it is from it that the management teams can be located both in the first phase of the process and at the end of the cycle. It is also noteworthy that terms used as “goals” and “objectives” are usually qualitative, quantitative indicators that point direction to channel work and resources, rather than indicating a specific state (Mariosa et al., 2019).

2.3 Critical success factors (CSF)

To continue with the proposed approach, it is necessary to highlight the Critical Success Factors (CSF), which serve as indicators for different levels of organization (Schaefer et al., 2022). The definition of this model permeates Rockart’s seminal article (1978), which suggests tools to identify information necessary for the success of activities, that is, favorable results that will ensure the success of the competitive performance of individuals, departments or organizations.

According to Brodeur et al. (2022) and González et al. (2018) CSF concerns those few areas that have the power to influence an organization’s positive performance. Some areas, when they ensure positive results, establish performance that increase competitiveness and contribute to the success of the organization.

For the author, the individual success of a department or corporation is related to such factors. In the case of an enterprise, its success depends on the ability of the management teams to identify which are the key areas – based on the established objectives – which, if well executed, will ensure the success of the entire organization (Rockart, 1978). Bullen and Rockart (1981) add that the CSF answer the question: “where should we turn our attention?”

Knowing the CSF is fundamental for the management of an organization (Zaman et al., 2022). By pointing out the CSF, the areas or activities that deserve the concentration of resources help in the planning and, therefore, in the successful management of the organization. When iden-



tified, the CSF make it possible to answer the question: where do we need to put our attention? In addition, these factors contribute to “improving mind maps and assisting in defining skills, technologies, and knowledge essential to achieving better performance.” (Lima et al. , 2012, p. 250).

Supporting organizational planning is one of the strengths of the critical success factor method. Other strengths of the method concern the concepts of “being simple” and well accepted by management, with easy communication, besides enabling structured analysis of each part of the organization (Caralli, 2004). Also, according to Caralli (2004), the main sources that can be investigated for the purpose of identifying the CSF in organizations are: the sector in which the organization is inserted, competitors (competitive position), the environment (environment), conjunctural or temporary events, and management.

In most industries there are usually three to six factors that determine their success. The main activities should be carried out in such a way that they contribute to achieving the success of the organization (Banales & Adam, 2007; Mathiyazhagan et al., 2022). In the organizational context, CSF emerge as a powerful framework, that is, a concept that points to problem solving (Martuchelli & Goldman, 2019; Rodriguez Serna et al., 2022) and can significantly assist in project management (Jordão et al., 2015; Shokri et al., 2022).

However, although the area of sustainability – with a cut-off for organizational sustainability – has relevant scientific production and, in recent years, increased participation in business activities and contact with society, the State and other actors, there is still a need for approaches that point to the CSF as instruments that will leverage their performance (Silveira et al., 2021).

3 RESEARCH METHODS AND PROCEDURES

Based on the conceptualization proposed by the Brazilian Center for Analysis and Planning (2016), this research presents a qualitative approach and has exploratory objective and descriptive and explanatory design.

Qualitative research is appropriate when it seeks to study beliefs, values, attitudes, social relationships and practices, strategies, management models and changes in the organizational context (GIL, 2019). The primary purpose of qualitative research “is to intervene in an unsatisfactory situation, to change conditions perceived as transformable” (Chizzotti, 2018, p. 89), which is consistent with the objectives of this study.

Considering that the research aims to identify which are the CSF for corporate sustainability, it can be classified as exploratory, which, according to Gil (2019, p. 41), “aims to provide greater familiarity with the problem, with a view to making it more explicit or to constitute hypotheses”. According to Triviños (2015), exploratory research allows the researcher to increase the experience around a particular problem that has not yet been studied or known.

Regarding its design, the research is characterized as descriptive and explanatory. According to Severino (2018, p. 123), descriptive research is one that, in addition to “recording and analyzing the phenomena studied, seeks to identify their causes”. In this sense, it was intended to identify and describe what are the critical success factors (CSF) that determine business sustainability. The research is also explanatory, since it sought to demonstrate the connection between critical success factors (CSF), management practices for sustainability and its articulation with business strategy.

Regarding the procedures for data collection, the research was characterized as documentary and bibliographic. According to Gil (2019), documentary research uses primary sources, that is, data and information that have not yet been proven in a scientific or analytical way (e.g., government agency reports, research reports, among others) and bibliographic research uses sources consisting of material that has already been finalized (e.g., articles, dissertations and theses, among



others). Both are important techniques in qualitative research, either complementing information obtained by other techniques, or unlooking new aspects of a theme or problem.

The analysis of the data of this research occurred through the technique called “content analysis”, based on Bardin (2016). It is an analysis technique that has been frequently used in qualitative research; is relevant to organizational studies; is expanding in the field of administration in Brazil. Content analysis is a rich technique of data analysis, important and with great potential for theoretical development in the field of administration, especially in studies with a qualitative approach. However, researchers must work in a coherent, ethical, reflective, flexible and critical manner (Mozzato & Grzybovski, 2011). The study followed the phases of content analysis, as recommended by Bardin (2016): (i) pre-analysis, seeking to identify potentially relevant materials; (ii) qualitative exploitation of materials considered relevant, and; (iii) treatment of the results, which involves inference, interpretation and description of the relevant findings of the research.

The sampling of this research is non-probabilistic and intentional, as instructed by Richardson (2017) and involved the analysis of scientific articles, dissertations, theses, research reports, among others. The study has a longitudinal temporal dimension between 2010 and 2020 and involved large Brazilian and foreign companies. No specific segment clippings were established, considering that the study has an exploratory and generalist objective, seeking, in a first step, to identify which sustainable practices are most repeated and contribute to determine the CSF with regard to corporate sustainability.

Initially, some key expressions were defined to be researched and that would bring relevance and enrichment to the study. The expressions surveyed were: “Sustainability practices in companies”; “Sustainable practices”; “sustainability in companies”; “critical success and sustainability factors”; “sustainability practices in companies”; “Sustainable practices”, and “critical success factors and sustainability”. A search began on the main platforms and search bases in the country. The platforms that presented content related to the expressions searched were: Google Scholar, Capes Journal Portal, Scielo, Brazilian Digital Library of Theses and Dissertations (BDBTD) and Unicamp Digital Library (BD Unicamp).

To select the CSF, this study adopted the proposal made by Carallii (2004). The information was collected from the sources pointed out and grouped in order to represent the main activities to be carried out in the field of sustainable actions, aligned with the organization’s strategy. This information was analyzed and organized into affinity groups, so that critical factors could be identified more efficiently. To this end, the following activity roadmap was followed: 1. Definition of the scope; 2. Data collection; 3. Data analysis; 4. Identification of critical factors; 5. Analysis of critical success factors.

Fifty-one documents were found, distributed as follows: 24 scientific articles; 20 master’s dissertations; 3 course completion papers; 2 doctoral theses; 1 dossier; 1 research report. Each of the materials found was examined and it was raised what sustainability practices have been in companies. A total of 394 actions aimed at economic, social and environmental sustainability were found in large organizations. Many sustainable practices are repeated, even in different words, which have been put together to avoid repetitions. Other practices identified are very specific for certain segments, being excluded from the analysis.

Table 2 contains the main corporate sustainability practices. Only the most repeated sustainable practices of a generalist nature were exposed, which can be applied in varied economic sectors. To facilitate understanding, such practices were categorized into an environmental, social and economic dimension, as described by Elkington (2012). Three repetition indexes were created: i) *High*, for practices that were repeated above 10 times; ii) *Medium*, for practices that were repeated between 5 and 10 times; and iii) *Low*, for practices that were repeated up to 5 times.



Table 2: More repeated and generalist sustainability practices found in the study.

Dimension	Sustainability practices in companies	Repeating index
Environmental	Solid waste management Implement environmental certification and audit Production + clean (use of clean and renewable technologies) Reuse of raw material leftovers Recycling and remanufacturing of materials Reduction of environmental impacts Reduction of electricity consumption Reduction and control in water consumption Reduction in waste generation Reduction in the use of non-renewable raw materials Waste treatment Use of reverse logistics Use of renewable and recyclable materials in the manufacture of the product and packaging	High
	Sustainable innovations CO2 neutralization (carbon neutral company) Own production of renewable alternative energy Reduction of greenhouse gas emissions Environmental Management System (SGA) Technical-environmental training Use of reusable packaging Rational and responsible use of natural resources Use of biofuel and electric vehicles Use of environmentally friendly packaging	Medium
	Campaigns for non-generation of waste Create sustainability committee Dissemination of sustainable practices in the company Eco Design Incineration equipment for waste Measurement of emissions Planting and preservation of native plant species Habitat protection and restoration Reforestation of degraded areas Use of selective recycle bins Use of low-emission materials Use of sustainability reports and indicators	Low
Social	Support environmental education programs Hire people with special needs Creation of social programs Educate and empower employees about sustainability	High
	Actions to combat corruption practices Code of conduct Defense of fundamental human rights Investment in culture and citizenship Improving the quality of life in the workplace Improving the quality of life of society in the region Community relations / Corporate citizenship and philanthropy Respect for the culture and goods of the local community	Medium
	Accessibility for people with disabilities Combating different forms of discrimination Internal and external communication on sustainability practices Hire suppliers who respect human rights Employment for disadvantaged communities Community engagement Better working conditions and salary Reducing risks to work-related human rights	Low



Economical	Adoption of environmental criteria in purchasing processes Net revenue increase Equipment maintenance costs Lower accident costs Avoid fines and penalties for non-compliance with laws and regulations Suppliers who respect the environment Indicators for cost control Improve positioning in the face of competitors Process and operations optimization to improve efficiency Lean production (focus on waste reduction) Productivity programs Reduction in operating costs Strengthen the value of the company and brand through social programs Using sustainability as a market differential	High
	Analyze professional performance Economic and financial feasibility assessment Development and impact of investment in infrastructure Sustainable local development Durability of materials Energy-efficient equipment Manufacture of green products Sustainable supply chain management Sustainable transport management Identification and description of economic impacts Economically viable innovations Integrating sustainable development into the business decision-making process Process map work Needs of the local community Provide work for the local community Offering eco-efficient products Sustainability policies and regulations Practice actions of social and environmental responsibility Promoting sustainable consumption Training on sustainable practices Use of 100% renewable or recyclable raw materials Using natural lighting to save energy Vision and commitment of senior management	Medium
	Application of the principles of green chemistry in production Benchmarking to identify efficient sustainable practices Constant investment in sustainability Industrial ecology Identify and use critical success factors Implementation of sustainability in the supply chain Sustainability-based business model New management practices for sustainability Replace paper and ink with the use of electronic media Sustainability Balanced Scorecard Use of ITCs to achieve sustainability Use of sustainable technology platforms	Low

Source: Elaborated by the authors based on the research data.

Table 2 points out repeated business sustainability practices that can be used comprehensively in various types of business. They were divided, as already mentioned, according to the sustainability tripod. The environmental dimension indicates 13 sustainable practices with high repetition level, 10 with medium level and 12 with low repetition level. In the social dimension, we identified 4 practices with high repetition level, 8 with medium level and 8 with low level. In the economic dimension, 13 practices with high repetition level are identified, 23 with medium level and 12 with low level.

The information contained in Table 2 allows the identification of 51 scientific studies prospected, with their main nuances of sustainability practices that can be used by companies. The practices identified provide support to analyze and discuss critical sustainability success factors (CSFS), as proposed in this study.

4 ANALYSIS AND DISCUSSION OF RESULTS

At this stage of the work, the results obtained in the research are presented, seeking to characterize the most important sustainability practices, that is, to point out the CSF, which can also be called Critical Success Factors in Sustainability (CSFS).




Analyzing the results of the survey, it is initially evidenced a prominence of repetitive factors related to the environmental and economic dimensions. In fact, authors such as Brent and Labuschagne (2007), Vifell and Soneryd (2012) and Lourenço and Carvalho (2013) show that, generally, business activities favor the environmental and economic dimensions, leaving the social dimension to a background. According to these authors, the inclusion of social aspects in sustainability debates and practices has been marginal, compared with the focus on the other two classical dimensions attributed to corporate sustainability, something that was endorsed in the 51 documents found.

In this regard, the results also show that there is a gap to be filled by the business sector in order to ensure a balance between the various facets that can lead private initiative to sustainable development. Silva (2021) showed that many Brazilian companies have demonstrated in their sustainability reports a growing concern about social issues. However, the social aspects implicit to business performance still need to emerge progressively as strategic elements, in view of the path to be traveled for this agenda to be consolidated in business management.

In turn, the focus given to the environmental and economic dimensions may reveal a rapprochement of two variables that are generally in opposition. Barbieri (2020, p. 41) states that the inclusion of economic growth as a component of sustainable development has been induced to make it “fairer, equitable and less intensive in raw materials and energy”. It is an important finding, considering that the literature highlights models for measuring the biophysical limits of the planet (Rockström et al., 2009; Nordhaus et al., 2012; Steffen et al., 2015; Steffen et al., 2018), in which social variables (Raworth, 2019) were inserted in order to delimit sustainable development.

The discovery of Critical Sustainability Success Factors in the business sector – related to Sustainable Development Goals – points to new results, as seen in Figure 1 and its subsequent developments.

Table 3: Interface between the classic dimensions of sustainability, critical sustainability success factors and the Sustainable Development Goals of the 2030 Agenda.

Classic dimensions of sustainability	Critical Factors of Success in Sustainability	Sustainable Development Goals
Environmental	Solid waste management Implement environmental certification and audit Production + clean (use of clean and renewable technologies) Reuse of raw material leftovers Recycling and remanufacturing of materials Reduction of environmental impacts Reduction of electricity consumption Reduction and control in water consumption Reduction in waste generation Reduction in the use of non-renewable raw materials Waste treatment Use of reverse logistics Use of renewable and recyclable materials in the manufacture of the product and packaging	
Social	Support environmental education programs Hire people with special needs Creation of social programs Educate and empower employees about sustainability	
Economic	Adoption of environmental criteria in purchasing processes Net revenue increase Equipment maintenance costs Lower accident costs Avoid fines and penalties for non-compliance with laws and regulations Suppliers who respect the environment Indicators for cost control Improve positioning in the face of competitors Process and operations optimization to improve efficiency Lean production (focus on waste reduction) Productivity programs Reduction in operating costs Strengthen the value of the company and brand through social programs Using sustainability as a market differential	

Source: Elaborated by the authors based on the results of the research.

Thus, it is verified that essential Sustainable Development Goals were not mentioned in critical sustainability success factors with high repetition index, such as SDD 13, for the environmental dimension, SDGs 2, 3 and 5, related to the social dimension, and SDS 11, concerning the economic dimension. In addition, SDG 16 and 17 were also not detected in this list of practices.

In order to solve this problem and increase corporate strategies aimed at genuine sustainability, the standardization of sustainable development goals as ways for the implementation of sustainable actions in companies can emerge as a viable alternative (Silva, 2021), generating positive fruits for corporations and, at the same time, for maintaining the necessary conditions for life and prosperity on the planet (Heras-Saizarbitoria et al., 2022).

Considering that critical factors of success in sustainability are not yet the object of widely debated and endorsed research, the approximation with a consolidated and international projection tool, such as the Global Objectives, shows positive signs, considering that it will potentially favor the dissemination of key elements for corporate sustainability.

In addition, we must consider the list of “symptoms of environmental unsustainability” (Munda, 1997, p. 213) that surrounds us. If the destruction of the ozone layer, the loss of biodiversity, air pollution, rivers, lakes and soils, and the complete depletion of non-renewable natural resources continue, the productive and commercial activity itself will be automatically compromised. Otherwise, if humanity is not willing to embrace this new model, “perhaps man’s destiny is to live a brief but febricitante, exciting and extravagant life, rather than a long, vegetative and monotonous existence.” If so, “may other species devoid of spiritual ambition – the amebas, for example – inherit an Earth that will bathe for a long time in a fullness of sunlight!” (Georgescu-Roegen, 2012, p. 134-135).

Assuming that in companies sustainability may be tied to competitive advantages, although, in some cases, managers effectively commit themselves to the construction of “generous and regenerative businesses” that present a “life goal” (Raworth, 2019), or with global agreements for sustainable development, such as agenda 2030, the absence of a strict sense for organizational sustainability may pervert the possibility of responsible actions from the point of view of socio-environmental perspective, in order to meet foreign interests in sustainable development.

5 FINAL CONSIDERATIONS

Sustainable development has won hearts and minds in recent decades, given that the paradigm offers the possibility of an increase in human well-being without extrapolating the biophysical limits of the planet.

A sure path to bring humanity closer to this utopia follows the achievement of the global goals and targets that are part of the 2030 Agenda for Sustainable Development, promulgated by the Member States of the United Nations. However, this proposal is not restricted to national governments, because its success is anchored in multi-agency, multisectoral and multilevel partnerships, including small, medium and large companies, Civil Society Organizations, religious institutions, foundations, institutes, associations, trade unions, social movements, universities and individuals.

This work investigated the Critical Success Factors for business sustainability, in order to increase management practices and, above all, to offer a diagnosis to society under the sustainable development goals.

It was verified, through the 51 documents selected for analysis, that there are a series of strategic management practices aligned with the classic dimensions of corporate sustainability, with special predilection for environmental and economic pillars, although the social is also gaining space as a strategic factor of sustainability. When comparing the results with the Global Objectives, it is perceived that fundamental topics for the maintenance of conditions for life on Earth and for human prosperity were not contemplated in the Critical Success Factors in Sustainability with high repetition index.

On this, it is worth mentioning that, in addition to sustainability being a decisive competitive factor, the commitment of organizations, in a general sense, should be reoriented, allowing their activities to be not really harmful to people and the planet. A decided and true conversion to genuinely sustainable development is necessary.

As a solution, we advocate a standardization of the Sustainable Development Goals as ways for the implementation of sustainable actions in companies and, consequently, as beacons for Critical Success Factors in Sustainability. This may favor the realization of good practices capable of responding to the challenges of the 21st century.

Future studies can empirically explore this proposition, highlighting its potentialities and vulnerabilities, in order to improve critical sustainability success factors aligned with sustainable development goals agreed by UN member countries and their main actors in the corporate sector. They can also conduct studies to identify Critical Sustainability Success Factors in specific segments in order to reveal which segments are most prosperous in these practices.

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Contribution	[Author 1]	[Author 2]	[Author 3]	[Author 4]
1. Definition of research problem	√	√		
2. Development of hypotheses or research questions (empirical studies)	√	√	√	
3. Development of theoretical propositions (theoretical work)	√	√		
4. Theoretical foundation / Literature review	√			√
5. Definition of methodological procedures		√	√	
6. Data collection	√			
7. Statistical analysis				
8. Analysis and interpretation of data	√		√	
9. Critical revision of the manuscript		√	√	√
10. Manuscript writing	√	√		
11. Other (please specify)				

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