SUSTAINABLE DEVELOPMENT GOALS IN THE SUSTAINABILITY REPORT

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Abstract

Sustainability is something voluntary that the company implements, with the aim of creating value, regardless of achieving regulatory compliance. The 2030 Agenda identifies the guidelines for solving the problem of unsustainable development and, with the 17 Sustainable Development Goals (SDGs), encourages companies towards sustainability. To evaluate companies' commitment to sustainability it is necessary to report on the SDGs. Even if the SDGs cannot be obtained without the companies' contribution, only recently, research literature has begun to consider their fundamental role in their achievement. For this reason, this study aims to verify whether disclosure on sustainability, for Italian listed companies in the period 2021–2022, is aligned with the SDGs and whether there is a relationship between the main performance indices and the level of disclosure. Descriptive statistics methods and econometric models were evaluated to achieve the research objective. The data used for the research was collected through the content analysis carried out on the sustainability reports. The study contributes to the theoretical development of the topic of sustainability disclosure and the SDGs. The developed positioning matrix is useful for managers and investors to better understand how each company positions itself in relation to SDG disclosure and which of the three sustainability areas is most reported. However, for sustainability to truly be put into practice, it must become part of the corporate culture.

Keywords: Disclosure, Sustainable Development Goals, SDGs, Performance, Sustainability, Corporate Strategies, Triple Bottom Line, Agenda 2030, Sustainability Report, Listed Companies, Content Analysis


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1. INTRODUCTION

Sustainability is a growing concern for businesses around the world. Most of them intervene in production processes by promoting green technologies, introducing environmental management systems and energy efficiency measures (Montabon et al., 2000; Mio et al., 2022).
challenges: from the eradication of poverty that requires economic growth strategies, to the protection of the environment, to the safeguarding of social needs including health, education and gender equality. It is necessary for companies all over the world to integrate economic strategies along with environmental and social ones. It becomes relevant to put people, planet, prosperity and collaboration at the center, improving lifestyle and contributing to global well-being (Kates et al., 2005; Gomez-Bezares et al., 2017; Sullivan et al., 2018; Adams, 2017; Ike et al., 2019). However, the role of companies in achieving sustainability goals is still evolving (Nylund et al., 2021) and does not seem easy to achieve (De Perea et al., 2019) even if corporate responsibility has been recognized globally (Bowie, 2019). The importance of sustainability should continue to grow, reinforcing its now important role in the development and creation of company value (Kleindorfer et al., 2005; Longoni et al., 2014; Ali et al., 2017; Blome et al., 2017; Porter & Kramer, 2006). Intuitively, investing in the environmental aspects of manufacturing processes can improve companies’ long-term performance.

Some authors in the literature argue that there is no clear knowledge of how sustainability practices promoted by companies affect the achievement of the SDGs; the latter, despite the efforts of companies, are not so easy to achieve (Schönherr et al., 2017).

According to Ajwani-Ramchandani et al. (2021), it is appropriate to focus on the role of large companies for four main reasons: 1) the impact of companies on waste, 2) the amount of resources and capabilities available, 3) internal social responsibility (CSR) strategies, and 4) ethics and the risk to brand equity if their interests are compromised. These are objectives that can be safeguarded thanks to substantial investments which at the same time contribute to the achievement of the sustainability objectives (James, 2019).

A study by Kolk et al. (2017) focused on large companies due to the fact that their activities have a significant impact on three very sensitive macro-areas indirectly related to the SDGs: 1) the macro-area of energy and climate change (SDGs 7 and 13), 2) that which concerns peace (SDG 16), and 3) that which aims to fight poverty and inequality (SDGs 1 and 10). Among the tools used by companies to achieve the SDGs, corporate social responsibility (CSR) plays a particularly important role as it covers all those actions taken to achieve sustainability (Holtischnider, 2015; Li et al., 2018). The concept of CSR and sustainable development is dynamic and global.

The adoption of best practices and CSR activities plays a critical role in achieving the SDGs (Palmer & Flanagan, 2016; Frynas & Yamahaki, 2016; Gomez-Bezares et al., 2017; Sullivan et al., 2018; Adams, 2017; Ike et al., 2019).

There is an argument that the SDGs should be included in corporate strategy because large companies that operate sustainably not only have less financial volatility and greater sales growth, with a greater chance of survival in the long to medium term, but also achieve the SDGs, positively impacts their operational and financial performance (Schramade, 2017). For this reason, some large companies have recently made considerable efforts to incorporate the SDGs in sustainability reports (Topple et al., 2017). Among the disclosure documents, the sustainability report provides useful information to understand each major company’s contribution to achieving the SDGs. It is prepared according to the Global Reporting Initiative (GRI) standards (Bebington & Unerman, 2018; Topple et al., 2017; Rosati & Faria, 2019; Szennay et al., 2019; García-Sanchez, 2020).

However, there is a surprising paucity of empirical studies analysing the sustainability disclosures of Italian listed companies and how these sustainability practices align with the SDGs. The purpose of the study is to answer the following research questions:

RQ1: Do companies listed on the Italian Stock Exchange disclose sustainability information?

RQ2: Is there a relationship between disclosing information on different areas of sustainable development (economic, social and environmental) and disclosing the SDGs?

Since SDG disclosure has a positive impact on company performance, this study tests whether there is a correlation between company key performance indicators ROI and ROA and the level of sustainability disclosure as argued by Wang et al. (2019) and Becchetti et al. (2012).

The sample used for the purpose of the research is based on the sustainability reporting documents prepared in two years (period 2021-2022) by companies listed on the Italian Stock Exchange and the information on their websites related to sustainable development and SDGs. The methodology used applied descriptive statistical methods and econometric models. Data were collected using content analysis, a methodology that is well suited for disclosure-related research (Ali et al., 2017; Krippendorff, 2004; Deegan, 2002). Content analysis was conducted on sustainability reports as they are the most commonly used documents for disseminating voluntary information (Morioka et al., 2018; Lozano et al., 2016).

The rest of the study is structured as follows. Section 2 presents the theoretical framework related to the topic of sustainability disclosure and SDGs. The sample composition and methodology used in the econometric analysis are presented in Section 3. Data collection and analysis are included in Section 4. The subsequent discussion and results achieved are included in Sections 5 and 6. Finally, conclusions and recommendations for further research are presented in Section 7.

2. LITERATURE REVIEW

2.1. Theoretical background

The development that allows the existing population to satisfy their needs without damaging the possibility of future generations satisfying their own is defined in the Brundtland report (World Commission on Environment and Development [WCED], 1987b) “sustainable development”.

It was a concept of general development that led to the emergence and development of other definitions of this concept (JSD et al., 1994).

For example, companies were suggested to implement strategies capable of meeting the needs
of the company and its stakeholders today, protecting, safeguarding and improving the human and natural resources that are also needed in the future. Later we find the definition provided by the United Nations Conference on Environment and Development, where it was noted that the role of stakeholders coming into contact with a company is decisive for the achievement of sustainable development goals (UN, 2015).

Regardless of the conceptualization, sustainable development began to become a growing concern for every company and over time its importance had increased, strengthening its new essential role in business development (Kleindorfer et al., 2005; Longoni et al., 2014; Lopez-Concepcion et al., 2022).

These are years in which a series of initiatives promoted by companies are launched to reduce the negative impact of their activities in order to treat the environment correctly and not damage it for the sake of present and future generations. Each company seeks to support sustainable development by implementing responsible actions and production processes that minimize energy consumption, reduce emissions of pollutants and toxic waste, promote forms of clean production and eco-efficient production (Welford, 2016; Sarkar & Pingle, 2018; Nikolau & Matarakoukas, 2016; Lu et al., 2021).

In 2002, at the United Nations World Summit on Sustainable Development (26 August–04 September, Johannesburg, South Africa), the concept of sustainable development continues its evolution with an emphasis, however, which shifts to the three areas of sustainability: economic, environmental, and social (Moldan et al., 2012). From this perspective, the concept of sustainable development explains that investments create not only financial, but also economic, environmental and social value. Therefore, companies must implement actions capable of generating better financial performance, anchored to environmental development objectives and social equity (Elkington, 1997). We are talking about so-called intelligent entrepreneurship, that is, doing business by maximizing results and carefully controlling every variable in your value chain, finding a relationship between economic results and sustainability with constant attention to efficiency. The 17 SDGs represent one of the main forces that encourage companies to sustainability (Topple et al., 2017). The SDGs encourage companies to combine and promote sustainable development with social inclusion and environmental sustainability (Sachs, 2015).

According to Van Zanten and Van Tulder (2018) companies are more likely to engage in some SDGs that are internally actionable across their value chains, rather than those whose implementation is determined by elements outside of their control. Prioritizing some SDGs helps the implementation of others. Dang and Serajuddin (2019) argue that several SDGs are complementary and some even contradictory. The literature on the relationship between sustainability and business performance does not always reach shared results. In fact, according to some Authors, promoting sustainability contributes to improving the competitive advantage and influences the results of performance (Pagell et al., 2004; Huang et al., 2012; Lim et al., 2023).

Others have found that sustainability can negatively contribute to corporate performance (Rao & Holt, 2005; Gonzalez-Benito & Gonzalez-Benito, 2005; Dan & Petkova, 2014). There was also a statistically significant relationship between sustainability and corporate performance (Jabbour et al., 2015; Rükkönen et al., 2017). Several authors have included the issue of reporting the SDGs at the center of their debates (Rosati & Faria, 2019; Van der Waal & Thijssens, 2020; Silva, 2021; Bose et al., 2024). By disclosing the SDGs, companies communicate their sustainability efforts to stakeholders (Rosati & Faria, 2019; Ordonez-Ponce & Khare, 2020). Furthermore, Szennay et al. (2019) argue that knowledge generated through reporting helps to understand companies’ commitment to sustainable development and achieving the SDGs. As Redman (2018) argues, the disclosure of sustainable commitment represents a condition for the dissemination of the SDGs.

According to the concept of creating shared value (CSV), sustainability becomes an integral part of the corporate strategy, through their activities, are not limited only to being socially responsible, but are able to create economic value while creating value for the company (Porter & Kramer, 2006; BreliaStiti & Josephine, 2017; Bose et al., 2024). At the same time as this scenario, companies need to have adequate forms of sustainability reporting. The evolution of the concept of sustainable development has influenced the content of corporate sustainability reporting. The latter published under the Global Reporting Initiative (GRI) standard presents a complete set of measures to assess the contribution of companies to the SDGs (Bebbington & Unerman, 2018; Rosati & Faria, 2019).

Furthermore, it is considered one considered one of the main disclosure tools enabling the integration of the SDGs into corporate strategy (Adams, 2020; Bebbington & Unerman, 2018; Rosati & Faria, 2019) and one of the major tools for dialogue with stakeholders in terms of sustainable reporting (Venturelli et al., 2020; Nichita et al., 2020).

### 2.2. Sustainability and SDGs disclosure

Corporate social responsibility has been studied from multiple perspectives: according to the agency theory; based on the legitimacy theory; taking into account the resource dependence theory; and, last but not least, on the basis of the stakeholder theory (Frynas & Yamahaki, 2016). In each of these theories it is defined as the commitment undertaken by the company to minimize or eliminate the dangerous effects of its activity and to maximize the long-term beneficial impact for the company.

Serious global problems such as climate change, financial instability, lack of water, malnutrition, poverty, irresponsible consumption, and production of resources and products, have pushed stakeholders to demand more from companies (Sarkar & Pingle, 2018). Companies must go beyond simple responsibility towards shareholders and must open up to stakeholders by treating the environment well without damaging it for the good of present and future generations (Mulk, 2017). What is good for people and sustainable for the planet is also good for business
and sustainable for stakeholders. Therefore, there is a convergence, in the long term, between the pursuit of sustainability objectives and the creation of corporate value (Harrison et al., 2020).

Companies have understood the need to align their business model with inclusive, sustainable, and easily communicable development (Giaguala & Solimene, 2019). For this reason, the system of strategic objectives has been organized around five areas of action: 1) People, 2) Planet, 3) Prosperity, 4) Peace, and 5) Partnership, also defined as the “5P” (UN, 2015).

Companies that intend to support sustainability and the SDGs connected to it promote multiple strategies: 1) redesign their products, 2) adopt new digital innovations, 3) move towards the so-called innovative and sustainable approach, 4) promote the adoption of cleaner technologies, 5) implementing environmental management systems and new measures to improve energy efficiency (Nidumolu et al., 2009; Albino et al., 2009). These are strategic choices that direct the core business towards sustainable economic development, consolidation of internal resources and reducing dependence on third economies (Madsen, 2020).

Establishing the boundary between sustainability and social responsibility is not always easy. What some call sustainability or CSR is referred to by others simply as sustainable development. Sustainability has been recognized as an essential element of corporate organizational strategy and is increasingly expressed as a multidimensional concept characterized by economic, environmental and social aspects (Braccini & Margherita, 2019). Companies that describe sustainability and the SDGs in their reports improve transparency and credibility, allowing stakeholders to evaluate the contribution to achieving sustainability (Bose & Khan, 2022; Albertini, 2019; Ashrafi et al., 2019; Vitolla et al., 2019).

The existence of sustainability reporting creates sustainability awareness, behavior, and decision-making among firms (Rustam et al., 2020). Reporting activity has become not only desirable but even indispensable to obtain the consensus that companies need. It can no longer be based only on common sense but on specific reporting models through which stakeholders are able to evaluate the consistency between the declared principles and the actual behaviors adopted by the company.

One important study on sustainability reporting in Africa comes from the work of Tilt et al. (2020). A study by Bebbington and Unerman (2018) examined the role of accounting research in the pursuit of UN SDG. The authors emphasized the need to include the SDGs in the sustainability reporting framework of corporate organizations. The results of the study provide opportunities for a new research agenda in the sustainability accounting literature. Echoing the work of Bebbington and Unerman (2018), Hopper (2019) emphasized the need for companies to measure, monitor and hold organizations accountable to help achieve SDG goals. Czaja-Cieszyńska and Kociański (2019) examined the sustainable development disclosure of 12 listed companies in Poland and found wide heterogeneity in the contents disclosed externally.

Nichita et al. (2020) examined the reporting on the SDGs of the 10 largest companies operating in the chemical industry of some countries (United Kingdom, Czech Republic, Hungary, Poland, Romania, and Slovakia) and found that 63% of the analysed reports did not clearly mention the SDGs in corporate sustainability reporting. Furthermore, the results revealed that the presentation of reports on the SDGs were not similar even within the same sector.

3. RESEARCH METHODOLOGY

3.1. Sample

The analysis was conducted on the sustainability reports that the companies listed on the Italian Stock Exchange (Borsa Italiana, Milan) published in the two-year period (2021-2022), and also on the information on the websites that somehow refer to sustainable activity. The choice to analyse listed companies was made both because they are large companies in terms of capitalization and because they are the most attentive to corporate sustainability issues (Annan-Diab & Molinari, 2017; Schramade, 2017). The listed companies are 229 grouped into 10 production sectors. It was not possible for all companies to obtain a sustainability report with reference to the period under analysis. The sample was therefore limited to 157 companies and a total of 314 reports (sustainability reports and Integrated documentation) were analysed, which provide guidance on the three areas of sustainability (the triple bottom line, TBL) and the SDGs.

3.2. Methodology

The methodology used in the study estimated two multiple linear regression (OLS) models to understand whether sustainability and SDG disclosures impact firm performance. Content analysis was used to examine disclosure as suggested in the literature (Krippendorff, 2004; Beattie & Thompson, 2007). The content allowed each company in the sample to assign a score as a measure of each company's ability to report information with reference to the three spheres of sustainable development (economic, social and environmental) and attention to the SDGs proclaimed in the 2030 Agenda in the non-financial statement (NFS). Robustness checks were carried out on both models.

4. DATA COLLECTION AND ANALYSIS

Each sustainability report has been read to identify information the most representative of sustainable activity read SDGs and for extrapolate a dataset of 93 words that was used performed content analysis (Calabrese et al., 2021).

As regards the SDGs, the words that make up the dataset have been selected taking into account the description and content of each goal, as reported in the document that describes them (UN, 2015).

In relation to the documents analysed, the study did not consider the quality of the space dedicated to the SDGs by each company.

Since it is not easy to establish the optimal size in terms of importance for companies operating in
different sectors, different weights were not assigned based on the characteristic of the size factor (Cordazzo & Vergauwen, 2012). Consequently, the quality of the information transmitted will be lower when the lack of information is greater.

In the basic equations used to achieve the research objective, the main variables that influence the performance of corporate sustainability are summarized:

**Model 1**

\[
ROI = a + B1 (\text{Regulatory\_implementation}) + B2 (\text{Collocation}) + B3 (\text{SDGs}) + e
\]

**Model 2**

\[
ROE = a + B1 (\text{Regulatory\_implementation}) + B2 (\text{Collocation}) + B3 (\text{SDGs}) + e
\]

The dependent variable used in the OLS model is represented by the main company performance indices return on investment (ROI) and return on equity (ROE). Both indices are suitable for describing and measuring the returns on investments also in sustainable practices (Wang et al., 2019; Becchetti et al., 2012).

Some authors argue that sustainability disclosure has a long-term effect on ROE (Kartini et al., 2019). Since the non-financial information contained in the reports is of a purely qualitative nature, through the content analysis a weight has been attributed to each single goal.

A score was assigned to each company based on the sum of the number of times each of these words is mentioned in the sustainability reports. The variables that remain represent the final product of a juxtaposition of the same, which is indispensable for analyzing the qualitative aspects. The variable *Regulatory\_implementation* assumes a value of zero if the document is drawn up on a voluntary basis while it assumes a value of one if the NFS is drawn up in accordance with current legislation (Kim & Kim, 2014). The *Collocation* variable takes on a value of 1 if the NFS is drawn up as an independent document in its own right; 0 if it is an integral part of another company document. At first, the content analysis made it possible to quantify which sector communicates the information relating to sustainable development the most. As shown in Figure 1, over the two-year period there is a progressive increase in communication regarding sustainability in all sectors, however the sector that communicates the most is *Industry*, followed by *Public Services* and *Finance*.

![Figure 1. Sustainable development communication](image)

Subsequently, the analysis, again using data collected through content analysis, tested which sector best communicated the SDGs. As shown in Figure 2, among the most connected sectors is *Industry*, followed by *Public Services* and *Finance*. This result allows us to answer the research question (RQ1) by arguing that there is a correspondence between the communication of information related to sustainable development and the communication of information related to SDGs.

In addition, answering the second research question (RQ2), we can argue that the most communicative sector is the *Public Services* sector.

To verify the positioning of companies in the industrial sector and their involvement in the disclosure of sustainable development and the SDGs, a positioning matrix was developed. The matrix was constructed through the processing of two indices: the Frequency index (FI) which aims to represent the disclosure of the SDGs of each sector.

![Figure 2. Positioning of companies](image)
company completeness of reporting) and the Coverage index of the SDGs (accuracy of reporting) which aims to highlight the disclosure of the SDGs with respect to the three spheres of the TBL (economic, social and environmental) (Calabrese et al., 2021).

For a clearer reading of the results, each company has been assigned an acronym with which the same company can be identified on the matrix (Table 1).

![Figure 2. Sustainable development communication SDGs](image)

Source: Authors’ elaboration.

### Table 1. Cataloging of companies in the industrial sector

<table>
<thead>
<tr>
<th>V1</th>
<th>V10</th>
<th>V19</th>
<th>V28</th>
</tr>
</thead>
<tbody>
<tr>
<td>Atlantia</td>
<td>Cerved Group</td>
<td>Interpump</td>
<td>Reno De Medici</td>
</tr>
<tr>
<td>V2</td>
<td>V11</td>
<td>V20</td>
<td>V29</td>
</tr>
<tr>
<td>Avio</td>
<td>Cir</td>
<td>Irce</td>
<td>Salaf</td>
</tr>
<tr>
<td>V3</td>
<td>V12</td>
<td>V21</td>
<td>V30</td>
</tr>
<tr>
<td>Biancamano</td>
<td>Danieli</td>
<td>Leonardo</td>
<td>Saipem</td>
</tr>
<tr>
<td>V4</td>
<td>V13</td>
<td>V22</td>
<td>V31</td>
</tr>
<tr>
<td>Biesse</td>
<td>Datalogic</td>
<td>Luve</td>
<td>Servizi Italia</td>
</tr>
<tr>
<td>V5</td>
<td>V14</td>
<td>V23</td>
<td>V32</td>
</tr>
<tr>
<td>Brembo</td>
<td>ELEn</td>
<td>Maire Tecnimont</td>
<td>Tesmac</td>
</tr>
<tr>
<td>V6</td>
<td>V15</td>
<td>V24</td>
<td>V33</td>
</tr>
<tr>
<td>Buzzi Unicem</td>
<td>Eln</td>
<td>Openjobmetis</td>
<td>Toscana Aeroporti</td>
</tr>
<tr>
<td>V7</td>
<td>V16</td>
<td>V25</td>
<td>V34</td>
</tr>
<tr>
<td>Caltagirone</td>
<td>Fiera Milano</td>
<td>Pininfarina</td>
<td>Trevi Fin</td>
</tr>
<tr>
<td>V8</td>
<td>V17</td>
<td>V26</td>
<td>V35</td>
</tr>
<tr>
<td>Cembre</td>
<td>Fincantieri</td>
<td>Prima Industrie</td>
<td>Webuild</td>
</tr>
<tr>
<td>V9</td>
<td>V18</td>
<td>V27</td>
<td>V36</td>
</tr>
<tr>
<td>Cementir Holding</td>
<td>Gefran</td>
<td>Prysmian</td>
<td>Zignago Vetro</td>
</tr>
</tbody>
</table>

Source: Authors’ elaboration by using Borsa Italian data.

The results can be summarized in Figure 3 where the four boxes of the matrix at first sight identical to each other show in the first quadrant the position of each company in the reporting of sustainability disclosure and commitment to the SDGs. The positioning of each individual company outlines the commitment to sustainability and the pursuit of the SDGs by each with respect to other companies in the same sector.

In the subsequent quadrants, however, the commitment of each individual company is represented with reference to the disclosure of the three spheres of the triple button line (social, economic and environmental).

The analysis of the first quadrant shows that most of the companies are located in the upper right corner. This means a high commitment on the part of each of them to report the disclosure of the three spheres of the triple button line together with the SDGs.

In the lower right section, on the contrary, there are a smaller number of companies, which are characterized by a more gradual approach to the disclosure of the three spheres of sustainable development and the SDGs.

Finally, in the top left corner there is only one company (Reno De Medici), which does not show much commitment to the areas of sustainable development and SDGs.

Companies in the top right corner of the first quadrant recognize that better sustainability disclosure contributes to achieving the SDGs; It is therefore clear that the competitiveness between these companies depends on the completeness and accuracy of the information provided (see, among others, Zignago Vetro, Caltagirone, and Cir). Instead, the companies within the same quadrant are positioned in the lower right, to become more competitive in the future, must consolidate a greater commitment to the aspects investigated (see, for example, Biancamano and Irce).
5. RESULTS

The results of this research enrich the literature on the topic of sustainable development reporting and highlight that not all industries analysed place equal emphasis on sustainability and SDG disclosures. Only for three sectors is there complete alignment between the communication of information related to sustainable development and that of the SDGs (Industry, Public Services and Finance). The most communicative sector is the Industry sector, for which the results returned by the two regression models allow us to argue that the disclosure of information on sustainable development and SDGs is increasingly emerging as a strategic element that can improve competitive dynamics and therefore performance.

Working at a theoretical level helps companies to recognize the quality of their sustainability reports in terms of accuracy in relation to sustainability goals. Developing a positioning matrix helps company decision makers understand how each company positions itself in relation to the SDGs compared to other companies present in the same manufacturing sector, and which of the three sustainability areas is most able to communicate effectively with the outside world.

Since efforts to align sustainability with the SDGs are generally signalled through reporting, companies should view disclosure not as a compliance issue, but rather as a guiding philosophy for their actions. This last aspect is very important because it demonstrates awareness, rather than commitment, of the interests of a community that expects trust, respect and loyalty. In this way, sustainability brings benefits by ensuring an economic system that is capable of delivering sustainable growth and competitive advantage.

At a practical level, the study's findings allow us to investigate the level of activity of companies involved in sustainability reporting and to monitor the contribution of each of them to the achieving of the SDGs.

6. DISCUSSION

Considering the sector that most communicates the spheres of Sustainable Development and the SDGs, two regression models have been developed that serve to describe the impact of sustainable disclosure on corporate performance.

Table 2 illustrates the estimate of the Model 1, relating to a sample of 36 companies in the industrial sector listed on the Italian Stock Exchange (Borsa Italiana) that published sustainability reports for the biennium 2021–2022. This model shows how disclosure of information about sustainable development and SDGs affects the performance of companies in the Industry sector.
The OLS model returns a negative coefficient for the SDGs variable, representing a negative impact on business performance. It can be said that, as the disclosure of the SDGs increases by a unit, the ROI decreases by a value equal to -0.0148436. As regards the Regulatory_implementation variable, the coefficient that the model returns to us is equal to 2.94698; this shows how the implementation of NFS legislation has a positive impact on company performance. Finally, the Collocation variable also shows a negative coefficient equal to -1.20736, synonymous with a negative impact of the variable on corporate performance.

Subsequently, a second regression model (Model 2) was developed that included the ROE variable in the model described above. The results that the model returns are summarized in Table 3.

### Table 2. Estimating effects of the SDGs on ROI

<table>
<thead>
<tr>
<th>SDG</th>
<th>Coefficient</th>
<th>Standard error</th>
<th>t</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Const</td>
<td>4.25204</td>
<td>16.6438</td>
<td>0.2719</td>
<td>0.7867</td>
</tr>
<tr>
<td>Regulatory_implementation</td>
<td>2.94698</td>
<td>16.2699</td>
<td>0.1811</td>
<td>0.8569</td>
</tr>
<tr>
<td>Collocation</td>
<td>-1.20736</td>
<td>9.75228</td>
<td>-0.1238</td>
<td>0.9019</td>
</tr>
<tr>
<td>SDGs</td>
<td>-0.0148436</td>
<td>0.0197728</td>
<td>-0.7507</td>
<td>0.4560</td>
</tr>
</tbody>
</table>

Source: Authors’ elaboration.

The econometric analysis provides useful clarifications on the impact of the disclosure of the SDGs on company performance. The results support our research question by confirming that there is a general increase in disclosure inherent in the three spheres of sustainable development and the SDGs. Furthermore, the research with the help of the positioning matrix demonstrates how the three spheres of sustainability are treated differently by individual companies.

The developed regression models suggest that there is a relationship between the disclosure of information about the SDGs and the company’s performance. In fact, as the disclosure of the SDGs increases, the ROI and ROA also decrease. The insignificance of the coefficients may be due to the objective difficulties that companies face in quickly adapting to the complex scenario of multiple SDG indicators (Calabrese et al., 2021; Schönherr et al., 2017).

The results that the analysis returns allow us to further enrich the literature on the topic of sustainability and the SDGs as they demonstrate that if companies are responsible for their impact on society, they have the opportunity to improve company results and contribute to the creation of a model of sustainable development. This scenario leads companies, and also their management, to respond to the precise demands of the environment by promoting and developing voluntary disclosure through new and different forms of reporting which have the aim of improving the dialogue between the company and its stakeholders.

This study contains some limitations. First, by analysing a limited number of companies, the results cannot be generalized. Second, the results are limited by the selection of a specific sector. In the future, the idea is to extend the analysed model over a wider time range, and in terms of comparison between different companies, or between similar companies from different countries.
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