



The Impact of Sustainability Accounting on Corporate Financial Performance, Evidence from Oil and Gas Company Sector in Egypt

Prepared by

Mahmoud Abdul Aleem Elkholy

Accounting department

Faculty of commerce – benha university

ellkholy79@gmail.com

*Scientific Journal for Financial and Commercial Studies and
Researches (SJFCSR)
Faculty of Commerce – Damietta University
Vol.1, No.2, Part 2., July 2020*

APA Citation:

Elkholy, M. A. (2020). The Impact of Sustainability Accounting on Corporate Financial Performance, Evidence from Oil and Gas Company Sector in Egypt. Scientific Journal for Financial and Commercial Studies and Researches (SJFCSR), Vol.1 (2) Part2. pp. 37-79.

Website: <https://cfdj.journals.ekb.eg/>

The Impact of Sustainability Accounting on Corporate Financial Performance, Evidence from Oil and Gas Company Sector in Egypt

Mahmoud Abdul Aleem Elkholy

1. Abstract.

This research is aimed to examine the effect of Sustainability accounting to corporate financial performance. Three material aspects reported in the Sustainability accounting such as economic performance information (ECO), environmental performance information (EN), and social performance information (SCO) are used as the independent variables in this research and the dependent variable is the corporate financial performance which is proxied by using sales growth. This research was conducted using mainstream positivistic quantitative methods to test the two formulated hypotheses. The questionnaire was designed and distributed to a sample of top management, cost accountants, managerial accountants, financial accountants, financial analysts, general employee Belongs to oil and gas companies in Egypt that interest to sustainability reports using GRI-G4 guidelines. This standard is the latest edition issued by the Global Reporting Initiative (GRI), which can be applied starting from 2018. The results presented that economics, environmental, and social aspects have a positive significant effect on corporate financial performance. And the two control variables (top management support and innovation) have a positive significant effect on the relationship between sustainability accounting and corporate financial performance. The practical implication of this research that, the oil and gas company must know the value of social, economics, and environmental report in sustainability accounting. Stakeholders become interested in such reporting, and they judge to give “value good image”. A good image is what helps enhance the financial performance of the company.

Keywords: Sustainability accounting, economic information performance, environmental information performance, social information performance, sales growth, GRI-G4, innovation, top management support

2. Introduction

Sustainability accounting is a new notion, it denotes how the company deal with the financial and non-financial issues including economic, environmental, social issues, nowadays, businesses meet a unique set of challenges that name to a new type of non-financial accounting and for a new set of standards to ensure that, it is useful. Some issues such as population growth, resource constraints, urbanization, technological innovation, and climate change can and do profound effects on business financial performance. (Hansen & Schaltegger, 2016). the prominent organizations in accounting professions, like the American Institute of Certified Public Accountants (AICPA), the Financial accounting standard board (FASB), and the Certified Financial accounting (CFA) institute aided authenticate the claims made by sustainability professionals about the necessity for sustainability accounting (Biswas & O'Grady, 2016). The sustainability accounting established to handle non-financial capital. The AICPA has mentioned, *"Accounting for Sustainability involves linking sustainability initiatives to company strategy. Evaluating risks and opportunities. Besides, providing a measurement of Accounting and management performance skills. To ensure that sustainability embedded into the day-to-day operation of the company."*(Khan et al., 2016) " While Institute of Management Accountants (IMA) describes the relationship between Sustainability and Accounting as *"connection can be made between non-financial reporting, financial value and the sustainable worth to the entity,"* the previous definitions of AICPA& IMA offering non- explicitly definition for sustainability accounting. Then, Sustainability Accounting Standard Board (SASB)'s a conceptual framework. Defines sustainability accounting, as, *"the measurement of a company's management of various forms of non-financial capital that impact the company's ability to create sustained long-term value* (Imoniana et al., 2018). *This includes human, social, and environmental capital. Besides, the impacts of governance, leadership, and innovation on value creation."* The Sustainability Accounting Standards Board (SASB). *' is an independent private sector standards-setting organization based in San Francisco, California dedicated to enhancing the efficiency of the capital markets by fostering high-quality disclosure of material sustainability information that meets investor needs'*.(Sands et al., 2016), although sustainability accounting

metrics cannot be expressed in monetary units, it discovered that its performance could have a financial impact.(George et al., 2016). Therefore noted, rising expenditure on activities related to sustainability activities such as environmental remediation and industrial energy management among oil and gas firms located in the United States of America. (Khan et al., 2016)). The sustainability accounting serves to both Financial and Managerial accountant for external reporting and internal reporting for informed decision-making. Where the main aim of Financial Accounting is preparing financial statements and reporting to external users. As, investors, creditors,..... etc. to make decisions to provide resources to the company. However, they have required more information than what has taken from traditional financial accounting reports alone. Financial reports account for financial performance in the past or at a certain point in time so the financial reports have not generally offered enough information to make enough forecasts of a company's future performance. Then, Sustainability Accounting has aided the financial accountant to report sustainability activities with financial reports to external users. To offer a comprehensive image of the overall firms' activities including financial and nonfinancial activities to enhance the decision of external users. Besides the main aim of Managerial Accounting is helping the management to perform its roles as decision –making, the Sustainability Accounting has aided the Management Accountant to report to decision-makers shortage and problems in performing sustainability initiatives to taking the correction actions (Eccles et al., 2014),(Passetti, E., Cinquini, L., Marelli, A., & Tenucci, 2014). Because of the importance of sustainability activities and there are differences in disclosure contents between firms, 'The SASB develops and maintains Sustainability Accounting Standards for 79 industries in 11 sectors that help public corporations have disclosed financially material information to investors in a cost-effective and decision-useful format'.(Cantele & Zardini, 2018). Managing and enhancing sustainability performance at the firm, sit a big challenge, and need collaboration with all members from the lowest level to the highest level at the firm. Therefore, this paper contributes to

- understanding of the importance of applying Sustainability Accounting.
- knowing the indicators of sustainability accounting.

- examining the influence of applying sustainability accounting on firm financial performance.
- Knowing the role of Top Management Support & Innovation to strengthen the relationship between sustainability accounting and firm financial performance focus on oil and gas company in Egypt for the reason, Although the oil and gas sector is the backbone of global economic progress. recognized as harmful the environment, abolishing surroundings and adversely affecting the livelihood of communities living near operation sites, the disruption of operations, as well as the increasing awareness concerning oil and gas as a non-renewable source of energy, has led to growing interest in sustainability activities in this sector (Gunarathne et al., 2016). Sustainability accounting is the topic that is motivated to study because The International Survey on Environmental Reporting conducted by the KPMG 2015 stated that the rate of reporting has increased from 28 % to 73 % between the years 2002- 2015. The rise in sustainability reporting is due to the growing awareness of the value of sustainability reporting for the stakeholders as well as to the companies. (Khodair, 2019)

3. Research problem and importance:

After the previous introduction. It clarifies that traditional financial reports that are focused on economic disclosure only have limited value for stakeholders such as stockholders and investors, which disappoints to offer useful information that enables interested users to assess the financial performance of the company, where The Institute of Chartered Accountants in England and Wales (ICAEW) noted that the insufficiency of financial reporting and its inability to provide the basic needs of investors was one of the reasons for Financial Crises in 2008. As a result, there is a huge stress on the accounting profession to substitute its traditional role and requests that financial reports disclosures needing to include along with the results of the economic performance as well as the results of the social and environmental performance of a company, which is known as sustainability accounting (GRI, 2016). The disclosure of sustainability in the developing countries especially in oil and gas companies in Egypt is voluntary. There are no laws or regulations obligate companies to disclosure the sustainability indicators. Therefore, some companies are fully or partially disclosing the indicators of

sustainability. Therefore, this research aims to examine the impact of sustainability accounting disclosure on the financial performance of the oil and gas company sector consistent with G4 reports published by the Global Reporting Initiative. So, I can summarize the aim of this paper into two questions.

- (1) How does Applying Sustainability Accounting effect on corporate financial performance drawing on Evidence of an Oil and Gas Company?
- (2) The role of Top Management Support & innovation to strengthen applying of Sustainability Accounting to effect on corporate financial performance.

4. Literature review

A considerable amount of literature has been published on the effect of sustainability on financial performance. (Khodair, 2019), it examines the effect of sustainability accounting on corporate financial reporting. It has surveyed a sample of 300 Egyptian listed companies, 1200 questionnaires were disseminated to managers, accountants, and auditors. It was found that there is a statistically significant influence of sustainability accounting elements on financial reporting, the total influence of sustainability accounting on financial reporting is weighted by 43.3%. environmental elements of sustainability accounting explain about 24.3%, the social elements explain about 23.5% and the economic elements explain about 35.2%, it also indicates that implementing sustainability accounting have obstacles represented mostly in the management unawareness of the importance of sustainability accounting, consequently management avoidance of reporting its social and environmental activities. (Al-Dhaimesh & Al Zobi, 2019), it aims to study the impact of sustainability accounting disclosure on the financial performance of banks operating in Jordan from 2013 through 2017, it used the content analysis method. The features of sustainability accounting disclosure were measured through indicators that have been developed for this purpose, which are following global reporting initiative (GRI) (G4), its results discovered that there is a statistically significant effect of sustainability accounting disclosure on financial performance also the study's results exposed that the reporting of the economic and social dimensions had a positive effect on return on equity (ROE). While the environmental indicator did not affect the return on

equity (ROE) besides. The results of the study exposed that the reporting of sustainability activities (economic, social, and environment) had a combined effect on the return on assets (ROA) the study concluded at the end the banks operating in Jordan give more priority to the economic indicator reporting, than to the social and environmental indicator. (Weber, 2017), it aims to analyze the connection between the sustainability performance of Chinese banks and their financial indicators. To discover whether sustainability activities can be implemented without decreasing the financial performance of the banking sector. The study examined reports and websites of Chinese banks. Categorized different corporate sustainability aspects and used panel regression and Granger causality as statistics tools to analyze cause and effect variables, It finding out the environmental and social performance of Chinese banks increased significantly between 2009 and 2013, and also it found a bi-directional causality between financial performance and sustainability performance. (Wiengarten et al., 2017), have concentrated on the behavioral perspective of sustainability, where, they have investigated how the employment of chief officer of corporate social responsibility(CSR) to the Top Management Team (TMT) impact on firm performance moreover, explore some certain characteristics of the newly appointed chief executive of CSR impact on a firm's financial performance. They have argued that appointing of chief executive of CSR under certain condition & characteristics result in improving the financial performance of a firm, furthermore if the appointee is female and has a CSR functional background the more financial performance benefits achieved. (Sands et al., 2016), have aimed to examine the feasibility of integrating the social, environmental and innovation processes within the four- perspective sustainability balanced scorecard (SBSC) model by determining the extent of linkage between and within the four SBSC perspectives, they have demonstrated direct associations between value-creating processes within the internal process perspective with the social, environmental and innovation processes. These results backing the viability of integrating the environmental, social, and innovation-oriented value-creating process into the internal process of the four – perspective SBSC model. Where also, have argued evidence about the extent to which direct or indirect associations exist between the four SBSC perspectives. First, the direct association of human capital (learning and growth perspective) with value-creating processes (internal

processes perspective). Second, the direct association of value-creating processes (internal processes perspective) with customer value (customer perspective). and third, direct associations of value-creating processes (internal processes perspective) with financial performance (financial perspective). these reflect the role of embedded Sustainability Accounting to corporate strategy leads to improve corporate financial performance. (Dufwa, 2015), have demonstrated the relationship between sustainable performance and firm performance within the basic materials industry. She has argued a negative relationship between sustainable performance, (using Thomson Reuters Asset4 ESG-index) and financial firm performance (return on assets and Tobin's q) for a panel data sample between 2003 and 2013 of 94 European basic materials firms (Zhang & Chen, 2017)., have aimed to investigate the relationship between corporate sustainability performance and financial performance in a new contextual setting in Sweden. As well, as have investigated the impact of board diversity on the relationship. It found a positive relationship between corporate sustainability and financial performance; moreover, educational board diversity has an impact on the relationship between sustainability and firm profitability. (Ameer & Othman, 2012), have investigated companies, which are exercise sustainable practices compared to those that do not engage in such practices. They have found the higher financial performance of sustainable companies has been increased, where the financial performance has measured by sales growth, return on assets, and profit before taxation and cash flows from operations. (Chiong, 2010), has aimed to investigate the relationship between corporate sustainability disclosure level and financial performance; (Return on equity, Debt to equity, and Revenue growth). He has argued the level of sustainability information disclosed by companies can be improved to achieve requirements for stakeholders if the international accounting standards board developing an accounting standard for corporate sustainability reporting to increase the level of disclosure of sustainability information and to harmonize reporting practices. Besides, he has found there no significant relationship between sustainability reporting and financial performance and there is a negative relationship between the level of disclosure of environmental information and debt to equity ratio.

Based on the previous literature, some of the studies have argued that. There is a relationship between sustainability activities and financial performance, negative or positive. Besides, others have not found this relation. This back for different environmental research and the nature of companies in this area.

Moreover, in the accounting literature, it has been found that there is a scarcity of studies that scrutinize the concept of sustainability in the oil and gas sector in Egypt, and its effect on sales growth, as a measure of corporate financial performance. so, I will try to investigate the impact of sustainability accounting on sales growth, in the Oil and Gas Company Sector in Egypt. Therefore, this study constitutes value to this field.

5. Theoretical framework and development of hypotheses

5.1. Sustainability Accounting (SA) Corporate Financial Performance (CFP) relationship

Sustainability accounting is a real cure that enables companies to be more sustainable and it reinforces the important role of financial information. It spreads the monetary value information to include the environmental, social and economic impacts which finally influence the process of decision making, (Menegaki & Tugcu, 2016) Therefore, the efficient performance of sustainability accounting and subsequently reporting can have the following advantages:

- It reflects stakeholders about how the firm interested in sustainability activities. it enables stakeholders to get knowledge about the true value of the firm. (George et al., 2016).
- It displays the cost reduction and savings from environmental and social external costs resulted from a commitment to sustainability.
- It is a mean to manage risk as it shed light on social and environmental risks related to current financial performance. Besides, it highlights the opportunities available not only the risks. (Hörisch et al., 2015).
- It offers a benchmarking device to evaluate sustainability performance. Besides, it reports financial and non-financial performance. (Schneider, 2015).
- It enables potential cost savings and broad risk management. To direct stakeholders that are interested in the firm's sustainability activities (Weber, 2017).

- The information included in the economics dimension (ECO) persuade stakeholders about prospective competitive capital resources and a low level of risk. Also, can show their company's contribution to the economic development of local communities. Sustainability disclosure report is seen as a positive act by the company to keep trust and good relations with investors and creditors that will invest in the company. The confidence sense of investors and creditors in corporate sustainability will improve the company's reputation or image. (Caesaria & Basuki, 2017), (Ng, 2018)
- The company reacted to public pressure by using environmental reporting, Environment category in GRI G4-2018 contains the impacts associated with the inputs (such as energy and water) and outputs (such as emissions, effluent, and waste). The use of input and output generated by the company prompts a variety of environmental problems. Then the company is required to avoid, diminish, and amending the damage as a procedure and responsibility to the environment. Clearness of the company's contribution to protecting the environment will make stakeholders know and understand the actions done by the company as a procedure and responsibility to the environment. Then the company will gain assessment and support from its stakeholders so the company's business operations will run more efficiently. (Xiao et al., 2018)
- The company's concern increased in the emphasis of social activities while maximizing the economic performance to satisfy shareholders. The company commences social responsibility for the benefit of society. Through enlightening the social aspects of sustainability, Social responsibility is not only for external but also internal stakeholders. The accountability to the internal side means the company is required to care about employee health and safety, the fairness of chance in competition between male and female employees, and human rights aspects. While, to external parties, the company is required to encourage anti-corruption policies, anti-competitive and monopolistic practices that can hurt the stakeholders. Also, labeling products for the health and safety of customers. Execution and report on social responsibility towards

stakeholders can not only increase the price of the company's stock but also enhance the welfare and employee loyalty, lower turnover rate of employees that can lead to increased productivity. When productivity increases, the company can further enhance the image or company's value in the eyes of all stakeholders. (Cantele & Zardini, 2018), (Joseph, 2012)

Thus, corporate sustainability leaders exercise good management and thus achieve a competitive advantage that helps them to outperform their competitors financially (Wiengarten et al., 2016). Good management theory defines sustainability performance as a subcategory of general management performance, where, the general management performance consists of different aspects, one of which is, the sustainability management. (Wiengarten et al., 2017). As literature reviews, sustainability accounting affected corporate financial performance, where if the firm interested in sustainability activities. (Economic, environmental, and social). These have an effective impact on employees, customers, suppliers, potential investors, stakeholders. These enable the firm to more trusted and acquiring comparative advantages in its sector and its products would more be requested in the market because it follows more transparency in the discourse of sustainability activities.

Therefore, we assume that sustainability Accounting (SA) and Corporate Financial Performance (CFP) are positively related. these arguments lead to the following hypothesis

H1: there is a positive relationship between the sustainability accounting performance (report of economic, environmental, social performance information) of oil & gas companies and their sales growth.

5.2 Impact of Innovation and Top Management Support on the relationship between SA and CFP

Innovation:

firm working in business-to-consumer markets have been increasingly pressured to surpass the focus on economic and technological innovations and to concentrate more environmental-friendly and socially desirable products and services, i.e. to engage in Sustainability-oriented Innovation (SOI). (Hansen et al., 2011),

innovation contests can create more sustainable performance-oriented environmental and social activities. In quest of to attain sustainable activities and eco-efficiency, firms are led to develop new products and to develop existing processes to reduce their use of resources and the environmental harm caused by their practices. In other words, firms are demanded to innovate. Innovation is generally considered to be an important facet of most businesses as it can lead to a competitive advantage (Ferreira et al., 2010), also, there is Evidence shows that companies with greater emphasis on a business model based on innovation have faster-operating margin growth and higher sales growth. also, for manufacturing firms, process innovation plays a vital role in maintaining competitive advantage, as it is generally a key factor in safeguarding long-term profitable growth. (Wiengarten et al., 2016). Innovations can be described in various modes, as, adoption of new systems, policies, programs, processes, products or services, which can be internally or externally created, While product innovation can add significant changes to existing products or manufacturing of new products, process innovation considers significant changes to the internal production processes. Both product and process innovation affect sustainability activities (Sands et al., 2016). development of new products, more advanced technological processes, have led to improving cost structures of product or service and this has a useful impact on the sales growth of a firm. (Ferreira et al., 2010). In other words, sales growth is likely to be associated with both product and process innovation and may consequently improve the competitive position of firms.

Innovation is at the forefront of a firm's ability to successfully differentiate itself from rivals and achieve a sustainable competitive advantage (Gök & Peker, 2017). Innovation and the related firm capabilities are strong intangible assets that are difficult to emulate within a short time. A firm's innovation efforts may enable the acquirement of resources and decrease their average costs through more productive resource utilization; Thus, innovation performance develops the firm's financial position (Rubera & Kirca, 2012). In other words, innovation is one instrument through which a firm obtains exceptional vision about, and access to, firm-specific resources with a positive future value. Thus, firms can realize larger margins on innovative products (Andries, P., & Faems, 2013). and innovation also provides organizations

with a tool for creating competitive advantage in the marketplace that in turn generates superior financial performance, besides, new products can allow a firm to lower its costs by targeting its current customers with new and improved products instead of having to incur the expenses related to finding new customers for its existing, older products. There is a significant direct link between innovation efforts and financial performance (Theoharakis & Hooley, 2008).

(Roberts, P. W., & Amit, 2003) emphasize that firms that are more active and consistent in their innovative activity tend to experience superior competitive position and financial performance.

The social, environmental, and financial components of sustainability should be embedded within a firm's internal processes because these modules are fundamental elements of innovation - orientated (IO) internal process. (Lang-Koetz et al., 2010)

Two complementary sustainability checkpoints approaches have been suggested to integrate the social, environmental, and financial components within an IO internal process: a "rather mechanical" approach and a "focus on the individuals in the process" approach (Gunnar & Große-dunker, 2013).

First, the "rather mechanical" approach (related to social and environmental risk analysis to appraise potential environmental & social impacts along the entire product's life cycle) is important at the beginning of the innovation process to serve sustainability activities. because 80 percent of sustainability effects can already be addressed in the Conception stage (Lang-Koetz et al., 2010). Second, extensive knowledge of environmental and social structures and relationships is vital for the "focus on the individuals in the process" approach, thereby necessarily involving a wider range of stakeholder groups, which may contribute to the development of sustainability innovation-oriented (Lozano, 2012).

The process innovation results in the efficient and effective use of resources, thereby protecting the environment and improving the financial performance of the firm. Innovation can play a vital role in improving economic growth and has the probable to bring about change and create chances for every business to use innovative technology to improve firm performance (Andries, P., & Faems, 2013).

Innovation as a key factor contributing to firm performance. Several studies analyze the direct effects of innovation on corporate

performance. (Mustafa & Yaakub, 2018), (Prange & Pinho, 2017), (Rosli & Sidek, 2013), (Ullah, 2020), (Wang, 2016).

The impacts of innovation on the performance of a firm can be exhibited by both financial and non-financial indicators, (Mashal, 2017). innovation, it is important to have both internal and external R&D, as well as to develop employees. according to the.

Above, we have concluded, there is a positive relationship between innovation and corporate financial performance and sustainability accounting.

Top Management Support

Top management support is the most important factor for success in applying sustainability accounting. top management support was actively implored to ensure that the integration of sustainability in the firm was effective for firms' financial and non-financial growth (Colwell, S. R., & Joshi, 2013). the sustainability integration in performance management systems might lead to better management and control of sustainability performance in firms (George et al., 2016). Sustainability activities may be gradually added in management control systems (MCSs), and environmental, social and economic concerns gradually combined into Sustainability control systems (SCSs) that are growing into more comprehensive systems (Gond et al., 2012), based on (Gond et al., 2012), top management have known the support of applied sustainability accounting in firms these lead to more refresh in the firm in more financial and non-financial aspects. because applied sustainability accounting leads to more transparency about environment, social, and economic issues doing by a firm, these have an impact on the confidence of customers, investors, supplies,....., etc. to the firm. These directed to improve firm reputation and could have more market share and growth in its sale. The personnel involved in the firm had to teach themselves about the concept of sustainability accounting to implement its issues and known its benefits for the firm, especially the older generation, resisted a sustainable orientation. "*Some[managers] would say, 'this is a very good and nice thing, but we are not a charity club, we are a business entity' or 'It doesn't make sense to me'.*" (George et al., 2016)" through Communication channels such as emails and conferences and meetings and brainstorm sessions were used by the top management to change employee attitude and create awareness of implement sustainability accounting, this means the top management support is more necessary to establish the company's sustainability accounting framework. sustainable

firms follow a comprehensive sustainability logic that integrates economic, environmental, and social considerations regarding present and future generations. How do business firms deal with the challenges of sustainable development? through top management support. (Schneider, 2015). to decide and constitute the sustainability accounting department, its main task collects, summarizes, analysis, and reporting and disclosure information about sustainability activities internally and externally of the firm. according to GRI standards, the practices of both sustainability accounting and top management determine whether business firms can contribute to sustainable development (Baumgartner, 2014).

Top management support is defined as dedicating time to sustainability accounting in proportion to its cost and capability to survive the financial performance of the firm, reviewing plans, following up on results, and facilitating the management problems involved with integrating sustainability accounting with the management process of the business. These activities will be assumed to be undertaken by a senior management firm sponsor/champion, the CEO, and the other senior managers. (Young & Jordan, 2008)

Therefore, we assume that innovation (INVO) and top management support (TMS) affect positively on the relationship between SA and CFP. these arguments lead to the following hypothesis

H2: Management Support & Innovation affect positively on the relationship between SA and CFP

Table 1: Theoretical framework and developed hypotheses

H1	Sustainability Accounting (SA)	positive SA-CFP relation (+)	(CFP)
H2	Top Management Support & Innovation (TMS&INVO)	(TMS&INVO) effect on the relationship between (SA&CFP)	(SA)&(CFP)

6. Methodology

The overall purpose of this paper is empirically test hypothesized causal relationship between SA and CFP and the impact of top management support and innovation in this relationship for oil and Gas companies in Egypt. In particular, the impact of SA applied to financial performance will be analyzed. In the first step, a *correlation analysis* containing the variables SA, CFP, TMS, and INVO measures the degree

of linear association. Thus, it is not implied that changes in one of the variables will lead to changes in all remaining variables. The relationship between SA and CFP, i.e. the movements in the two variables, will then be tested with a regression analysis.

6.1 Sample and data

To see the effects of SA on CFP, we first need to identify firms that have placed a high level of focus on sustainability activities (economic, environmental, social), as a segment of the firm's strategy. Moreover, we need to find firms that have adopted these policies, so the company has been scheduled in S&P/EGX/ESG and adopted a comprehensive set of firm policies related to the environment, employees, community, products, and customers chosen. The complete set of these policies have provided in the table below as discussed from Global Sustainability Standard Board (GSSB) which issued a consolidated set of Global Reporting Initiatives (GRI) sustainability reporting standards 2018 and supported by Sustainability Accounting Standard Board (SASB).

Table 2: Sustainability accounting indicators

No	code	Description
Economic performance indicators		
<i>Aspect: Economic performance</i>		
1	EC1	Direct economic value generated, distributed
2	EC2	Financial implication and other risks and opportunities due to climate change
3	EC3	Defined benefits plan obligation and other retirement plans
4	EC4	Financial assistance received from the government
<i>Aspect: market presence</i>		
5	EC5	Ratios of standard entry level wage by gender compared to local minimum wage
6	EC6	The proportion of senior management hired from the local community
Environmental performance indicators		
<i>Aspect: water and effluents</i>		
7	EN1	Interactions with water as a shared resource
8	EN2	Management of water discharge-related impacts
9	EN3	Water withdrawal
10	EN4	Water discharge

Mahmoud Abdul Aleem Elkholy

No	code	Description
<i>Aspect: environmental compliance</i>		
11	EN5	Non-compliance with environmental laws and regulations
Social performance indicators		
<i>Aspect: employment</i>		
12	SO1	New employee hires and employee turnover.
13	SO2	Benefits provided to full-time employees that are not provided to temporary or part-time employees;
14	SO3	Parental leave
<i>Aspect: rights of indigenous people</i>		
15	SO4	Incidents of violations involving rights of indigenous peoples
<i>Aspect: human rights assessment</i>		
16	SO5	Operations that have been subject to human rights reviews or impact assessments
17	SO6	Employee training on human rights policies or procedures
18	SO7	Significant investment agreements and contracts that include human rights clauses or that underwent human rights screening
<i>Aspect: local communities</i>		
19	SO8	Operations with local community engagement, impact assessments, and development programs
20	SO9	Operations with significant actual and potential negative impacts on local communities

Source: global reporting initiatives 2018

A random sample of respondents has drawn from selected Egyptian gas and oil firms that are scheduled in S&P/EGX/ESG. and the questionnaires have been mailed to them, to reply the questionnaires as they would be practiced of the firm's methods and policies, specifically concerning the sustainability activities and practices, this study depends on several sources to gather data including postal survey, emails, and personal contact of the respondents. Furthermore, the mobile was also used to clarify the major idea of research to some of the respondents (*if essential*). The respondents have been chosen from a lot of areas including accountants, analysts, general employees, and members from the top management. 60 out of 100 questionnaires (60%) were returned,

thus, the statistical analysis is based on a sample size of 60. Table 3 shows the sampled respondents per the respondents' job. As follows.

Table 3: Sample distribution

<i>Respondents' job</i>	<i>Number of respondents</i>	<i>%</i>
Top management	5	8.3%
Cost accountants	20	33.3%
Managerial accountant	15	25%
Financial accountant	14	23.3%
Financial analysts	4	6.6%
General employee	2	3.3%
Total	60	100

6.2 Research design

The research approach is a combination of deductive and inductive approaches; the research attempts to scan the extent of realizing sustainability accounting and its effect on corporate financial performance through surveying a research method in some selected firms in Egypt (Deductive Perspective). In contrast, the study is looking to settle the vital effect of running sustainability accounting on corporate financial performance (Inductive Perspective). Furthermore, the survey depends on a questionnaire that was established to collect data from the selected sample. To improve the questionnaire, a study was carried out to adjust and/or eliminate some variables and questions, the observations and responses were collected from practitioners.

6.3 Variable measurement

6.3.1 Independent Variables

This current study is handling sustainability accounting activities (economic, environmental, social) as a principal independent variable that will be measured to highlight the impact degree of running SA activities disclosure on the CFP. Nonetheless, after revising numerous preceding studies in the field of sustainability accounting. Like, (Khodair, 2019), (Al-Dhaimesh & Al Zobi, 2019).

6.3.2 Dependent Variable

The fundamental dependent variable of the current study is the corporate financial performance, which has measured by sales growth

6.3.3 Control Variables

Adopting and running the values and activities of SA requires considering many variables that might influence the relationship between SA and corporate financial performance. So, the current research paper is going to depend on two control variables; top management support & innovation.

Table 4 represents the description of all research variables

Table 4: Description of the main variables

Variable	Definition
SA	Sustainability Accounting
ECO	Established Six questions to measure this item, which related to economic performance and market presence.
ENV	Established Five questions are to evaluate this item, which related to water, effluents, and environmental compliance.
SO	Nine questions are established to measure this item, which is related to employment, rights of indigenous people, human rights assessment, and local communities
CFP	Seven questions are constituted to evaluate this item, which is related to sales growth
Control Variables	
TMS	six questions are constituted to evaluate this item, which is related to knowledge and practices of top management attitude SA
INVO	Five questions are established to assess this item which is related to what extent innovation is a basic strategy in a firm

Source: the author has designed this table

Therefore, to investigate the relationship between SA and CFP, the researcher constitutes the subsequent regression equations:

$$CFP (Y) = \text{constant} + \beta_1 (ECO) + \beta_2 (ENV) + \beta_3 (SO)$$

$$CFP (C1) = \text{constant} + \beta_1 (ECO) + \beta_2 (ENV) + \beta_3 (SO)$$

$$CFP (C2) = \text{constant} + \beta_1 (ECO) + \beta_2 (ENV) + \beta_3 (SO)$$

Table 5: Description of the sub main variables

CFP(Y)	corporate financial performance measured by a sales growth
ECO1	the average value of aspect economic performance presented as a part of economic performance indicator according to sustainability accounting practices
ECO2	the average value of aspect market presence as a part of economic performance indicator according to sustainability accounting practices
ENV1	the average value of aspect water and effluents as a part of environmental performance indicator according to sustainability accounting practices
ENV2	the average value as a part of environmental compliance as a part of environmental performance indicator according to sustainability accounting practices
SO1	the average value of aspect employment as a part of social performance indicator according to sustainability accounting practices
SO2	the average value of aspect rights of indigenous as a part of social performance indicator according to sustainability accounting practices
SO3	the average value of aspect human rights assessment as a part of social performance indicator according to sustainability accounting practices
SO4	the average value of aspect local communities as a part of social performance indicator according to sustainability accounting practices
TMS	Top Management Support as a control variable
INNV	Innovation as a control variable

7. Results and discussion

This section argues the empirical research results by concentrating on three major analyses; descriptive statistics, correlation analysis, and regression analysis. First, descriptive statistics have been run to describe the essential features of the gathered data by presenting simple outlines concerning the sample in a practicable shape. Second, the goal of the research is to achieve the correlation test for examining the closeness of the relationships between all pairs of data sets, it indicates to whether and how deeply pairs of variables are related. Third, regression analysis is applied to forecast the change in corporate financial performance based on the change in the SA practices. Furthermore, this section evaluates the impact of control variables on the main research relationship.

7.1 Descriptive statistics

Table 6 depicts the results of the descriptive statistics to describe the major attributes of the sample. Therefore, this section examined the central tendency measures acceptance mean, median, and standard deviation. Besides, table 6 shows the minimum and maximum values of the research variables. (*Note: the numbers in table 6 in Question serial refer to the sequence of questions in the questionnaire that displayed in appendix I*).

Table 6: Descriptive statistics of the study's variables

Question serial	Variable	Mean	Median	SD	Min.	Max.
1	ECO1.1	4.87	5.00	.813	2	5
2	ECO1.2	3.83	4.00	.874	2	5
3	ECO1.3	2.17	3.00	.699	3	5
4	ECO1.4	4.10	4.00	.687	2	5
5	ECO2.1	3.95	4.00	.851	2	5
6	ECO2.2	2.20	2.00	.664	2	5
7	ENV1.1	3.27	3.00	.691	3	5
8	ENV1.2	4.08	4.00	.536	2	5
9	ENV1.3	4.59	5.00	.416	3	5
10	ENV1.4	4.27	4.00	.361	3	5
11	ENV2	4.95	5.00	.481	2	5
12	SO1.1	2.17	2.00	.547	3	5
13	SO1.2	4.42	5.00	.575	3	5
14	SO1.3	4.19	4.00	.601	3	5
15	SO2	4.08	4.00	.772	1	5
16	SO3.1	4.41	4.00	.361	3	5
17	SO3.2	3.12	4.00	.618	3	5
18	SO3.3	4.59	5.00	.595	2	5
19	SO4.1	1.47	2.00	.597	3	5
20	SO4.2	4.19	4.00	.601	2	5
21	Y1.1	4.29	4.00	.811	2	5
22	Y1.2	4.25	4.00	.695	3	5
23	Y1.3	4.42	5.00	.649	3	5
24	Y1.4	4.59	5.00	.461	3	5
25	Y1.5	4.37	4.00	.484	2	5
26	Y1.6	4.27	4.00	.639	3	5
27	Y1.7	3.46	4.00	.597	3	5
28	CV1.1	4.29	4.00	.427	2	5
29	CV1.2	4.75	5.00	.706	3	5
30	CV1.3	4.36	4.00	.637	2	5
31	CV1.4	4.44	5.00	.702	3	5
32	CV1.5	4.37	4.00	.522	3	5
33	CV1.6	4.51	5.00	.626	2	5
34	CV2.1	4.17	4.00	.501	4	5

35	CV2.2	4.47	4.00	.568	3	5
36	CV2.3	4.42	4.00	.498	4	5
37	CV2.4	4.37	4.00	.641	3	5
38	CV2.5	4.44	5.00	.641	3	5

Appendix 1 displays the details of questions in the questionnaire

It can be detected from the data in Table 6 that the mean value of ECO1.1, ENV2, SO3.3, Y4, CV1.6, CV2.5, is 4.87, 4.95, 4.59, 4.59, 4.51, and 4.44 respectively. In addition, standard deviations are 0.813, 0.481, 0.595, 0.461, 0.626, 0.641 respectively. This reveals that these six sentences have vital significance within the respondents.

- The firm must report revenues, operating costs, employee wages and benefits, payments to providers of capital, and the government to strengthen relationships with customers. to increase confidence between a firm and its customers. To generate revenues.
- It is focal that the company has reported significant fines and non-monetary sanctions. For non-compliance with environmental laws and regulation. To support relation to customers and increase its creditability in the market which affects growth its sales.
- The company must report the total number and percentage of significant investment agreements and contracts that include human rights clauses or that underwent human rights screening for acquiring the company's competitive advantage.
- Company set up new branches in states is an indicator of the increase in growing sales.
- The top management has set up seminars to discuss ways to improve the company's sustainability practices is an indicator to top management support as control variables to apply sustainability accounting.
- The company has adopted contemporary ideas, which extracted from the international conference; it is also an indicator of innovation as control variables to support applying sustainability accounting.

It can be detected also from the data in Table 6 that the mean value of ECO1.3, SO1.1, SO4.1, 2.17, 2.17, 1.47, respectively. In addition, standard deviations are 0.699, 0.547, and 0.597, respectively. This reveals that these three sentences

have less significance within the respondents. Where the respondent founding that

- not important that the company report if the company can pay its liabilities from its general resources and has a separate fund to pay the plan's pension liabilities.
- not important that the company reports total numbers and rate of new employee hire and employee turnover at the end of each financial year by age group, gender, and region.
- Also, not essential that the company report percentage of operations with implemented local community engagement, such as local community development programs based on local community's needs, local community consultation committees, and processes that include vulnerable groups. Works councils, occupational health, and safety committees.

7.2 Correlation analysis

Table 7 portrays the correlation matrix, which displays the relationships among all variables. The correlations bring up whether and how firmly pairs of variables are associated.

Table 7: Correlation matrix of the study's variables

Variable	ECO1	ECO2	ENVI	ENV2	SO1	SO2	SO3	SO4	CFP	TMS	INVO
ECO1	1.00	0.997**	0.445*	0.353*	0.654*	0.532*	0.352**	0.252**	0.757*	0.423*	0.252*
ECO2	0.997**	1.00	-0.552*	0.442*	0.225**	0.321**	0.545*	0.125*	0.545*	0.225*	0.352*
ENVI	0.445*	-0.552*	1.00	0.554**	0.352*	-0.125*	0.252*	0.131**	0.422*	0.752*	0.852*
ENV2	0.353*	0.442*	0.554**	1.00	0.454*	0.255*	0.374*	0.125*	0.322**	0.654*	0.232*
SO1	0.654*	0.225**	0.352*	0.454*	1.00	0.525*	0.658*	0.781**	0.545*	0.754*	0.542*
SO2	0.532*	0.321**	-0.125*	0.255*	0.525*	1.00	0.454*	0.352*	0.655*	0.442*	0.232*
SO3	0.352**	0.545*	0.252*	0.374*	0.658*	0.454*	1.00	0.547*	0.642*	0.222*	0.542*
SO4	0.252**	0.125*	0.131**	0.125*	0.781**	0.352*	0.547*	1.00	0.425*	0.526*	0.752*
CFP	0.757*	0.545*	0.422*	0.322**	0.545*	0.655*	0.642*	0.425*	1.00	0.842	0.452
TMS	0.423*	0.225*	0.752*	0.654*	0.754*	0.442*	0.222*	0.526*	0.842	1.00	0.664*
INVO	0.252*	0.352*	0.852*	0.232*	0.542*	0.232*	0.452	0.542*	0.452	0.664*	1.00

**Correlation is significant at the 0.01 level (2-tailed).

* Correlation is significant at the 0.05 level (2-tailed).

As exhibited in Table 7, correlation matrix values reveal that. Numerous positive relationships among variables that are fluctuating between weak, middle, strong, and significant associations. The value (0.757) suggests strong a positive correlation between economic

disclosure indicators (ECO1) in the SA indicators and growth in sales (CFP) besides, there is a positive correlation fluctuating between weak and middle of other components that are involved in SA indicators and growth in sales This is clear from values; (0.545, 0.422, 0.322, 0.545, 0.655, 0.642 and 0.425) respectively this consistent with more studies such as (Sands et al., 2016), (Wiengarten et al., 2017). This finding confirms partially the validity of H1. Further, top management support & innovation represent control variables in this study where they determine to what extent the firm can adapt and apply the activities of SA, this can be observed from positive values; 0.423, 0.225, 0.752, 654, 0.754, 0.442, 0.222, 0.526, 0.252, 0.352, 0.852, 0.232, 0.542, 0.232, 0.452, 0.542, respectively. There is a positive correlation between SA indicators and top management support & innovation at significant, this is consistent with more studies such as (Dufwa, 2015), (Wiengarten et al., 2017). also, can be observed positive values; 0.842, 0.452 which reflected positive correlation between CFP and top management support & innovation at significant this is consistent with more studies such as (Colwell, S. R., & Joshi, 2013), (Wiengarten et al., 2016) this finding confirms partially the validity of H2.

7.3 Regression analysis

Multiple regression is an extension of correlation that indicates how much the variance in the dependent variable can be explained by the joint influence of several independent variables. When the independent variables are collectively regressed against the dependent variable, the individual correlations between each independent variable with the dependent variable and with each other are combined into what is called multiple correlations. The square of this multiple correlations is commonly referred to as R-square or R^2 . The value of R^2 indicates to what extent the dependent variables is explained by the independent variables. The result of multiple regression is an equation that shows the best prediction of the dependent variable from several independent variables. The multiple regression model is used to test hypotheses 1 to 2.

Hypotheses1 investigate the relationship between the independent variables, that is economic performance indicator, environmental performance indicator, social performance indicator. And the dependent variable, namely, a corporate financial performance measured by sales growth

Hypotheses2 investigate the relationship between the independent variables that is an economic performance indicator, environmental performance indicator, and social performance indicator. and the dependent variable, namely, a corporate financial performance measured by sales growth within existence control variables, namely innovation and top management support.

In this research study have three, multiple regression equations are used. The first equation is used when no control variable is presented. The second equation is used when the control variable for top management support is presented in the analysis. The third equation is used when the control variable for innovation is presented. Each control variable has introduced in a separate model and not collected in one model because "multicollinearity and singularity: where multicollinearity refers to a high correlation between two or more independent variables. singularity refers to a perfect correlation between two or more independent variables. These problems affect the interpretation of the relationship between the independent variables and the dependent variable, these detected by examining the variance inflation factor (VIF) value, where the VIF value should be less than 10."(Chiong, 2010).

The first equation when no control variable is presented takes the following form

$$Y = \alpha + \beta_1 x_1 + \beta_2 x_2 + \beta_3 x_3 + \epsilon$$

Where:

Y = the dependent variable: sales growth

α = constant

β_1 to β_3 = regression coefficient for independent variables x_1 to x_3 respectively.

x_1 to x_3 = the independent variables: number of economic performance indicators (ECO), environmental performance indicators (ENV), and social performance indicators (SOC).

ϵ = error term

The second equation when the control variable for top management support is presented, as follows:

$$Y = \alpha + \beta_1 x_1 + \beta_2 x_2 + \beta_3 x_3 + \beta_4 x_4 + \epsilon$$

Where:

Y = the dependent variable: sales growth

α = constant

β_1 to β_3 = regression coefficient for independent variables x_1 to x_3 respectively.

β_4 = regression coefficient for control variable x_4 .

x_1 to x_3 = the independent variables: number of economic performance indicators (ECO), environmental performance indicators (ENV), and social performance indicators (SOC).

x_4 = the control variable for top management support

$\hat{\epsilon}$ = error term

The third equation when the control variable for innovation is presented, as follows:

$$Y = \alpha + \beta_1 x_1 + \beta_2 x_2 + \beta_3 x_3 + \beta_5 x_5 + \hat{\epsilon}$$

Where:

Y = the dependent variable: growth sales

α = constant

β_1 to β_3 = regression coefficient for independent variables x_1 to x_3 respectively.

β_5 = regression coefficient for control variable x_5 .

x_1 to x_3 = the independent variables: number of economic performance indicators (ECO), environmental performance indicators (ENV), and social performance indicators (SOC).

x_5 = the control variable for innovation

$\hat{\epsilon}$ = error term

Table 8 to table 10 (which focuses on sales growth as an accounting-based measurement for the corporate financial performance) displays the outcomes obtained after carrying out a regression analysis for the study's variables.

Table 8: Outcomes of Regression Analysis (first equation)

<i>Variable</i>	<i>Coefficient</i>	<i>t-value</i>	<i>p-value</i>
Constant	12.235	1.20	0.235
ECO	1.22	2.25	0.028**
ENV	0.789	2.65	0.010***
SOC	1.323	2.35	0.022**
N	60	60	60
R ²	0.465		
Adj-R ²	0.443		
F- Value	3.959		0.027**
<i>** denotes 5% Significance level &*** denotes 1% Significance level.</i>			

Table 9: Outcomes of Regression Analysis (second equation)

<i>Variable</i>	<i>Coefficient</i>	<i>t-value</i>	<i>p-value</i>
Constant	12.22	1.77	0.081
ECO	1.65	2.30	0.028**
ENV	0.898	2.05	0.045**
SOC	1.523	2.20	0.023**
TMS	0.989	2.39	0.020**
N	60	60	60
R ²	0.455		
Adj-R ²	0.420		
F- Value	4.656		0.006***
<i>** denotes 5% Significance level &*** denotes 1% Significance level</i>			

Table 10: Outcomes of Regression Analysis (third equation)

<i>Variable</i>	<i>Coefficient</i>	<i>t-value</i>	<i>p-value</i>
Constant	13.22	0.988	0.327
ECO	1.75	2.15	0.036**
ENV	1.20	2.50	0.015**
SOC	1.754	2.40	0.020**
INNOV	1.56	2.45	0.017**
N	60	60	60
R ²	0.474		
Adj-R ²	0.352		
F- Value	4.880		0.004***
<i>** denotes 5% Significance level &*** denotes 1% Significance level</i>			

Table 8: Outcomes of Regression: The regression table demonstrates the coefficients, t-values, and p-values for the study's variables. In terms of SA disclosure, the values reveal that three components of SA indicators (economic, environmental and social) have a significant positive association with sales growth as an indicator of corporate financial performance (Coefficient = 1.22, 0.789, 1.323 at t-value = 2.25, 2.65, 2.35, p-values = 0.028, 0.010, 0.022 respectively) at the significant level 5%, 1%, and 5% respectively, this means confirming the first hypothesis that is, there is a positive relationship between the sustainability accounting performance (the disclosure of economic, environmental, social performance information) of oil & gas companies and their sales growth. This consistent with more studies such as (Al-Dhaimesh& Al Zobi, 2019), (Weber, 2017).

Table 9: Outcomes of Regression: The regression table demonstrates the coefficients, t-values, and p-values for the study's variables. In terms of SA indicators and one of control variable TMS the values reveal that three components of SA indicators (economic, environmental and social) and the control variable that is top management support have a significant positive association with sales growth as an indicator of corporate financial performance (Coefficient = 1.65, 0.898, 1.523, 0.989, at t-value = 2.30, 2.05, 2.20, 2.39, p-values = 0.028, 0.045, 0.023, 0.020 respectively) at the significant level 5%, this means confirming partially the second hypothesis that is, Top Management Support & Innovation affect positively on the relationship between SA and CFP, where the F-value which reflect the significance of model increase to 4.656 at significant level 1% which mean top management support effect on the relation SA and CFP. This is consistent with more studies such as (George et al., 2016), (Schneider, 2015).

Table 10: Outcomes of Regression: The regression table demonstrates the coefficients, t-values, and p-values for the study's variables. In terms of SA indicators and one of control variable INVO the values reveal that three components of SA indicators (economic, environmental and social) and the control variable that is innovation have a significant positive association with sales growth as an indicator of corporate financial performance (Coefficient = 1.75, 1.20, 1.754, 1.56, at t-value = 2.15, 2.50, 2.40, 2.45, p-values = 0.036, 0.015, 0.020, 0.017

respectively) at the significant level 5%, and 1% this mean confirming partially the second hypothesis that is, Management Support & Innovation affect positively on the relationship between SA and CFP, where the F-value which reflect the significance of model increase to 4.880 at significant level 1% which mean innovation effect on the relation SA and CFP. This is consistent with more studies such as (Wiengarten et al., 2016), (Gök & Peker, 2017).

8. Conclusion and future research

8.1 The conclusions:

- ❖ Sustainability accounting which has a report on firm about three aspects of economics, environmental, and social have a significant influence on sales growth of the firm which leads to enhance financial performance. These three aspects will be able to show the firm's involvement to the economic development of both global and local, to prove the presence of the company's concern for the environment, as well as their social contribution to the community and these, will enhance the company image in the eyes of the people, thus increasing the firm's market performance. This leads to improving a firm's financial performance.
- ❖ The top management support and innovation are more important to applicable sustainability accounting in perfect performance because top management support obligates all members in a firm to follow sustainability aspects and persuading them that applicable sustainability accounting has led to a pleasant and Promising future for the company.
- ❖ However, as with all research, my study has various limitations, Firstly, my study is limited to financial performance in terms of sales growth, it would have been interesting to see how sales growth may vary in terms of sustainability accounting indicators. additional consideration could also be for future research to include some dependent variables such as ROA, ROE, some ratios from cash flow statement, and other an intangible measure of success as the reputation of the firm. And the study also has taken limited aspects under each indicator of sustainability accounting as shown in table2. However, future research could take more aspects. my study is bound and confined by a sample from the oil and gas company sector in Egypt. Future research could take other sectors such as the

Pharmaceutical sector, HealthCare sector. My study confirmed that top management support and innovation as a control variable affect positively on the relationship between sustainability accounting and growth sales, future research could take other control variables such as firm size, corporate governance, diversification of nationality in shareholders.

- ❖ I recommend that The oil and gas company should be obligated by formal authorities to apply sustainability accounting with all indicators and Imposing heavy financial penalties on companies that do not comply with this.

8.2 Implication of the study

The practical implication of this study is that the oil and gas company must pay attention to the value of social, economics, and environmental performance information report in the sustainability accounting to raise the value of a firm in stakeholders'eyes. Stakeholders become interested in such reporting, and they judge to give “value good image”. A good image is what helps to improve the financial performance of the firm in the market.

8.3 Future research

1. Future studies are expected to use more samples and representative, and other kinds of sectors.
2. In calculating the firm's financial performance could use more relevant financial performance indicators, i.e. (ROE), (ROA), ratios in cash flow statement, Tobin's Q.
3. Further research is expected to examine the influence of each indicator of sustainability accounting on the financial performance of Firms using other measurement tools or add new variables and involves not only secondary data, but also involves other data, such as the behavior of shareholder and investor response.

References

- Abdu, M., & Jibir, A. (2018). Determinants of firms' innovation in Nigeria. *Kasetsart Journal of Social Sciences*, 39(3), 448–456.
- Al-Dhaimesh, O. H., & Al Zobi, M. K. (2019). The effect of sustainability accounting disclosures on financial performance: An empirical study on the Jordanian banking sector. *Banks and Bank Systems*, 14(2), 1–8.
- Ameer, R., & Othman, R. (2012). Sustainability practices and corporate financial performance: A study based on the top global corporations. *Journal of Business Ethics*, 108(1), 61–79.
- Andries, P., & Faems, D. (2013). Patenting activities and firm performance: does firm size matter? *Journal of Product Innovation Management*, 30(6), 1089–1098.
- Anwar, M. (2018). Business model innovation and SMEs performance- Does competitive advantage mediate? *International Journal of Innovation Management*, 22(7), 182–
- Baumgartner, R. J. (2014). Managing corporate sustainability and CSR: A conceptual framework combining values, strategies, and instruments contributing to sustainable development. *Corporate Social Responsibility and Environmental Management*, 21(5), 258–271.
- Biswas, S., & O'Grady, W. (2016). Using external environmental reporting to embed sustainability into organizational practices. *Accounting Research Journal*, 29(2), 218–235.
- Caesaria, A. F., & Basuki, B. (2017). The study of sustainability report disclosure aspects and their impact on the companies' performance. *SHS Web of Conferences*, 34, 08001.
- Cantele, S., & Zardini, A. (2018). Is sustainability a competitive advantage for small businesses? An empirical analysis of possible mediators in the sustainability–financial performance relationship. *Journal of Cleaner Production*, 182, 166–176.
- Chiong, P. T. N. (2010). An Examination of Corporate Sustainability Disclosure Level and Its Impact on Financial Performance. *The Middlesex University, Multimedia*, 1–331.
- Colwell, S. R., & Joshi, A. W. (2013). Corporate ecological

- responsiveness: Antecedent effects of institutional pressure and top management commitment and their impact on organizational performance. *Business Strategy and the Environment*, 22(2), 73–91.
- Dufwa, L. (2015). Corporate Sustainability and the Financial Implications for the European Basic Materials Industry. *The thesis of Financial Economics*.
- Eccles, R. G., Ioannou, I., & Serafeim, G. (2014). The impact of corporate sustainability on organizational processes and performance. *Management Science*, 60(11), 2835–2857.
- Ferreira, A., Moulang, C., & Hendro, B. (2010). Environmental management accounting and innovation: An exploratory analysis. In *Accounting, Auditing, and Accountability Journal* (Vol. 23, Issue 7).
- George, R. A., Siti-Nabiha, A. K., Jalaludin, D., & Abdalla, Y. A. (2016). Barriers to and enablers of sustainability integration in the performance management systems of an oil and gas company. *Journal of Cleaner Production*, 136, 197–212.
- Gök, O., & Peker, S. (2017). Understanding the links among innovation performance, market performance, and financial performance. *Review of Managerial Science*, 11(3), 605–631.
- Gond, J. P., Grubnic, S., Herzig, C., & Moon, J. (2012). Configuring management control systems: Theorizing the integration of strategy and sustainability. *Management Accounting Research*, 23(3), 205–223.
- Gunarathne, N., Samudrage, D., Wijesinghe, D. N., & Lee, K. H. (2016). Fostering social sustainability management through safety controls and accounting: A stakeholder approach in the mining sector. *Accounting Research Journal*, 29(2), 179–197.
- Gunnar, E., & Große-dunker, F. (2013). Sustainability-Oriented Innovation. *Encyclopedia of Corporate Social Responsibility*.
- Hansen, E. G., & Schaltegger, S. (2016). The Sustainability Balanced Scorecard: A Systematic Review of Architectures. *Journal of Business Ethics*, 133(2), 193–221.
- Hansen, E. G., Bullinger, A. C., & Reichwald, R. (2011). Sustainability innovation contests: Evaluating contributions with an eco impact-innovativeness typology. *International Journal of Innovation and Sustainable Development*, 5(2–3), 221–245

- Hörisch, J., Ortas, E., Schaltegger, S., & Álvarez, I. (2015). Environmental effects of sustainability management tools: An empirical analysis of large companies. *Ecological Economics*, 120, 241–249.
- Imoniana, J. O., Soares, R. R., & Domingos, L. C. (2018). A review of sustainability accounting for emission reduction credit and compliance with emission rules in Brazil: A discourse analysis. *Journal of Cleaner Production*, 172, 2045–2057.
- Joseph, G. (2012). Ambiguous but tethered: An accounting basis for sustainability reporting. *Critical Perspectives on Accounting*, 23(2), 93–106.
- Khan, M., Serafeim, G., & Yoon, A. (2016). Corporate sustainability: First evidence on materiality. *Accounting Review*, 91(6), 1697–1724.
- Khodair, M. (2019). Examining the impact of Sustainability Accounting on the Financial Reporting -A Field Study-Journal of Accounting Thinking,(2), 1202-1220.
- Lang-Koetz, C., Pastewski, N., Schimpf, S., & Heubach, D. (2010). Resource efficiency as a key driver for technology and innovation management: Dealing with an emerging trend in technology intelligence. *International Journal of Technology Intelligence and Planning*, 6(2), 164–184.
- Lozano, R. (2012). Towards better embedding sustainability into companies' systems: An analysis of voluntary corporate initiatives. *Journal of Cleaner Production*, 25, 14–26.
- Mashal, A. (2017). Do Non-Financial Factors Matter for SMEs Performance? “Case from Jordan.” *Business and Economics Journal*, 08(04), 156–167.
- Menegaki, A. N., & Tugcu, C. T. (2016). The sensitivity of growth, conservation, feedback & neutrality hypotheses to sustainability accounting. *Energy for Sustainable Development*, 34, 77–87.
- Mustafa, H. K., & Yaakub, S. (2018). Innovation and technology adoption challenges: impact on SMEs' company performance. *International Journal of Accounting, Finance, and Business*, 3(15), 57–65.
- Ng, A. W. (2018). From sustainability accounting to a green financing system: Institutional legitimacy and market heterogeneity in a global

- financial center. *Journal of Cleaner Production*, 195, 585–592.
- Passetti, E., Cinquini, L., Marelli, A., & Tenucci, A. (2014). Sustainability accounting in action: Lights and shadows in the Italian context. *The British Accounting Review*, 46(3), 295–308.
- Prange, C., & Pinho, J. C. (2017). How personal and organizational drivers impact on SME international performance: The mediating role of organizational innovation. *International Business Review*, 26(6), 1114–1123.
- Roberts, P. W., & Amit, R. (2003). (2003). No TitleThe dynamics of innovative activity and competitive advantage: The case of Australian retail banking, 1981 to 1995. *Organization Science*, 14(2), 107–122.
- Rosli, M. M., & Sidek, S. (2013). The Impact of Innovation on the Performance of Small and Medium Manufacturing Enterprises: Evidence from Malaysia. *Journal of Innovation Management in Small & Medium Enterprise*, 2013, 1–16.
- Rubera, G., & Kirca, A. H. (2012). Firm innovativeness and its performance outcomes: A meta-analytic review and theoretical integration. *Journal of Marketing*, 76(3), 130–147.
- Sands, J. S., Rae, K. N., & Gadenne, D. (2016). An empirical investigation on the links within a sustainability balanced scorecard (SBSC) framework and their impact on financial performance. *Accounting Research Journal*, 29(2), 154–178.
- Schneider, A. (2015). Reflexivity in Sustainability Accounting and Management: Transcending the Economic Focus of Corporate Sustainability. *Journal of Business Ethics*, 127(3), 525–536.
- Theoharakis, V., & Hooley, G. (2008). *by focus is at least as important in New Europe as in our Old European country, while service and financial performance. Keywords* □: *Emerging Markets, Customer Orientation, Organizational Innovativeness, Differentiation, Sustainable Competitive Advan.* 44(0), 1–28.
- Ullah, B. (2020). Financial constraints, corruption, and SME growth in transition economies. *Quarterly Review of Economics and Finance*, 75, 120–132.
- Wang, Y. (2016). What are the biggest obstacles to the growth of SMEs in developing countries? – Empirical evidence from an enterprise

- survey. *Borsa Istanbul Review*, 16(3), 167–176. Weber, O. (2017). Corporate sustainability and financial performance of Chinese banks. *Sustainability Accounting, Management and Policy Journal*, 8(3), 358–385.
- Wiengarten, F., Lo, C. K. Y., & Lam, J. Y. K. (2017). “How does Sustainability Leadership Affect Firm Performance? The Choices Associated with Appointing a Chief Officer of Corporate Social Responsibility.” *Journal of Business Ethics*, 140(3), 477–493.
- Xiao, C., Wang, Q., van der Vaart, T., & van Donk, D. P. (2018). When Does Corporate Sustainability Performance Pay off? The Impact of Country-Level Sustainability Performance. *Ecological Economics*, 146(December 2016), 325–333. <https://doi.org/10.1016/j.ecolecon.2017.11.025>
- Young, R., & Jordan, E. (2008). Top management support: Mantra or necessity? *International Journal of Project Management*, 26(7), 713–725.
- Zhang, B., & Chen, B. (2017). Sustainability accounting of a household biogas project based on energy. *Applied Energy*, 194, 819–831.

Appendix 1: Questionnaire

		Strongly agree	Agree	Undecided	Disagree	Strongly disagree
	Independent variables (Sustainability Accounting practices) (SA)					
	Economic performance indicators					
	<i>Aspect: Economic performance (ECO1)</i>					
1	It is necessary that the company report of revenues, operating costs, employee wages and benefits, payments to the provider of capital and government to strengthen relation to customers.					
2	The company must have a system to calculate the financial implications (costs or revenues) due to climate change like new legislation, water scarcity, etc. to sustain a high level of operating efficiency.					
3	It is important that the company report of if the company can pay its liabilities from its general resources, and has a separate fund to pay the plan's pension liabilities to strengthen relation to creditors and employees					
4	It is vital that the company report of the value of financial assistance received from any government bodies during the reporting period such as. Tax reliefs and tax credits subsidies,etc. to support relation to customers					
	<i>Aspect: market presence (ECO2)</i>					
5	The company must report the ratio of employees, which have full-time wages in the lowest employment category by gender at significant locations of operations to improve related to the community.					

Mahmoud Abdul Aleem Elkholy

		Strongly agree	Agree	Undecided	Disagree	Strongly disagree
6	It is focal that the company report percentage of senior management at significant locations of operations that are hired from the local community to increase the company's market share.					
Environmental performance indicators						
Water and Effluents (ENV1)						
7	It is essential that the company report how it interacts with water; including how and where water is withdrawn consumed and discharged to strengthen relationships to the community.					
8	The company must have standards for the quality of effluent discharge to support relation to Ministry of Environment					
9	The company must report the source of water withdrawals such as, Surface water, Groundwater, Seawater, etc. to support related to the Ministry of Water Resources and Irrigation.					
10	It is essential that the company report how it discharges water. to support related to the Ministry of Water Resources and Irrigation.					
Non- compliance with environmental laws and regulations (ENV2)						
11	It is focal that the company reports significant fines and non-monetary sanctions for non-compliance with environmental laws and/or regulations to support relation to customers.					
Social performance indicators						
Employment (SO1)						
12	The company must report					

**Scientific Journal for Financial and Commercial Studies and Researches
(SJFCSR) Faculty of Commerce – Damietta University**

		Strongly agree	Agree	Undecided	Disagree	Strongly disagree
	total numbers and rate of new employee hire and employee turnover at the end of each financial year. By age group, gender, and region to sustain positive relationships with community					
13	It is important that the company report benefits which are standard for a full-time employee of the organization but are not provided to temporary or part-time employees such as, life insurance, health care, parental leave,.....etc. to support relation to employees.					
14	The company must report the total number of employees that were entitled, took, and returned of parental leave to support relation to employees.					
Rights of indigenous people (SO2)						
15	The company must report Total number of identified incidents of violations involving the rights of indigenous peoples at the end of financial year and actions taken such as, Incident reviewed by the organization, Remediation plans being implemented, Remediation plans that have been implemented, to enable a company to establish branches in any place in the state					
Human rights assessment (SO3)						
16	The company must report the total number of operations that have been subject to human rights reviews or human rights impact assessments, by country to support relation to customer					

Mahmoud Abdul Aleem Elkholy

		Strongly agree	Agree	Undecided	Disagree	Strongly disagree
17	The company must report the total number of hours and the percentage of employees in training on human rights policies or procedures concerning aspects of human rights that are relevant to operations. To acquire the company competitive advantage					
18	The company must report the total number and percentage of significant investment agreements and contracts that include human rights clauses or that underwent human rights screening to acquiring the company competitive advantage					
Local communities (SO4)						
19	It is essential that the company report percentage of operations with implemented <u>local community</u> engagement, such as, Local <u>community development programs</u> based on local communities' needs, local community consultation committees, and processes that include <u>vulnerable groups</u> , works councils, occupational health and safety committees To acquiring the company competitive advantage					
20	It is essential that the company report operations with significant actual and potential negative impacts on local communities, such as the location of the operations, the significant actual and potential negative impacts of operations To acquiring the company competitive advantage					

**Scientific Journal for Financial and Commercial Studies and Researches
(SJFCSR) Faculty of Commerce – Damietta University**

		Strongly agree	Agree	Undecided	Disagree	Strongly disagree
Dependent variables						
Corporate financial performance (CFP) (increase revenue and growth)						
21	Your company has more cash to pay its current liabilities easily					
22	Your company has purchased long term assets in a continuous way					
23	Your company has purchased securities in a continuous way					
24	Your company set up more branches in states in a continuous way					
25	Your company's retained earning has shown in balance sheet increases year – to – years					
26	Your company have paid dividends to a stockholder in a systematic year without delay					
27	Your company has increased its dividend to stockholder year-to-year					
Control variables						
Top Management Support						
28	Your company's board of directors has one member or more acquired the FSA credential					
29	The Top management has encouraged employees to take FSA credential					
30	The Top management has set up workshops to discuss the sustainability accounting practices to spread the knowledge to all employees					
31	The Top management has set up a budget to reward employees who are acquired FSA credential					
32	The Top management has incentive the biggest braches' revenues					

Mahmoud Abdul Aleem Elkholy

		Strongly agree	Agree	Undecided	Disagree	Strongly disagree
33	The top management has set up seminars to discuss the ways to improve company' sustainability practices					
Innovation						
34	Your company has set up a big budget for the R&D process					
35	Your company has interested to employ qualified engineers who have Ph.D. or international certificates in their specialty.					
36	Your company has the policy to change techniques of production continuously.					
37	Your company has set up a big budget to reward the employees who have new ideas to improve products, processes ...etc.					
38	Your company has adopted the contemporary ideas extracted from international conferences.					

تأثير محاسبة الاستدامة علي الأداء المالي للشركات بالتطبيق علي قطاع البترول والغاز في مصر

د. محمود عبد العليم الخولي

قسم المحاسبة

كلية التجارة – جامعة بنها

ellkholy79@gmail.com

الملخص:

يهدف البحث إلى دراسة تأثير محاسبة الاستدامة على الأداء المالي لشركات البترول والغاز في مصر، حيث تهتم محاسبة الاستدامة بالإفصاح عن ثلاث جوانب رئيسة لتعكس مدى تطبيق الشركة لمحاسبة الاستدامة وتلك الجوانب (المتغيرات المستقلة) هي: معلومات عن الأداء الاقتصادي؛ معلومات عن الأداء البيئي؛ معلومات عن الأداء الاجتماعي، ويتمثل المتغير التابع في نمو المبيعات للشركات محل الدراسة، والذي بدوره يعكس الأداء المالي للشركات. واعتمد الباحث علي العديد من الأساليب الكمية باستخدام برنامج SPSS لاختبار فروض البحث وتم تصميم قائمة استبيان كأداة لتجميع البيانات تم توزيعها على الفئات المستهدفة بعينة من شركات البترول والغاز المصرية والتي تهتم بتقارير الاستدامة باستخدام إرشادات GRI-G4.

وأظهرت نتائج البحث أن الإفصاح عن المعلومات الاقتصادية، والبيئية، والاجتماعية ذو تأثير إيجابي معنوي على نمو المبيعات الذي يعكس تحسن الأداء المالي لشركات البترول والغاز في مصر. واتضح كذلك أن هناك العديد من المتغيرات الحاكمة (دعم الإدارة العليا والابتكار) ذو تأثير إيجابي معنوي علي العلاقة بين محاسبة الاستدامة والأداء المالي لشركات البترول والغاز في مصر، وتتمثل أهم التوصيات للبحث في ضرورة اهتمام شركات البترول والغاز بقيمة التقرير الاقتصادي والبيئي والاجتماعي في محاسبة الاستدامة لأنه أصبح طلباً ملحاً و أساسياً لأصحاب المصلحة، كأداة لتحسين صورة الشركة وتعظيم أدائه المالي.