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IDENTIFYING HOW INCREASED ECONOMIC GROWTH MAY BE ATTRIBUTED TO SUSTAINABLE DEVELOPMENT

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Abstract. The United Nations has issued an urgent call to action to promote collaboration with programs that support sustainable development. This is one of the methods to drive economic growth, and the United Nations' call to action supports such cooperation. However, no established method exists for measuring individual sustainable initiatives' impact on the overall economic growth rate. This study aims to evaluate and investigate sustainable decisions' impact on the company's economic performance in General. In the context of this research, the phrase "sustainable decisions" refers to any choices made by Entrepreneurs that contribute to the overall development of an organisation on several fronts, including the social, environmental, and economic fronts. The results of this study can be exploited as a method for capturing society's attention to raise social awareness of the need to invest in sustainable options. Furthermore, they will assist in the design and execution of future research efforts and the development of environmentally friendly technologies with regard to economic development.

Keywords: economic performance, sustainable development, decision-making, sustainable impact assessment, economics.

JEL Classification: M15, M21.

Introduction

The concept of sustainability encourages individuals and organisations to reconsider their worldviews and the justifications they provide for their activities (Van der Heijden & De Vos, 2015). To better understand sustainable entrepreneurship, we may define it as the process of identifying, developing, analysing, and capitalising on possibilities to produce new goods and services that align with sustainable development objectives (Fichter & Tiemann, 2020). The manufacturing process or production expenses are often used as the definition of economic sustainability. In contrast, the consumption of energy and other resources and operational waste are frequently cited as the definition of environmental sustainability. In addition, social sustainability is often coupled with initiatives that promote equitable access to opportunities. In today's world, sustainability is often understood to refer to a state that strikes a balance between economic expansion and environmental preservation. It is essential to understand sustainability as a combination of many viewpoints and methods, such as ecological economics, industrial ecology, ecosystem health, sustainable decision-making, policy, and design. Achieving sustainability requires making systemic changes over an extended period of time in the following domains: technical, economic, cultural, and organisational. These shifts must take place in tandem with one another. So, sustainability should be defined in more than just ecology (Hallin et al., 2021).

The development of a sustainable society is aided by the implementation of a solution that is also sustainable. While making sustainable choices, it is common practice to consider several environmental concerns as well as economic, political, social, ethical, and other elements. The classical theory presumes that decision models are founded on the concept of rational choice. In this model, decision processes are viewed as sequential. It is preferred that a decision be selected from a set of alternatives based on an individual's expectations of the future. Even though rational decision-making presupposes that one of the best options would be picked, in reality, it is more common for an alternative to be selected that surpasses the criteria or objectives that have been

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specified. It is necessary to evaluate each available option to increase the likelihood of picking the option that will provide the most remarkable results. With this method of making decisions, you can choose the finest option from among several less desirable choices. Since there is a possibility that none of the other options is sustainable, using this model for decision-making that is sustainable is appropriate (Hersh, 1999).

In this research, we suggest the other way of evaluating the enterprises' sustainable decisions from the point of view of whether it impacts the company's economic performance. This primary goal is going to be achieved by several raised tasks of this research: (i) first of all, the literature review needs to be done in order to delineate what are the methods for evaluating the company's sustainable decisions, and which of them can be addressed as the one for this particular research; (ii) next and the most time usable is the data selection, collection and analyses; (iii) the last part will include final calculations with the selected case study, in order to evaluate whether there is any link between the sustainable decisions of the company and its economic performance.

1. Literature review

1.1. Sustainability of enterprises

A sustainable organisation must specify economic, social and environmental issues (Assoratgoon & Kantabutra, 2023; Frostenson et al., 2022; Ketprapakorn & Kantabutra, 2022; Sancak, 2023; Sun et al., 2022). A sustainable firm must simultaneously seek economic development and evaluate its social and environmental effects (Arribas et al., 2019). A sustainable business must consider its influence on the environment, i.e., decrease its carbon footprint, waste, and pollution, and make optimal use of its resources. A sustainable corporation must also be socially responsible; that is, it must consider the social effect of its actions. This involves providing workers with equal rights and fostering social activities. A sustainable organisation must also have effective governance structures, a robust board of directors, and a management team dedicated to accomplishing sustainability goals and objectives. A sustainable business must also be economically robust, financially secure and capable of delivering long-term shareholder value. Environmental and social responsibility contribute to an organisation's commercial worth (D'Apice et al., 2020). Hence, it is essential to underline that a sustainable firm must be honest about its operations and effects and responsible to its stakeholders, including investors, customers, workers, and the greater community.

1.2. Overview of Indices of sustainability

There are many methodologies all around the World which are being used in order to evaluate the sustainability of different areas, starting from manufactory and finishing with education or even construction or programming. This section reviews several sustainability evaluation technics, which focus their methodology on the enterprises' sustainability evaluation.

For example – Established in 1999, the Dow Jones Sustainability Index (DJSI) World is a worldwide gauge of the financial performance of the New York Stock Exchange's most sustainable corporations. The index assumes that sustainability is the capacity to produce long-term shareholder value via the management of opportunities and hazards related to economic, environmental, and social growth. It is calculated using the 10% most sustainable corporations in each sector. "The index value on any given day is the division of the overall float-adjusted market capitalisation of the index's members and the index's divisor." Remember that the DJSI is a financial index that evaluates the overall effectiveness of the most sustainable enterprises and not each company's individual economic, environmental, and social performance parameters (Lucato et al., 2018).

Global Reporting Initiative (GRI) is one of the most widespread instruments for evaluating the sustainability of businesses. Since the early 1990s, many sustainability indicators have been presented to assist businesses of all sizes in comprehending and communicate their commitments to sustainable development. These metrics take into account the economic, environmental, and social implications of businesses that try to meet current demands without jeopardising future generations. In accordance with the triple bottom line, the current edition of the GRI Report (G4) provides the necessary criteria for constructing a detailed and exhaustive account of the most vital components of sustainability. Nevertheless, the GRI report analyses the sustainable performance of a firm as a whole, making its usage in a subset of a company, such as a manufacturing process, challenging. In addition, there is no synergy between the three sustainability principles in order to assess sustainability as a whole.

A great number of additional projects have been designed to evaluate the amount of sustainability that firms possess, but they are not as widely used. The ISO Environmental Performance Evaluation, the Dashboard of Sustainability, the Barometer of Sustainability Index, the United Nations of Sustainable Development, the ETHOS Corporate Social Responsibility Indicators, the Enterprise Sustainability Index, the Environment Performance Sustainability, the OECD Core Environmental Indicators, and the Food Product Index are some of the indicators that are included (Lucato et al., 2018).

The businesses are eager to turn a profit and reap the full advantages they are entitled to get due to incorporating corporate social responsibility into their day-to-day operations and procedures. The non-financial items consist of seven categories that measure the performance of the companies' responsibility in the following components: social, corporate governance, diversity, employees, environment, individual rights, and products. Each of these categories is measured independently from the

others. A standard questionnaire was designed for performance measurement in order to determine the assessment methods that support accomplishing the objective of incorporating social sustainability reporting in companies. This questionnaire consisted of 20 questions for economic, 18 for social, and 25 for environmental criteria. The design of this questionnaire was based on the requirements from the modification of GRI Sustainability 3.1 indicators. In order to find the measurement criteria that help in achieving this goal, it was necessary to create a standard questionnaire (Oncioiu et al., 2020).

The FTSE Group first introduced the FTSE4Good Index in the year 2001 (now FTSE Russell). Investors use the index to measure the success of the firms they have chosen to invest in against the performance of larger public stock markets. The index's primary objective is to point investors in the direction of businesses that engage in responsible environmental and social activities while simultaneously elevating the standards for inclusion to persuade businesses to improve their environmental and social footprints (Slager et al., 2021).

Since the 1992 Earth Summit in Rio, the concept of sustainability has been recognised as an essential objective. Throughout the interest of evaluating sustainable development, numerous academics and practitioners have established measurement systems such as the Driving Force State Response (DSR) framework (Hens & Devuyst, 1996), the Human Development Index (HDI) (Goeteyn, 1996) developed by the United Nations Development Programme, the Sustainable National Income (SNI) created by (Hueting, 1992), and the Ecological Footprint (Wackernagel & Rees, 1996). The environmental sustainability index (ESI) is a combined indicator developed by the World Economic Forum, Yale University, and Columbia University to quantify a country's success in maintaining a healthy, habitable environment. By 2002, 142 nations had been measured using ESI. Nevertheless, it has not yet been shown whether it can be implemented nationally. In this research, we attempted to use ESI to evaluate Shandong's sustainable development in China. Twenty-two indicators and 43 variables were selected, and the findings indicated that Shandong's ESI was 49, indicating that the province is still far from achieving sustainable development: 2004 Taylor & Francis Group, a limited liability company.

Comparison of quantitative sustainability assessment methodologies: DJSI (Dow Jones Sustainability Indexes), Global Reporting Initiative (GRI), Sustainability Metrics of the Institution of Chemical Engineers (IChemE), Composite Sustainable Development Index (I CSD).

The initiative for global reporting (GRI). The Global Reporting Initiative (GRI) has developed and distributed guidelines for reporting on sustainability that is relevant worldwide. The Global Reporting Initiative (GRI) is committed to achieving its purpose by engaging several stakeholders in an open discussion and working together to develop a voluntarily recognised accounting framework for business organisations. These essential fundamental economic, social, and environmental characteristics of business operations are established by the GRI standards, which are then utilised worldwide to prepare reports on business operations' environmental, social, and economic impact (Kinderyte, 2010).

The FTSE4 index enables investors to contrast the achievements of chosen firms to the performance of the larger public stock markets. The objective of the index is to identify firms with solid sustainability investors while strengthening the inclusion requirements to push companies to improve their sustainability performance (Slager et al., 2021). FTSE4Good is comprised of global

Table 1. Sustainability assessment indicators overview

Sustainability assessment indicators	Factors assessed	Sources
Dow Jones Sustainability Index (DJSI)	Generating long-term shareholder value through managing economic, environmental, and social development's possibilities and hazards. This criterion is compared to the ten per cent most sustainable corporations in each sector.	(Gerlagh et al., 2002; Kinderyte, 2010; Oncioiu et al., 2020; Robinson et al., 2011; Zago et al., 2018)
Global Reporting Initiative (GRI)	Considering economic, environmental, and social implications, this criterion examines businesses that seek to address present demands without damaging future generations.	(Boiral & Henri, 2017; Fonseca et al., 2011; Roca & Searcy, 2012; Veleva et al., 2001)
ISO Environmental Performance Evaluation	Indicators are used in collecting information and comparing ongoing actions and those that have occurred in the past with environmental performance standards that the business has defined.	(Bennett & James, 1998; Falqi et al., 2020; Hsu & Liu, 2010; Lucato et al., 2018)
Composite Sustainable Development Index (I CSD)	The evaluation takes into account a set of economic data, a set of social indicators, and aspects related to the environment. This index's results show that each component should be combined in a certain sequence.	(Kinderyte, 2010; Krajnc & Glavič, 2005; Laurinkevičiūtė & Stasiškienė, 2010)
The environmental sustainability index (ESI)	Environmental considerations are considered throughout the manufacturing process to minimise the negative impact on the surrounding environment.	(Agustini & Giannetti, 2018; Babcicky, 2013; Nallusamy et al., 2016)
Human Development Index (HDI)	Scale that is estimated to measure human living standards (Suitable for manufacturing workers)	(Belfort et al., 2021; Montoya-Reyes et al., 2020; Spangenberg, 2016)

corporations that fulfil stringent requirements in areas such as environmental sustainability, social responsibility, and corporate governance. The criteria are based on globally recognised norms, such as the Global Compact of the United Nations, important International Labour Organization treaties, and the Global Accountability Initiative. Businesses that do not match the FTSE4Good criteria are omitted from the index. It gives a method for identifying businesses devoted to sustainability and ethical business practices.

The ISO evaluation criteria are used to evaluate a company's sustainability. ISO 14001 is the most significant standard for evaluating business sustainability. The standard mandates that businesses assess and regulate the environmental effect of their operations, goods, and services and continually improve their environmental performance. ISO 14001 is comparable with ISO 9001 (quality management), ISO 45001 (occupational health and safety management), and ISO 26000 (information security management) (social responsibility). Additional ISO standards pertaining to sustainability include ISO 50001 (Energy Management System Standard), ISO 14064 (Organizational Greenhouse Gas Accounting Standard), and ISO 14020 (Environmental Management System Standard) (Product Environmental Declaration Standard). However, it is essential to note that ISO standards are not legally binding. Thus, businesses may use one or more of these standards based on their requirements and objectives. In Table 1 are presented the leading reviewed sustainability assessment indicators with regard to company performance.

2. The impact of sustainable companies on the Economy

Success in achieving sustainable development and living standards is contingent on a nation's GDP growth (GDP) (Zausková et al., 2013). By producing employment, generating money, and encouraging social and environmental responsibility, sustainable businesses may have a nation's economy and a substantial influence on a country's economy. These are some ways in which sustainable enterprises might influence a nation's economy: Sustainable enterprises provide employment, particularly in the renewable energy, waste management, and sustainable agricultural industries. Sustainable companies contribute to a nation's GDP and assist in fuelling economic development by selling their goods and services locally and globally and generating money. Sustainable businesses may advance social responsibility by investing in and contributing to social activities. Sustainable companies may encourage environmental responsibility by minimising their carbon footprint, waste, and use of natural resources. Not only is this beneficial for the environment, but it also reduces expenses and increases productivity. Investing in research and the creation of new technologies and processes that support sustainability may help sustainable firms foster innovation. This may result in the creation of new goods and services, which can boost economic expansion.

3. Methodology

The limitation of this research was basically related to the fact that there is a lack of previous research which would identify what methodology is appropriate for one another case evaluation to identify the company's sustainability level. So as a solution in this research was used one of the most widely used sustainability assessment criteria: Global Reporting Initiative (GRI) standards, Dow Jones Sustainability Assessment Index. The DJSI index allows you to determine which country companies operate most sustainably. Moreover, the Global Accountability Initiative standards allow for assessing an individual company's social impact, environmental impact and economic growth.

- GRI 102: this criterion has an additional classification according to the gender of employees, working hours;
- GRI 201: criteria showing how much economic value the company creates;
- GRI 202: the criterion is additionally classified according to the wage by gender compared to the local minimum wage. Also, this criterion assesses what percentage of senior managers are hired from the local community;
- GRI 204: a criterion for assessing the proportional share of the company's expenses with local providers;
- GRI 205: criterion for evaluating corruption incidents in the organisation;
- ¾ GRI 301: the criterion is more broadly classified according to the weight of the materials required to produce the product and its packaging. It is also classified according to the percentage of recycled raw materials used in the production of the product;
- GRI 302: the criterion is more broadly classified according to the energy consumption of companies and according to how much the company has reduced energy demand;
- GRI 303: the criterion is more finely classified according to the company's water consumption;
- GRI 304: criterion considering the extent to which the company's activities have affected local protected areas in order to preserve their biological diversity;
- GRI 305: the criterion is more finely classified to assess the company's CO2 emissions;
- GRI 306: the criterion is more finely classified according to the company's consumption, i.e. how much environmentally hazardous waste is emitted, how much of it is recycled;
- GRI 307: criterion for evaluating the organisation's environmental violations and fines paid for it;
- GRI 308: criterion assessing the percentage of the company's suppliers that have been checked according to environmental aspects;

– GRI 401: the criterion is more broadly classified according to employees who have taken paternity leave or left the workplace;
– GRI 403: the criterion is more broadly classified according to employee health, safety, and health damage suffered during work;
– GRI 404: the criterion assessing how much time was allocated to employee training is also assessed by gender;
– GRI 405: criterion assessing the percentage of women on the company's board of directors;
– GRI 406: criterion assessing the number of discrimination situations in the company during the reporting period;
– GRI 409: criteria reflecting whether the company establishes operational operations that may cause work risks;
– GRI 411: a criterion assessing the number of incidents in the company related to employee discrimination based on belonging to a particular ethnic group;
– GRI 412: the criterion according to which human rights assessment is carried out in the company;
– GRI 414: criterion evaluating the social impact of the company's suppliers and the negative impact on the environment;
– GRI 416: criterion assessing how many incidents there were in the company related to the threat to the safety and health of consumers;
– GRI 417: criterion assessing the number of incidents related to the violation of marketing and communication rules;
– GRI 418: a criterion that assesses how much effort is put into the company's efforts to preserve the privacy of users;
– GRI 419: criteria for assessing sanctions for non-compliance with social and economic requirements by the organisation.

Due to the multidimensionality of the sustainability objective and the complexity of socio-economic and biophysical systems, multi-criteria decision analysis (MCDA) techniques are becoming more popular in sustainable decision-making. Many authors use MCDA techniques for optimal alternative selection in many fields (Azaldegui et al., 2023; Makwakwa et al., 2023; Mohamed et al., 2023; Raza et al., 2023; Rosa et al., 2023; Schryvers et al., 2023; Yatsalo et al., 2022).

For the comparison of the company sustainable performance have been used COPRAS (Zavadskas et al., 2008, 2009) multi-criteria decision-making method in composition with simply additive weighting, in order to evaluate companies sustainability level without and with its economic performance.

The normalized x values of the j criteria for the i alternative are calculated as follows when using the COPRAS technique:

$$\overline{x_{ij}} = \frac{x_{ij}}{\sum_{i=1}^{m} x_{ij}}, \text{ if min is preferable or max} \qquad (1)$$

$x_{ij}<0$, under conditions $x_{ij}<0$, $X_{ij}>0$, under conditions $x_{ij}>0$.

When applying the COPRAS method, optimality criterion Q_i is determined as follows:

$$Q_i = \frac{S_{+i} + \left(\min_i S_i \cdot \sum_{i=1}^{m} S_{-i} \right)}{s_{-i} \cdot \left(\sum_{i=1}^{m} S_{-i} / S_{-i} \right)}. \qquad (2)$$

Weighing is being done, basing on the average deviation by each separate criterion.

4. Data results and findings

For the initial evaluation it was collected the data about the biggest companies in UK, which publicly are reporting the information about their GRI standards and company performance.

The limitation of the research was limited access to data or, in some cases, time constraints.

However, below in Table 2 is presented information about the companies and the data, which have been taken into consideration in initial stage of calculations, which had presented open access to the information about their GRI criteria of sustainability.

Table 2. Data, collected for the empirical research

Company	Criteria of GRI for data collection
Royal Mail Group	Total number of employees in the company (GRI 102-8-a) Number of working women in the company (GRI 102-8-a) Number of working men in the company (GRI 102-8-a) Company income (GRI 201-1) Company energy consumption in GJ (GRI 302-1-e) Company's fuel consumption in GJ from non-renewable sources (GRI 302-1-a) Company fuel consumption in GJ from renewable sources (GRI 302-1-b) Company's direct CO2 emissions in tons (GRI 305-1-a) Indirect CO2 emissions of the company in tons (GRI 305-2) The organization's total amount of waste in metric tons (GRI 306-2) Average training hours per employee (GRI 404-1) Women's ch. percent in the board of directors (GRI 405)
Environmental Resources Management	
Burberry Group plc	
Unilever	
Marks and Spencer Group plc	
BT Group	
Diageo	
AnglianWater	

Based on the collected information, it was seen that taking into consideration only one period of the reporting would be difficult to analyse is there any correlation between sustainable decisions and the criteria which describes them in order to evaluate whether there is any link between them, which makes an impact on companies' economic performance.

So, the next data collection stage included analyses of the period from 2018 to 2021. This analysis included information about the three biggest companies from the previously presented data.

The most descriptive information about the last three years was collected about the Unilever company, which was tested to assess the final outcomes using multi-criteria decision-making methods.

The results of COPRAS method calculation are presented in Table 3.

Table 3. The results of COPRAS method calculations

Analysed period of time	The results of COPRAS (Q_i)/expediency*	Rank
2021	0.270043 (86%)	4
2020	0.272272 (87%)	3
2019	0.283253 (90%)	2
2018	0.313777 (100%)	1

Note: * Degree of usefulness.

The computations have been separated into two distinct stages. In the first of these, all of the GRI criteria, including the economic performance of the company, have been taken into consideration. The next task required excluding the company's income results so that a comparison could be made to determine whether or not there are any apparent differences between the results. The calculations show that compared to the previous year's results, the company's overall GRI score in 2018 (which also considers the company's economic performance) was the highest it could have been in 2018. However, when evaluating the company's score using the simply additive weighting method and excluding the results of (GRI 201-1), the results showed the opposite outcome. This was the case even though the GRI 201-1 income results were not included. The year 2021 received the highest possible score

Conclusıons

Many authors use different current policies or methodologies evaluating sustainability in their research. However, it needs to be clarified what the main pathway and strategy or future implications for sustainable decision-making in general are.

The literature review allowed concluding the sustainable methodology, which could be defined as the most reliable and suitable in order to evaluate first the level of sustainability of the investigated company. Global Reporting Initiative (GRI) standards were used as one of the most prevalent sustainability evaluation criteria. This index enables to assessment businesses function through the sustainable perspective.

After the comprehensive data collection for the research, it was lastly made the decision to focus on the biggest economically performing companies and to take into consideration their GRI results of the period from 2018–2021.

The results indicate that the company's overall GRI score in 2018 (which includes the company's economic performance) was the greatest it could have been compared to the other year's results. After examining the company's score using the simple additive weighting approach and ignoring the findings of (GRI 201-1), however, the opposite conclusion was reached. This was the case notwithstanding the exclusion of the GRI 201-1 revenue figures. 2021 achieved the best possible rating.

Concluding the results, it can be stated that basing on this particular case calculations, there is no perceptible link between the company's sustainable decisions and its economic performance. However, more cases need to be analysed and investigated to state these results as a tendency better than individual research findings.

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