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Sustainability reports and their impact on firm value: Evidence from Saudi Arabia

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ABSTRACT

This study aimed to clarify the significance of sustainability reports and test the impact of the disclosure of sustainability reports on firm value. To achieve this end, the researcher conducted an applied study of the firms listed on the Saudi stock market during the period from 2017 to 2021. A sample of (60) firms was selected with a total number of 300 data points. Firm value was measured using four different measures: Tobin's Q, market value per share, price/book value ratio per share, and security return. An indicator was created to measure the level of disclosure of sustainability reports and another to measure the quality of disclosure of sustainability reports. To measure the study's variables, the content analysis method was used. Based on the results of the regression analysis, the study concluded that an intrinsic correlation exists between the level of disclosure of sustainability reports and the firm value, as well as a correlation between the quality of disclosure of sustainability reports and the firm value. The study recommends the following: First, an accounting standard for the disclosure of sustainability reports should be issued. Secondly, sustainable development criteria should be included in the academic criteria at Saudi universities. Thirdly, meetings with accountants and members of the Saudi capital market and firms should be held to find solutions to the challenges facing firms when preparing sustainability reports. Finally, further scientific research should be conducted in this field.

Contribution/Originality: Most previous studies have focused on the two dimensions of environmental and social sustainability; the present study is the first to focus on sustainability in its three dimensions (economic, social, and environmental) and examine the relationship between sustainability reports and firm value in the Saudi capital market.

1. INTRODUCTION

Companies' main objective is to maximize their value and wealth. Maximizing the value of a company means maximizing the wealth of its investors by maximizing the market value of the stock. Thus, higher stock prices ensure that the valuation of the company is higher, which has an impact on investors' confidence in the current and future performance of the company. The stock price, therefore, is an important measure of investors' decisions. Given the importance of firm value, it is necessary to study the factors that affect it. One of the most significant factors that affect the value of firms is their disclosure of sustainability reports (Hariyani, Wahyuandari, & Salatnaya, 2022). Sustainability reports are an effective tool for bridging the information gap between company management and stakeholders, as they provide financial and non-financial information related to environmental, economic, and social performance. These reports have attracted the attention of researchers and international organizations due to their ability to enhance a company's reputation, financial and competitive performance, value creation, and attraction of long-term investments (Philipova, 2020). Therefore, it is expected that the disclosure of sustainability reports will affect investors' decision-making through their impact on the value of the company.

The Kingdom of Saudi Arabia has announced (13) programs to achieve the 2030 Kingdom Vision, including those to raise firms' awareness of the concept of sustainability with its three dimensions and the disclosure of it in reports. Despite the importance of firms' disclosure of their social responsibility and the adoption of social responsibility programs and initiatives, including the National Commercial Bank, Al Rajhi Bank, and Savola Group (Barbu et al., 2022), disclosure is still limited to brief phrases in the annual financial report or on the firm's website. This was confirmed through a review of the Global Reporting Initiative (GRI) database. It was found that the number of firms that voluntarily disclosed annual sustainability reports was very low, only (19) firms, which is weak compared to the Saudi economy. The firms that issued these reports most often were the "Saudi Electricity Firm" and "Saudi Telecom Firm" (STC). The financial reports of these firms included environmental, social, and governance (ESG) performance indicators. Remarkably, an analysis of the annual financial reports of firms in the Saudi capital market, in addition to the annual reports of the Board of Directors and the shareholder structure, revealed that most firms presented their data using economic standards and ignored social and environmental ones, leading to a decrease in the level of disclosure of sustainability reports, which then negatively affected the firm value (Knights, 2020). Therefore, the current level of disclosure does not meet the needs of users of financial statements, who require the disclosure of many non-financial items that are not provided by traditional financial statements to support the decision-making of stock market investors. Also, at the level of the Arab region, sustainability report disclosure is generally still limited, incomplete, biased, and driven by concerns of legitimacy. This provides more support for the necessity of better regulation and enforcement. Saudi firms' level of sustainability report disclosure is thus limited compared to that of firms in developed countries. Firms' failure to disclose these reports gives the impression that firms are not playing their part in social responsibility (Tamkeen Report for Administrative and Development Consultations, 2007). Therefore, there is increasing pressure on these firms to extensively disclose sustainability reports and provide further information on environmental, economic, social, and governance performance. Consequently, disclosure should not be limited to financial performance. Additionally, reports on the impact of the disclosed items on society should be prepared. Previous studies have differed in their results regarding the impact of sustainability report disclosure on company value. Some concluded that there is a relationship, and others that there is no relationship or that the relationship is neutral. Moreover, few studies have dealt with sustainability in its three dimensions (economic, social, and environmental), and, to the researcher's knowledge, most of those studies were conducted in countries other than the Kingdom of Saudi Arabia. Therefore, the current study aims to complement the efforts of previous studies, and its recommendations add to the research in this field.

The importance of the study stems from the importance of the variables that it tests, as the disclosure of sustainability reports is critical to stakeholders and society. Disclosure also gives investors and creditors a good impression of firm value and the factors affecting it. Thus, to fill the knowledge gap of previous literature in this field, the study examined the level of firms' disclosure of corporate social responsibility (CSR), the factors that affect firm value, and whether there is a relationship between the disclosure of sustainability reports and firm value. Accordingly, the study problem was formulated in the following question: What is the impact of the disclosure of sustainability reports on the value of companies listed on the Saudi stock market?

Based on the above considerations, this research contributes to the literature on sustainability reports and company value in several ways: First, this study is one of the most comprehensive studies on the relationship between the level of disclosure of sustainability reports and company value. Second, the study was conducted and tested the relationship between variables in the developing country of Saudi Arabia. Third, the study represents a starting point for academics to conduct further research on the level and quality of disclosure and quality of sustainability reports in developing markets. The paper is organized as follows: Section 2 presents a review of the literature related to sustainability reporting and company value, Section 3 outlines the empirical methodology, Section 4 contains a discussion of the results, and Section 5 presents the conclusions and recommendations.

2. LITERATURE REVIEW

2.1. Theoretical Background

Previous literature has focused on several positive theories of sustainability reporting, including legitimacy theory, stakeholder theory, institutional theory, and signal theory (Amran & Haniffa, 2011; Birjandi, Hakemi, & Sadeghi, 2015; Hahn & Kühnen, 2013; Jacob, Schaltegger, & Freeman, 2020; Matthew, 2004). According to the theory of legitimacy, companies operate under a "social contract" aimed at gaining social acceptance. This theory helps in understanding the need for companies to prepare sustainability reports to clarify the legitimacy of the company's activity, and it discusses why sustainability reports have become an "ethical" requirement. The stakeholder theory is that companies focus their strategy on consolidating their relationships with stakeholders to create the greatest amount of value for them, and, to achieve success and sustainability, executives must maintain the interests of stakeholders on a continuous and balanced basis. The theory clarifies stakeholders' need for information relating to the economic, social, and environmental dimensions of sustainability through reports. Legitimacy theory is linked to stakeholder theory and is useful in analyzing the determinants of non-financial sustainability reporting.

Institutional theory seeks to develop a view of the sociology of institutions, meaning the way they interact with and influence society. This theory provides another way to see organizations outside the traditional economic sphere; it studies the institutionalization of social aspects to understand the interaction between firms and stakeholders. As a result, the theory creates awareness of a new institutional space, which requires reference to the economic, environmental, and social clauses of responsible business, which is why non-financial reports came to solve the problem of information asymmetry among stakeholders. The signal theory, in turn, focuses on creating an "information bridge" between stakeholders to reduce information asymmetry; this theory helps to better understand the evolution of non-financial reporting. Deegan (2002) mentioned that the legitimacy theory is usually used in companies operating in developed countries, while the stakeholder theory is used in companies operating in developing countries because companies can more easily manage the interests of stakeholders; therefore, the current paper focused on the Kingdom of Saudi Arabia as a developing country governed by primarily Islamic norms.

The theories discussed above provide a theoretical background for understanding the literature relating to CSR and firm value. Companies adopt social and environmental practices that reduce production costs, improve transparency, reduce agency costs, help stakeholders make appropriate decisions, and improve companies' financial performance, which, in turn, is reflected in firm value.

2.2. Sustainability Reports: Definition and Importance

According to KPMG (2019), sustainability reports are "a tool used to bridge the information gap arising from the lack of information provided by the firm, and to meet the needs of stakeholders." Zabihollah and Tuo (2017) defined them as "an effective tool aimed at assessing the commitment of firms in the field of sustainable development and measuring and disclosing the firm performance with the aim of achieving sustainable development and taking responsibility towards internal and external stakeholders." Aggarwal (2013), on the other hand, defined them as "reports that contain information on the firm's performance in the economic, social and environmental fields, and the sum of these reports constitutes the net added value to society."

Accordingly, the researcher defined sustainability reports as annual reports that provide financial and non-financial information on the firm's economic, social, and environmental activities to evaluate the performance of firms in the long term, assist stakeholders in making decisions, and assess firms' risks and opportunities. Sustainability reporting helps organizations measure, understand, and communicate their economic, environmental, and social performance, and then set goals and manage change effectively (GRI, 2020). The GRI indicated that sustainability disclosure is a vital step to achieving a sustainable global economy through firms' accountability for the impacts of their economic, environmental, and social activities, as well as their positive or negative contributions to sustainable development. It also allows governments to evaluate firms' contributions to economic development (GRI 2016). The importance of sustainability report disclosure stems from the following (Alsayegh, Abdul Rahman, & Homayoun, 2020; Javeed & Lefen, 2019): (1) It improves the firm's reputation and trademark, positively reflecting on its performance and competitive position in the market and increasing its share value in the stock exchange. (2) It helps stakeholders understand the true value of the organization and make appropriate decisions. (3) It improves firms' financial performance, helps manage business risks, creates added value, and increases the growth opportunities of firms' projects. (4) It reduces information asymmetry and the costs of agency, as well as improving the accuracy of financial analysts' forecasts. (5) It improves the efficiency of operational performance, increasing profits by reducing costs, rationalizing the exploitation of resources, and maintaining the level of safety and public integrity of the firm's activities. (6) It measures and evaluates sustainability performance in all its economic, social, and environmental aspects, which enhances the firm's ability to develop long-term strategies and plans. (7) It reduces regulatory oversight, where firms that disclose sustainability reports are subject to fewer inspections, and governmental institutions give preference to them. (8) It reduces employment and training, as socially responsible firms can easily appoint highly qualified employees and establish good relationships with them, enjoying improved employee satisfaction and productivity, as well as reducing waste. (9) It enhances customers' loyalty and trust, resulting in increased sales and profits.

2.3. Sustainability Report Indexes

There are several sustainability report indexes, including 1) the Global 100 Index of the world's most sustainable firms, which was created by the Corporate Knights Report (2005) – firms listed on this index focus on clean capitalism (Knights, 2020); (2) the Dow Jones Sustainability Index; (3) the FTSE 4 Good Index, launched in 2001 by the Financial Times Stack Exchange (FTSE) in the United Kingdom to measure the performance of firms that meet globally recognized standards of corporate responsibility and demonstrate strong environmental, social, and governance practices (Fernando, 2022); (4) the Egyptian Index of Corporate Social Responsibility, launched in 2010, which aims to measure the performance of firms listed on the Egyptian stock market and raise the degree and quality of disclosure of environmental, governance, and social responsibility issues to investors in Egypt – it links CSR practices to the share price performance (Al-Asarg, 2018). The Guidelines of the GRI were established in 1997 and represent the most widely used standards for preparing sustainability reports. They are the most comprehensive and focus on environmental, societal, and economic sustainability (Guidelines for Preparing Sustainability Reports, 2018). The first version of the Guidelines (GRI/G1) was issued in 2000, and the second (GRI/G2) was issued in 2002. In 2016, the International Sustainability Reporting Standards Initiative, developed by the Global Sustainability Standards Board, was launched. The most current GRI standards are the GRI/G4 standards, which aim to improve the quality of the content of sustainability reports and help firms evaluate their sustainable development performance (Al-Shaer, Albitar, & Hussainey, 2022; Purushottam, 2020).

The most important indicators disclosed in sustainability reports (of a total of 91 indicators) according to GRI/G4 and used in the current study are the following: (1) Economic standards: economic performance (including standards such as revenue and employee wages), presence in the market (including standards such as the percentage of appointed board members from the local community), indirect economic effects (including standards such as the extent to which there are significant investments in the infrastructure of the financial community), and purchasing practices (including indicators such as the percentage of products and services purchased locally). (2) Environmental criteria: resources (including standards such as the total volume of materials used in production), energy (including standards such as the types and amount of fuel consumed), water (including standards such as how much water is used and how it is recycled), biodiversity (including standards such as the company's management strategy, waste, and products and services), compliance with environmental laws and regulations (including standards such as the number of legal offenses resulting from non-compliance with environmental laws), transportation (including standards such as significant environmental impacts of transportation of the company's products and production materials), and total expenditure on environmental protection (including standards such as waste disposal costs, emissions treatment costs, and environmental management costs), as well as environmental assessment of suppliers and environmental complaints mechanisms. (3) Social standards: labor and decent work (employment, relationship between employees and management, health and vocational safety, training and education, diversity and equal opportunities, non-discrimination, and evaluation of supplies in terms of labor practices and complaints mechanisms), and human rights (investment, non-discrimination, the freedom of forming syndicates, child labor (including standards such as the number of measures taken to prevent child labor by companies), forced or compulsory labor (including standards such as the number of measures in place to eliminate forced labor by companies), security practices (including standards such as the number of employees trained in human rights programs), human rights assessment (including standards such as the number of accidents to residents of areas surrounding production operations), supplier human rights assessment (indicators for identifying human rights impacts in the supply chain), and human rights complaint mechanisms (including indicators on the number of human rights complaints)); also, social standards include local communities, anti-corruption (including standards such as the number and percentage of corruption operations), public policy (including indicators of the value of political contributions), anti-competitive behavior (including standards such as the number of legal antitrust practices used), and compliance (including indicators of the number of violations as a result of non-compliance with laws and regulations), evaluation of suppliers regarding impacts on society and complaint mechanisms related to consequences on society, and product responsibility (including customer health and safety, product labeling, marketing communications, customer's privacy, and compliance). According to the GRI standards, the principles of sustainability reporting should include stakeholders, sustainability context, relative importance, and completeness, with the aim of preparing high-quality sustainability reports (Karagiannis, Vouros, Sioutas, & Evangelinos, 2022). According to Al-Saleh (2019), the principles of sustainability report quality include accuracy, balance, clarity, comparability, reliability, and publishing at the right time so that stakeholders can make rational decisions.

2.4. The Concept of Firm Value and Its Measurement

Firm value is a measure of the firm's total value and is usually used as a substitute for the firm's market value. A firm's main objective is to maximize its value and wealth by maximizing the market value of its shares, which maximizes the wealth of the firm's investors. Consequently, firm value is an important concept for investors. It is an indicator of how the firm is evaluated in the stock market, as the firm value, or market value, is reflected in the price of the shares. Therefore, high share prices mean the firm's evaluation is higher, affecting investors' confidence in the firm's current and future performance; thus, the share price is an important measure of investors' decisions. Firm value can be measured in the following ways (Ayman Issa, 2019; Cho, 2019; Haidar & Sohail, 2021):

- Tobin's Q Measurement: This is used to measure the firm value through accounting and market information. It represents the sum of the market value of common and preferred stocks and the book value of the total debts divided by the book value of the total assets. If the result is greater than one, the firm's performance is good, and its profits are high, which encourages investors to invest in this firm and vice versa.
- Security Return: This is one of the most important measures investors rely on when making their decisions. A rise in this rate means an increase in the market price of the share and thus an increase in the investors' wealth. Calculating this rate relies on market information only. It is the difference between the price of the current share and the price of the previous share divided by the price of the previous share.
- Market Value Added: The calculation of this value depends on both accounting and market information, as it is the difference between the market value of common and preferred shares and the book value of shareholders'

rights, divided by the book value of assets. An increase in the value of this measure indicates an increase in the market value of shares, maximizing investors' wealth.

- Price to Book Value per Share: Firms use the price-to-book value ratio to compare the market value of the firm to its book value. It is the result of dividing the price of the firm's share by the book value of the share.
- Market Value per Share: The firm's market value is one of the most common methods to calculate the firm value based on the total value of the firm, where the market value of the firm is based on the total value of its traded shares. Its calculation is the number of traded shares multiplied by the value of each share.

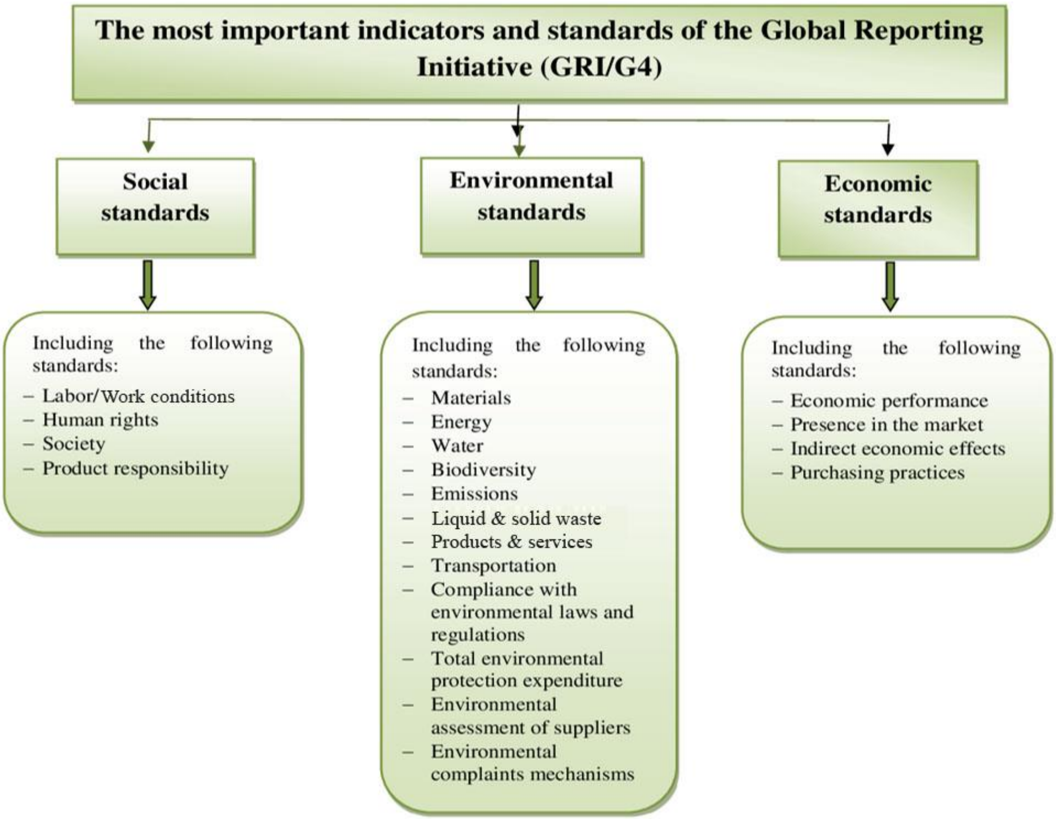

Figure 1. Standards of Global Reporting Initiative GRI/G4.

2.5. The Impact of Sustainability Report Disclosure on Firm Value

Previous literature has shown a discrepancy in the relationship between the disclosure of sustainability reports and firm value. However, most previous studies (Balatbat, 2012; Ghardallou, 2022; Hariyani, Ratnawati, & Rahmiyati, 2021; Li, Gong, Zhang, & Koh, 2018; Qamruzzaman, Jahan, & Karim, 2021) supported the existence of a positive relationship between the disclosure of social and environmental responsibility and firm value. These studies concluded that the positive relationship is due to the advantages of disclosing sustainability reports, which provide the firm with competitive advantages through which it can increase its sales, expand its market share, and improve its image in the business world. This means that increasing the disclosure of sustainability reports leads to an improvement in the relationship between firm and stakeholders, thus affecting an increase in the firm value, the enhancement of investors' decisions by attracting capital and long-term investments and increasing dealings in the firm's shares, and thus an increase in the prices of its shares. The findings of Al-Sayed, Eltaher, and Hendawy (2020) confirmed a positive and significant relationship between the level of CSR disclosure and firm value. The study also showed that increasing CSR disclosure enhances firm value through increased attention paid to improving the internal situation of the firm, such as its diversity, employee relations, and product quality, which promote employee loyalty and improve productivity. In addition, the disclosure of CSR information helps to meet the demands of stakeholders, which promotes the firm's reputation and thus positively affects firm value. Mohaisen, Al-Abedi, and Saeed (2021) concluded that sustainability disclosure is positively related to a firm's market value. However, the sustainability disclosure variable displayed weak explanatory power in explaining the variance in firm value. This result may be attributed to the low level of community awareness of firms' responsibilities towards the environment and society, as well as the mutual benefits for the firm and society. In contrast, other studies (Javeed & Lefen, 2019; Ratanacharoenchai, Rachapradit, & Nettayanun, 2017; Sarı & Ece, 2020; Utomo, Rahayu, Kaujan, & Irwandi, 2020; Uwuigbe et al., 2018; Zhang, Li, & Zhang, 2019) found a negative relationship between a firm's disclosure of sustainability reports and its value due to the high costs of increasing sustainability report disclosure, and the firm runs the risk of sustainability information leaking to competing firms, negatively impacting on the competitiveness of the firm and thus decreasing the firm value. Other studies concluded that there is no relationship between sustainability report disclosure and firm value (Carp, Păvăloaia, Afrăsinei, & Georgescu, 2019; Haidar & Sohail, 2021) because the impacts of the three economic, environmental, and social dimensions of sustainability may cancel each other. This leads to the absence of a fundamental impact of overall sustainability on firm value. Ramili (2016) confirmed an insignificant effect of the level of social responsibility disclosure of non-financial firms listed on the stock exchange on firm value.

Finally, yet other literature has illustrated that the relationship between sustainability report disclosure and firm value is mixed, as some of the three economic, environmental, and social dimensions have a positive relationship with firm value and other dimensions of sustainability have a negative relationship with firm value. Sobh (2014) concluded that Saudi firms' level of social responsibility disclosure was low and that there is a positive relationship between CSR disclosure and the volume of assets, capital, and profits. Al-Matarna (2019) confirmed that the level of sustainability disclosure among some Omani firms, especially in the environmental and social dimensions, was weak and that sustainability disclosure has a relationship with firms' financial performance, affecting the firm value. According to Cho (2019), there is a positive and significant relationship between sustainability disclosure and the performance and value of the firm. The study of Oncioiu et al. (2020) indicated that the disclosure of corporate social reports in Romania creates new opportunities to improve management practices, increase the firm's value and financial performance, and assist stakeholders in making appropriate decisions.

Also, Li et al. (2018) tested the impact of corporate ESG performance disclosure on company value. They studied (350) companies listed in the FTSE Index of the London Stock Exchange for the period (2004-2013). The results confirmed that improving transparency and enhancing trust for each of the dimensions plays an important role in improving the value of the company, with a positive correlation between the level of ESG disclosure and the company value. Ofori, S-Darko, and Nyuur (2014) confirmed a positive relationship between CSR activities and return on assets and shareholder equity. Al-Sarg (2014) confirmed the relationship between CSR and profitability, as firms that adopted social responsibility programs have a higher rate of profitability than those without similar programs, which leads to an improvement in the firm's financial performance, and thus its value.

Based on the above literature review, the study's hypotheses can be formulated as follows:

H01: There is no intrinsic relationship between the level of sustainability report disclosure and firm value.

H02: There is no intrinsic relationship between the quality of sustainability report disclosure and firm value.

Figure 2 illustrates the relationship between sustainability reports in its three economic, environmental, and social dimensions and firm value.

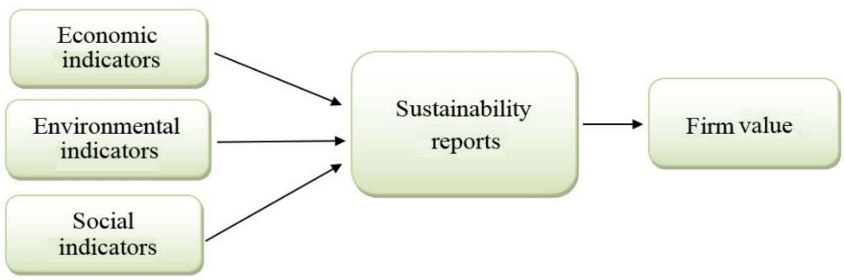

Figure 2. The relationship between sustainability reports and firm value.

3. EMPIRICAL METHODOLOGY

The study aimed to test the impact of sustainability report disclosure on the value of firms listed on the Saudi capital market.

3.1. The Study Data and Sample

The researcher selected a random sample of (60) firms during the period (2017-2021), with a total number of (300) data points. The industrial joint-stock companies listed on the Saudi stock market were selected from the following sectors: petrochemical industries, cement, energy and service facilities, construction and building, agriculture, and food industries, for the following reasons: In 2019, the Saudi industry witnessed a new transformation with the launch of Prince Mohammed bin Salman's "National Industrial Development and Logistics Program" within the Saudi Vision 2030. The industrial sector is one of the most active sectors listed in the Saudi market, especially the construction sector. It is one of the most active sectors in the Gulf in general and is expected to grow more in the coming years. Altogether, these sectors are the core of the Saudi economy, they contribute to community development, and they bear responsibility for preserving the environment due to their negative effects on the environment; this is an important area of social responsibility, and they have a duty to society in return for their depletion of its natural resources and wealth. Data were obtained from the annual financial reports of these companies during the study period, as well as the sustainability reports voluntarily issued by some companies, the companies' websites, and the Saudi Capital Market Authority (Tadawul) website www.tdawul.com, www.argaam.com, or www.mubasher.info.

3.2. Measurement of the Study Variables

To measure the study variables, the content analysis method was used, and the variables were divided into independent, dependent, and control variables as follows:

3.2.1. Independent Variables (X)

1- Sustainability report disclosure level (SR_1) was measured by giving weights to each dimension in the sustainability reports (economic, social, and environmental). The firm would take the value (0) if it did not disclose a dimension in the sustainability report, and the value (1) if it did disclose a dimension. The index of the level of sustainability report disclosure was measured using the following equation:

$$SR_1 \text{ (first hypothesis)} = (AD/TD)$$

Where (SR_1) is the sustainability report disclosure level, (AD) is the number of items disclosed by the firm in its reports, and (TD) is the total number of disclosure index items (economic, social, and environmental).

2- Quality of sustainability report disclosure (SR_2) was measured by giving weights to each element of the sustainability reports. The firm would take the value (3) if it disclosed the sustainability items in a way that was fully compatible with the requirements of the GRI/G4. The firm would take the value (2) if it disclosed the sustainability items in a way partially compatible with the requirements of the GRI/G4. The firm would take the value (1) if it disclosed in a way incompatible with GRI/G4. However, the firm would take the value (0) if it did not disclose the sustainability items at all. The index of the quality of sustainability disclosure reports was measured through the following equation:

$$SR_2 \text{ (second hypothesis)} = (AS/TS)$$

Where SR_2 is the quality of sustainability report disclosure, AS is the degree that the firm obtained (the quadruple index ranges from 0 to 3), and TS is the highest score a company can obtain (number of disclosure index elements x maximum index 3).

The researcher prepared an indicator for sustainability report disclosure according to the items mentioned in the Sustainability Disclosure Guide provided by the GRI/G4. It included (91) indicators of sustainability in (3) dimensions: economic, environmental, and social. The reason for using this guide is that it is used globally to assess sustainability, which helps to compare the sustainability reports of different companies at the international level, and the Kingdom of Saudi Arabia has a set of systems compatible with the concept of sustainability and the standards of the GRI, all of which are already binding on companies, including environmental conservation systems, the nature of materials and resources, work systems, and governance systems. Figure 1 shows the most critical economic, environmental, and social indicators of sustainability according to GRI/G4 that were used in the current study.

3.2.2. Dependent Variables (Y)

Based on the literature, four variables were used to measure firm value (FV): (1) Tobin's Q Measure (FV_1), (2) Market Value per Share (FV_2), (3) Price Ratio/ Book Value per Share (FV_3), and (4) Security Return (FV_4).

3.2.3. Control Variables

Following the literature, we included the following control variables: (1) the return on assets (ROA) ratio: net profit after interest and taxes divided by total assets, (2) the financial leverage (LV) ratio: total debt divided by total assets, and (3) assets turnover (AT) ratio: net sales divided by total asset average.

4. DISCUSSION OF THE RESULTS

4.1. The Results of the First Hypothesis

To test the first hypothesis, multiple data regression analysis was used to explain the relationship between the dependent variable represented as the firm value (FV), and the independent and control variables represented as the level of sustainability report disclosure (SR_1), return on assets (ROA) ratio, financial leverage (LV) ratio, and assets turnover (AT) ratio. Table 1 shows the most important results from the period 2017-2021. Next, Table 2 demonstrates the value of the correlation coefficients R, the determination coefficient R^2, adjusted R^2, the value of F, and Sig. F during the period 2017-2021 to assess the efficiency of the model. (The abbreviations used are explained in Appendix 1.)

Table 1. Results of regression analysis for the data during the period (2017-2021).

X	Y	SR_1			SR_2		
		B coefficients	T	Sig.	B coefficients	T	Sig.
FV_1	Constant	-0.585	-4.300	0.001	-1.196	-11.220	0.004
	SR	0.431	0.453	0.000	0.037	0.129	0.000
	ROA	5.712	3.8531	0.002	0.951	10.412	0.000
	LV	-0.446	-2.863	0.000	-1.914	-12.413	0.000
	AT	5.652	12.010	0.000	13.157	26.654	0.001
FV_2	Constant	-0.403	-10.571	0.004	-3.387	-19.765	0.003
	SR	0.001	3.915	0.000	0.180	3.281	0.000
	ROA	0.410	15.050	0.000	8.189	13.767	0.000
	LV	-0.278	-9.003	0.000	-5.344	-14.086	0.000
	AT	0.071	3.986	0.000	0.018	3.802	0.002
FV_3	Constant	-1.046	-14.784	0.003	-1.337	-8.953	0.009
	SR	4.128	11.985	0.000	0.054	0.628	0.000
	ROA	1.060	3.728	0.000	0.460	3.824	0.001
	LV	-2.273	-5.733	0.000	-0.067	-2.125	0.000
	AT	0.638	2.736	0.000	0.129	3.113	0.000
FV_4	Constant	-2.404	-15.222	0.012	-5.548	-15.265	0.001
	SR	0.042	6.080	0.000	0.034	4.062	0.000
	ROA	0.92	6.468	0.000	10.653	24.186	0.000
	LV	-0.009	-8.646	0.000	-4.573	-14.756	0.000
	AT	0.124	2.696	0.000	0.091	2.261	0.000

Table 2. Results of the regression analysis to test the significance of the model during (2017-2021).

X	Y	R	R^2	Adjusted R^2	F	Sig. F
SR_1	FV_1	0.853	0.727	0.707	147.557	0.000
	FV_2	0.983	0.967	0.962	192.028	0.000
	FV_3	0.945	0.893	0.883	83.788	0.000
	FV_4	0.981	0.963	0.943	48.140	0.000
SR_2	FV_1	0.730	0.533	0.529	112.804	0.000
	FV_2	0.777	0.603	0.572	37.277	0.000
	FV_3	0.821	0.674	0.622	177.607	0.000
	FV_4	0.832	0.693	0.616	130.174	0.000

Both Table 1 and Table 2 illustrate an intrinsic correlation between the independent variable (SR_1), the level of sustainability report disclosure, and the dependent variable of firm value (measured using the four measures described above), as well as the control variables of ROA, LV, and AT. The regression model is explained in detail using SR_1 and FV1 because it is the basic regression model in this study. This model clarifies the relationship between the level of sustainability report disclosure and firm value. Other measures are used to confirm the existence of a relationship between the independent variable and both the dependent and control variables. The multiple regression equation formula took the following form:

$$FV_1 = -0.585 + 0.431\ SR_1 + 5.712\ ROA - 0.446\ LV + 5.652\ AT$$

Through statistical analyses, the following results were reached: R^2 amounted to (0.727), and adjusted R^2 amounted to (0.707), which is a high ratio, indicating that sustainability report disclosure explains 70.7% of the variance of the firm value, and the remaining ratio (29.3%) can be attributed to other factors. There is an intrinsic positive relationship between the level of sustainability report disclosure (SR_1) and the firm value (FV_1) measured by Tobin's Q index and at a 5% level of significance. This indicates that when the level of sustainability reports disclosure increases, the firm value increases by 0.431. The value of the correlation coefficient (R) reached 85.3%, which is a high coefficient. There is an intrinsic positive relationship between the return on assets (ROA) ratio and the dependent variable (firm value FV_1) as measured by Tobin's Q index. This is a logical result, as it means that when the ROA rate increases by 1%, the firm value increases by 5.712. This disproves the study hypothesis. The Financial leverage (LV) ratio has a negative impact on the dependent variable FV_1, as measured by Tobin's Q index, as when LV increases by 1%, the firm value decreases by 0.446. The assets turnover (AT) ratio positively affects the dependent variable (FV_1) measured by Tobin's Q index. This is a logical result, as it is assumed that when AT increases by 1%, the firm value increases by 5.652. The significance of the model, calculated using the F value, reached 147.557 at a significance level of less than 5%, which is greater than the tabular value, and the significance of the independent variable (X) appeared high at a significance level (T) of less than (a = 5%), indicating a significant effect of this variable on the dependent variable, proving the accuracy of the model and the possibility of using it effectively. Accordingly, the study rejected the first hypothesis, and the alternative hypothesis was accepted, which assumes that there is a significant relationship between the level of sustainability report disclosure and firm value.

4.2. The Results of the Second Hypothesis

It is clear from the above tables that there is an intrinsic correlation of medium strength between the independent variable (SR_2), the quality of sustainability report disclosure, and the dependent variable of firm value (FV), measured using the four measures described above, and the control variables. The low overall quality of firms' disclosure of items in their sustainability reports is because most firms disclosed their sustainability reports in a way that is not in line with the requirements of GRI/G4. The regression model is explained using SR_2 and FV_1 because it is the basic regression model in the study. The multiple regression equation can be formulated as follows:

$$FV_1 = -1.196 + 0.037\ SR_2 + 0.951\ ROA - 1.914\ LV + 13.914\ AT$$

Through statistical analyses, the following results were reached: R^2 amounted to (0.533), and adjusted R^2 amounted to 0.529, which is a medium ratio, indicating that the quality of sustainability report disclosure explains 52.9% of the variance in firm value as measured by Tobin's Q index, and the remaining ratio (47.1%) can be attributed to other factors.

There is a positive relationship between the variable SR_2 (the quality of sustainability report disclosure) and the dependent variable (firm value FV_1), as measured by Tobin's Q. That is, when the quality of sustainability report disclosure increases, the firm value increases by 0.037, and the correction coefficient (R) was 73%. There is an intrinsic positive relationship between the ROA ratio and the dependent variable (firm value FV_1) measured by Tobin's Q index. Thus, when the ROA rate increases by 1%, the firm value increases by 0.951. This confirms that the study hypothesis is incorrect. The LV ratio has a negative impact on the dependent variable (FV_1), measured by Tobin's Q index; when LV increases by 1%, the firm value decreases by 1.914. The assets turnover (AT) ratio positively affects the dependent variable (FV_1) measured by Tobin's Q index.

This is a logical result, meaning that when the AT ratio increases by 1%, the firm value increases by 13.914. The significance of the model calculated as the F value reached 112.804 at a significance level of less than 5%, which is greater than the tabular value, and the significance of the independent variable (X) appeared high at a significance level (T) of less than (a = 5%), which indicates a significant effect of this variable on the dependent variable, proving the accuracy of the model and the possibility of using it effectively. Accordingly, the second hypothesis was rejected and there is an intrinsic relationship between the quality of sustainability report disclosure and firm value.

5. CONCLUSIONS, RECOMMENDATIONS, AND FUTURE STUDIES

The study investigated the relationship between sustainability reports and firm value. The researcher conducted an applied study of the firms listed on the Saudi stock market from 2017 to 2021, selecting a sample of (60) firms. The study proved the importance of sustainability reports with their three economic, social, and environmental dimensions because they help improve the financial performance of firms, increase firm value, and assist in the decision-making of investors and stakeholders. The results of the applied study demonstrated an intrinsic relationship between the level of sustainability report disclosure (SR_1) and firm value (FV), as sustainability report disclosure significantly enhances firm value by focusing attention on improving the firm's internal situation, increasing employees' loyalty and productivity.

It also helps in meeting the needs of stakeholders, which enhances the firm's reputation and social welfare, which is reflected positively in firm value. The results also showed that there is an intrinsic relationship between the quality of sustainability report disclosure (SR_2) and firm value (FV). Accordingly, the researcher recommends that, firstly, an accounting standard for the disclosure of sustainability reports is urgently issued. Secondly, awareness of the importance of the information contained in sustainability reports and its impact on financial performance should be increased.

Thirdly, firms listed on the Saudi market should be obligated to follow the rules of governance and disclose sustainability information in its three economic, environmental, and social dimensions in accordance with the requirements of GRI/G4. Fourthly, sustainable development and CSR should be included in Saudi universities' academic curricula. Lastly, further research should be conducted in the following areas: 1) testing the relationship between sustainability report disclosure and firms' financial and competitive performance, 2) exploring the impact of sustainability report disclosure on the management of profits, and 3) examining the role of other independent or control variables that were not addressed in the current study and their application in different periods.

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Appendix 1. Abbreviations of variables.

Variables	Symbol	Explanation of the abbreviation
Dependent variables	FV_1	Tobin's Q measure
	FV_2	Market value per shares
	FV_3	Price ratio/ Book value per share
	FV_4	Security return
Independent variables	AD	The number of items disclosed by the firm in its reports
	TD	The total number of disclosure index items (Economic, social, and environmental)
	AS	The degree that the firm obtained (The quadruple index ranges from 0 to 3)
	TS	The highest score a company can get (Number of disclosure index elements x maximum index 3)
	SR_1	SR_1 = (AD/TD)
	SR_2	SR_2 = (AS/TS)
Control variables	ROA	Return on assets = Net profit after interest and taxes/Total assets.
	LV	Financial leverage ratio = Total debt/ Total assets
	AT	Asset’s turnover = Net sales/ Total assets average.