

Mini Review

Study of ESG criteria and metrics for the construction industry

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Considering the performance of supply chains in the three dimensions of sustainability; Economic, Social, and Environmental, ESG scores can function as a measurement scale [1]. Environmental, social and corporate governance (ESG) is an extension and enrichment of the concept of Socially Responsible Investment (SRI) and is an important measure of corporate sustainable development [2,3].

Sustainable development is one of the main global trends in the development of modern companies. In particular, sustainable development is one of the three priorities of the European Union's 2020 strategy. The concept of sustainable development requires companies to develop and implement management methods and tools that allow them to achieve [4], ecological [5] and [6], governance development goals, for which the abbreviation ESG is accepted. Thus, companies start to face ESG risks that are potential barriers to the company's entry on a sustainable development path. In recent times, the concept of ESG has emerged for companies to express their determination on environmental, social, and governance issues, unifying many of the demands of stakeholders [7,8].

The ESG concept has also impacted financial markets and investment activity. Green or socially responsible investment has become one of the trends in the modern economy. Investors have become more interested in companies that operate with ESG principles due to the fact that companies that adhere to ECG principles are much more [4], sustainable [6] and have more resources for long-term development [6] spend time optimizing their activities. Furthermore, some scientists confirm that companies with a high ESG rating (Khan, et al. 2020) have better financial performance.

Much literature is devoted to the empirical point of view of the influence of ESG factors. A commitment to ESG or sustainable development is tangible and has a financial impact. A study by Bank of America [4], showed that between January 2007 and August 2019 alone, the capitalization/earnings ratio of European companies that follow the principles of sustainable development improved by 20% compared to others.

In addition to investigating the environmental impact,

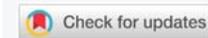
its social participation and governance model has become increasingly important to investors. As an emerging topic in academia and industry, there is still a search for a broad materiality matrix, the main parameters of ESG, and using this matrix to compare companies in quantitative performance rankings, reducing the share of published qualitative negative screening reports. By experts. Few studies suggest ESG performance evaluation for some sectors of the economy [9-11]; however, there is an apparent difficulty in finding an optimal solution for most companies.

With the rise of the green concept, an increasing number of companies accept ESG rating agency assessments. However, existing studies on responses to the validity of the ESG classification are controversial. Scholars who support ESG ratings argue that such assessments objectively and effectively measure a company's ESG efforts through its competitive advantage, social reputation, and operational performance to provide stakeholders with comprehensive and comparable data to correct information asymmetries [12], provide access to resources and reduce regulatory and reputational risks [13]. For construction companies, adopting ESG standards is not just a strategy to access markets and resources. It provides a new opportunity to seek long-term sustainability, achieve more efficiency in operations and create a connection with the new generations for whom purpose has become a great generator of value [14].

The greatest concern with the construction of green buildings is already an example of the importance of ESG

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in civil construction. Today, more than erecting a building and ensuring that it is functional, it is necessary to respect environmental policies of conscious consumption of water and energy, guarantee comfort and health to occupants and, of course, respect the socioeconomic reality of the region. There is no more room for organizations that leave environmental and social issues aside in their strategies. Otherwise, they will have more difficulties in finding investments and will be on the sidelines of the main discussions that will permeate the world in the coming years [15].

ESG in construction, or in any other area, is a central theme in the corporate environment. Research by the Chief Executives for Corporate Purpose (CECP) shows that seven out of ten corporations evaluate the performance and remuneration of their professionals with metrics based on this concept [15]. There is a clear benefit in the adoption of ESG indicators in the development of projects in the sector: the reduction in the consumption of natural resources and, consequently, a smaller impact of the work on nature. However, there are other contributions that go beyond the environmental issue [15].

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