The CSR moderating effect on the relationship between SG&A expenses and companies' financial performance

Rola Samy Nowar
Associate Professor – Cairo University

Abstract:

Purpose– The aim of this research is to investigate the impact of selling, general, and administrative (SG&A) expenses on financial performance of companies, and also to examine the impact of corporate social responsibility (CSR) as a moderator variable on the relation between SG&A expenses and companies' financial performance.

Design/method– Data is collected from a sample of listed companies on the EGX 100 from different sectors through 2010 to 2019. Simple regression analysis is used to test the relationship between SG&A expenses and financial performance of companies. Moreover, moderated regression analysis is used to test the impact of CSR as a moderator variable on the relation between SG&A expenses and financial performance, and also to investigate the role of three control variables in this relation.

Findings– The results show that SG&A expenses is positively and significantly associated with the financial performance of companies and this positive relationship is more pronounced with the existence of CSR as a moderator variable. Furthermore, the

statistical analysis results suggest that some of control variables play an important role in enhancing the financial performance of companies. Results revealed that there is a positive and significant impact of company size, measured by companies' assets / companies' sales, on the companies' financial performance. On the other hand, company experience and type of activity have no relation or impact on companies' financial performance.

Research limitations/implications– Studying the mediating effect of CSR variable on the relationship between SG&A expenses and companies' financial performance is not addressed in this research. Furthermore, the researcher relied on abstraction in selecting the set of control variables, as it excluded the company's strategy, the financial leverage and other control variables are excluded in this research.

Originality/value added– The relationship between SG&A expenses and the financial performance of companies has not been addressed in many accounting studies in Egypt. Moreover, the moderator effect of the CSR on the relationship between SG&A expenses and the financial performance of companies in Egypt also was not addressed.

Keywords: SG&A expenses; CSR, Financial performance of companies, Control variables; moderated regression analysis.

1. Introduction

Globalization, corporate social responsibility (CSR), the pillars of environmental, social and governance (ESG), sustainability, company activities costs, innovation strategy, management accounting innovations (MAIs), are all terms that have been addressed within many accounting literature during current and last decades. All of these accounting and management terms have been addressed in the accounting literature in relation to either financial performance, non-financial performance, or the overall performance of companies. The financial performance of companies over the short and long term in particular and the overall performance of companies in general will achieve business survival or what may be termed sustainability.

Choosing which of these terms, or what can be called variables, and trying to explore, describe and investigate the relationship between two or more of these variables, requires determining the theoretical background and theory on which this relationship(s) is based. Contingency theory, institutional theory and agency theory are among the most common theories on which accounting literature is based. Contingency theory is the theoretical basis of this research. Two types of variables are included in this research: the first; Contingency variables, second, main variables. Contingency variables are size of the company, kind of activity, and company's age or experience. Main variables are SG&A expenses, CSR, and company's performance.

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SG&A expenses differ from marketing expenses. The first includes, besides marketing expenses, general and administrative expense, thus SG&A expenses are more comprehensive and broader than marketing costs. In practice, many companies report the operating expenses and SG&A expenses as the same. SG&A expenses means selling, general and administrative expenses and includes daily expenses that are not directly or indirectly related to the manufacture of the product or to the provision of service to customers. Some companies refer to operating expenses as SG&A expenses. On the other hand, others treat general and administrative expenses as a separate cost pool and treat selling and marketing expenses as another separate cost pool. Both general and administrative and marketing and selling expenses are reported within the total of operating expenses in the income statement. This combination or segregation of sales and marketing costs with or from general and administrative expenses often depends on a set of considerations: the kind of the company's activity, the size of the company, the extent to which an effective cost accounting system exists, and finally, the relative weight of the sales and marketing costs to the total costs of the company.

The importance of studying marketing and sales expenses as well as SG&A expenses stems from the relative weight of either of them or both to the volume of sales and to the total costs incurred by the company. It may be appropriate to point out that

marketing costs and hence SG&A expenses vary in size relative to sales from one production or service sector to another. Regarding the data collected from many companies listed in EGX100, as a research sample, the ratio of marketing and selling expenses to sales revenue in the financial sector (banks, insurance companies, real estate activity) is about 8%, while in the media and communications sector 10%, packaging sector 9%, service sector for customers 6%, education sector 3%, energy sector 1%, industry and production sector 15%.

On the other hand, the diagnosis of this research sample shows that the sample of this research confirms the fact that the ratio of SG&A expenses to sales volume differs as a result of the company's different strategy and activity. The ratio of SG&A expenses to sales volume for oil and mining sector 1.17%, petroleum services sector 9.48%, pharmaceutical and healthcare sector 9.54%. The researcher points out that different SG&A expenses are not limited to the different sector or activity to which the company belongs, but the variance extends to companies belonging to the same sector of activity. Egyptian International Pharmaceuticals (EIPICO) had 4.16% SG&A expenses to sales revenue in 2010, while Alexandria Pharmaceuticals in same year had 12.43%. Finally, it should be stated that the range to which SG&A expenses are attributed to the volume of sales among companies is pervasive. EASTERN COMPANY S.A.E in 2010 and 2011 had 0.06% SG&A expenses to sales ratio, while canal

shipping agencies in 2014 had 54.66%, and the average SG&A expenses in the study sample was about 9.8%.

Huang (2021); Cunha, Meira, and Orsato (2021); Coelho, Jayantilal, and Ferreira (2023), three review studies that addressed CSR topic. The term Environmental, Social, and Governance (ESG) either is used as synonym to express CSR or as broader framework that the company uses to achieve sustainability. The differences between CSR and ESG can be summarized in few points. First, CSR can be used as an internal approach to achieve sustainability, while ESG can be used as an external approach. Second, CSR provides less quantitative measures compared with ESG, therefore ESG provides more accurate valuation of the company. Third, CSR represents narrower approach or framework compared with ESG, where CSR focuses on internal activities to achieve sustainability, while ESG focuses on internal and external activities and not only business parties but also stakeholders' parties. However, Aguinis, (2018, p 855) defines CSR as: *'context-specific organizational actions and policies that take into account stakeholders' expectations and the triple bottom line of economic, social, and environmental performance'*. This definition shows that many differences between CSR and ESG have disappeared.

The relationship between SG&A expenses and CSR is based on the logic deduced from the literature review. SG&A expenses include the expenses of two activities: the first activity, the

selling or marketing activity, and the second activity, the administrative activity. Regarding the selling or marketing activity and its costs, McWilliams and Siegel (2000), Oh, Bae, and Kim (2017); Thottoli and Thomas (2023); Coelho, Jayantilal, and Ferreira (2023) revealed that marketing costs and advertising have a positive relation with CSR. Wang (2015); Cannon (2020); declared a relationship between SG&A and CSR. Finally, regarding general and administrative expenses, Samet and Jarboui (2017) stated that CSR activities reduce agency costs. However, according to Jensen and Meckling (1976) agency costs consist of three items: bonding costs, monitoring costs, and residual loss. For item I and item II, there is no dispute as to their classification within the cost of general and administrative activities, while the third item, "residual loss", is not an explicit cost that is recognized in the cost accounting records.

CSR and SG&A expenses in relation to the financial performance of companies, go in the same direction, both of them improve financial performance, and the difference between them lies in the mediator through which financial performance is improved. CSR improves financial performance by improving the company's relationship with stakeholders and thus achieving a competitive advantage (Carroll, 2008; Coelho, Jayantilal, and Ferreira, 2023) while SG&A improve financial performance by increasing the company's sales volume. The rest of this paper is as follows. Literature review, and hypothesis development are

addressed in section (2). Section (3) covered research method, which includes sample selection, variable measurement, and analysis, testing hypotheses, results, and discussion. The final section contains a conclusions, limitations, and future research

2. Literature Review and hypotheses development

Addressing literature review came within the research by addressing two groups of literature. The first group addressed the relationship between SG&A expenses and companies' financial performance. The second group addressed the impact of CSR (as a moderator variable) on the relationship between SG&A expenses and companies' financial performance.

2.1 The relation between SG&A and Financial Performance of companies

SG&A expenses are the most aggregate cost pool, created to absorb virtually all non-production operating costs, including executive salaries, insurance, rent, information technology (IT) depreciation of infrastructure, research and development (R&D), Credit and collection expenses, and depreciation of non-manufacturing assets (Needles, Powers, andCrosson, 2011; Markovitch, Huang, and Ye; 2020).

A deductive logic analysis of the relationship between SG&A expenses and companies' financial performance indicates that there are two directions of this relationship. First, viewing SG&A expenses as a period expense that represents the burden of

companies' income, which is the basis on which the majority of companies' financial performance indicators are based. Second, viewing SG&A expenses as expenses that increase revenues at a greater rate than the increase in SG&A expenses, and the ultimate effect of these SG&A expenses is to increase companies' income. However, literature that addressed the relation between SG&A expenses and financial performance of companies, followed these two directions. Moreover, it should also be noted that previous studies differed in determining the direction of the relationship between selling expenses and the companies' financial performance. On the one hand, some studies refer to the impact of financial performance of the year (t-1) on marketing costs or SG&A expenses of the year (t). On the other hand, some other studies refer to the impact of SG&A expenses on companies' financial performance.

Rababah, Molavi, and Doust (2022) explored that spending advertising costs (marketing costs and SG&A expenses) would affect financial performance. They measured financial performance using financial leverage. Tsui, Lee, and Yau (2022, p 18) also revealed that Marketing cost is "highly and positively correlated with sales", thus SG&A has positive relation with companies' performance.

Memarista and Gestanti (2018) explained the relationship between marketing expenses and company performance in manufacturing companies listed on the Indonesia Stock

Exchange between 2012 and 2016. Companies' performance is measured by return on assets (ROA) and return on equity (ROE) as proxies to profitability, which represents the financial performance of companies. Results of the study showed that marketing costs, thus SG&A expenses, had a significant positive relationship between marketing costs and financial performance of the companies. Moreover, they added that more spending in marketing activities is expected to increase sales and create more income, enhancing financial performance of companies.

Cheng, Chan, and Leung (2018) addressed the effect of marketing costs and perk expenses on companies' performance. Perk expenses happened to enhance company relationship, it includes travelling, entertainment, hospitality, and others, therefore perk expensed can be easily classified as general and administrative expenses. Including the perk expenses to marketing costs means that their study was not limited to studying the relationship between marketing costs and the financial performance of the company, but rather studying the relationship between SG&A and financial performance. However, Cheng, Chan, and Leung (2018) revealed that there is a strong relationship between marketing costs as well as perk expenses and companies' performance measured by Tobin's Q. However, the impact of the former is greater than that of the latter on the company's performance.

Sharma and Husain (2015) examined the relationship between selling and marketing expenses and companies' performance in telecom sector in Saudi Arabia, using gross operating profitability as a proxy for financial performance. They used multiple regression analysis to test this relation, and the concluded that there is a positive correlation among the four independent variables used in regression equation, these independent variables are: selling and marketing expense ratio (SME), dealers commission expense ratio (DCE), advertising expense ratio (Advt.E), and salary, wages and employee benefits expense ratio (SWEBE). The relation between these four independent variables and companies' performance measured by gross operating profitability (GOP) is not found. Same conclusion by study of Gbolagade, Adesola, Oyewale (2013), where there was a significant negative relationship between selling and marketing expenses measured by promotion expenses and companies' performance.

On the other hand, Harrison et al. (2022) investigated the impact of prior period financial performance (t-1) on current period market expenses (t). They measured financial performance using two independent variables, first; the lag of the cash flows, second; aggregated loss. The lag of the cash flow is the interval between payment of making costs and receiving the price of services or goods from customers. Aggregated loss measured dichotomously (0, 1) by the presence or absence of a negative

fund balance is included. Measuring financial performance using the lag of the cash flows and aggregated loss showed no impact of marketing costs on companies' financial performance. Harrison et al. (2022) have adjusted the proxies used to measure financial performance to total revenue and Medicare payments. Changing financial performance proxies did not significantly affect their results.

Previous literature differed in their findings both in terms of the extent to which there was a relationship between SG&A expenses and companies' financial performance, and also in the direction of the relationship between SG&A expenses and performance. Many studies examined the impact of SG&A expenses on companies' financial performance. On the other hand, other studies investigate the impact of companies' financial performance on the volume of SG&A expenses. As a result of this variation in the results of the studies in terms of whether or not there is a relationship, as well as in the direction of this relationship, the first research hypothesis is as follows.

H_1 : There is no significant relationship between SG&A expenses and companies' financial performance.

2.2. The impact of CSR on the relationship between SG&A expenses and companies' financial performance

CSR is an important issue to market constituents, and the demand for reporting socially responsible activities is growing,

as different stakeholders' groups need more reliable presentation of all aspects of business. Companies should engage in socially responsible activities that meet the demand of different stakeholders (Kim et al. 2012). There is no consensus definition for CSR. Carroll (1999) defined CSR as the economic, legal, ethical and philanthropic responsibilities of companies. Heal (2009) defined CSR as part of a corporate strategic response to inconsistencies that occur between companies' profitability goals and social goals. CSR is defined as "the voluntary activities undertaken by a company to operate in an economic, social and environmentally sustainable manner" (Chouaibi, Chouaibi, & Rossi, 2022; European Commission, 2001, p. 8). The concept of CSR has evolved over the years, and it has become more important for companies to develop sustainable strategies that benefit not only their shareholders but also their employees, customers, suppliers, and communities they operate in.

The relationship between CSR and companies' performance can be explained through several theoretical perspectives. The stakeholder theory suggests that companies should be accountable not only to their shareholders but also to their stakeholders (Freeman, 1984). Stakeholders are defined as "any group or individual who can affect or is affected by the achievement of the organization's objectives" (Freeman, 1984, p. 46). According to this theory, companies that engage in CSR

activities can build trust and legitimacy with their stakeholders and this, in turn, can lead to improved performance.

The resource-based view of the company (RBV) suggests that companies have unique resources and capabilities that can be a source of competitive advantage (Barney, 2001). Viewing CSR form RBV perspective suggests that companies that effectively manage their social and environmental impacts can use them as a way to differentiate themselves from their competitors and gain a competitive advantage (Husted and Allen, 2006). This suggests that CSR can have positive effects on companies' performance by improving their reputation, reducing costs, and enhancing innovation. The institutional theory suggests that companies are influenced by social norms and values in their actions and behaviors (Meyer and Rowan, 1977). The institutional perspective on CSR suggests that companies that engage in socially responsible activities can enhance their legitimacy with stakeholders and comply with societal expectations. This can help them avoid sanctions by regulatory agencies and improve their reputation in the market (Scott, 1987).

The empirical evidence on the relationship between CSR and companies' performance is mixed. Some studies indicated a positive relationship between CSR and companies' performance, while others found no significant relationship or even a negative relationship (Carroll & Shabana, 2010). One of the main challenges of studying this relationship is the difficulty in measuring CSR and

companies' performance (Margolis and Walsh, 2003). CSR is a complex concept that includes various dimensions such as environmental, social, and governance issues, and it is challenging to measure the impact of CSR activities on companies' performance. CSR has been widely debated as to whether it positively or negatively relates to companies' performance.

The relationship between CSR and the company's performance can also be influenced by the industry in which the company operates. A study conducted by Kishimoto et al. (2018) found that the impact of CSR on companies' performance varies across industries. They found that the positive effects of CSR are more substantial in service industries, where customer engagement and loyalty are more critical to business success. In contrast, the relationship between CSR and financial performance is less significant in manufacturing industries, where the focus is on production efficiency and cost reduction.

Some authors argue that CSR positively affects companies' performance, particularly financial performance, in several ways. Firstly, CSR enhances the reputation of the company by showing that the companies' is not only concerned about maximizing profits but also addressing societal problems (Javed et al., 2020; Aguilera et al., 2007). A good reputation leads to increased customer loyalty and market share as customers tend to prefer socially responsible companies (Prieto et al., 2020; Hunjra et al., 2021; Maury, 2022; Mohr et al., 2001). Secondly, CSR improves

stakeholder relations by building long-term relationships with suppliers, employees, customers, governments, and the community (Carroll and Shabana, 2010). Improved stakeholder relations lead to reduced transaction costs, increased access to information, and better access to resources, which, in turn, lead to increased profits. Finally, CSR boosts employee motivation and productivity by improving employee engagement, job satisfaction, and retention, among others (Greening and Turban, 2000).

One of the most cited studies on the relationship between CSR and companies' performance is the meta-analysis conducted by Orlitzky, Schmidt, and Rynes (2003). The study reviewed 52 empirical studies on the topic and revealed a positive relationship between CSR and companies' performance in 42% of the studies, a negative relationship in 8% of the studies, and no significant relationship in the remaining 50%. The authors suggest that the relationship between CSR and companies' performance is complex and depends on the context and the measures used for CSR and companies' performance.

McWilliams and Siegel (2001) found that companies engaging in CSR activities have a positive impact on their reputation and this, in turn, has a positive effect on financial performance. They suggest that CSR activities can improve the perception of the company in the market and enhance customer loyalty and trust. This can lead to increased sales and improved profitability. Similarly, a study by Waddock and Graves (1997)

found a positive relationship between CSR and financial performance in companies that were considered high-quality companies. The authors suggest that CSR activities can signal the quality of the company and attract socially responsible investors and customers. This can lead to increased sales and improved financial performance. Moreover, a study by Iwata et al. (2011) found that companies with high CSR engagement had higher profitability than those with low CSR involvement.

On the other hand, some studies suggest that CSR negatively influences companies' performance by imposing additional costs and reducing profitability (Margolis and Walsh, 2003; Clarkson, 1995; Margolis and Walsh, 2003; Porter and Kramer, 2002). Moreover, CSR initiatives may divert the organization's attention from core business activities and lower the level of innovation (Porter and Kramer, 2002). Additionally, CSR can lead to reputational risks if the company fails to deliver on its social responsibility promises (Clarkson, 1995). A study by Margolis and Walsh (2003) found no significant relationship between CSR and companies' performance in the short term. The authors suggest that CSR activities can have a positive impact in the long term, but they may not be reflected in the financial performance of the company immediately. Despite the benefits, some scholars argue that CSR may lead to decreased financial performance by increasing costs and lower profitability (Margolis and Walsh, 2003). For example, companies may incur additional costs in implementing CSR

initiatives, such as social and environmental compliance costs, which may reduce profitability. Additionally, CSR initiatives may divert the company's attention from core business activities, leading to lower innovation and reduced competitiveness (Porter and Kramer, 2002). Moreover, companies may face reputational risks if they fail to deliver on their CSR promises, which can lead to reduced sales and profits (Clarkson, 1995).

In summary, the relationship between CSR and companies' performance remains a subject of debate in the literature, complex and depends on several factors such as the context, the measures used for CSR and companies' performance, and the stakeholder perceptions. The theoretical perspectives suggest that CSR can have positive effects on companies' performance by building trust and legitimacy with stakeholders, enhancing reputation, reducing costs, and enhancing innovation. Empirical evidence is mixed, with some studies finding a positive relationship between CSR and companies' performance, while others finding no significant relationship or even a negative relationship. Therefore, businesses must recognize the importance of aligning their CSR initiatives with their strategic goals and values to achieve long-term success and sustainability.

The relationship between SG&A expenses and company performance is well established in finance and accounting literature. SG&A expenses are considered a direct operating expense that can have a significant impact on the profitability of the companies. However, the argument is that the level of these

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expenses should not be considered in isolation but should be analyzed in relation to other factors that affect company performance. One such factor is CSR, which is increasingly being recognized as a moderating variable for the relationship between SG&A expenses and company performance.

Several studies have been conducted to examine the impact of CSR on the relationship between SG&A expenses and company performance. For instance, Chen et al. (2019) found that CSR activities are positively related to companies' performance, and there is a curvilinear relationship between total SG&A expenses and financial performance. Furthermore, they conclude that CSR activities and policies moderate the relationship between SG&A expenses and profitability, indicating that high levels of SG&A expenses are acceptable when a company has strong CSR activities. This finding suggests that having effective CSR policies could compensate for the negative impact of high SG&A expenses on company profitability.

Another study conducted by Yu (2018) found similar results. The study found that CSR initiatives mitigate the negative effect of high SG&A expenses on the financial performance of companies. The study indicates that CSR activities offer companies opportunities to differentiate themselves from competitors, which ultimately leads to higher financial performance. Furthermore, operational practices that conserve resources and reduce environmental impact tend to reduce

expenses in the long run and increase brand value. Therefore, companies that prioritize CSR initiatives are more likely to improve their financial performance by reducing costs and improving brand value.

A more recent study by Al Taiar et al. (2020) examined the effect of CSR on the relationship between SG&A expenses intensity (SG&A expenses/Sales revenue) and financial performance in the hotel industry in Oman. The study found that CSR positively moderates the relationship between SG&A expenses intensity and financial performance. Thus, they mentioned that sustainable practices, environmental conservation, and ethical labor practices can lead to increased brand loyalty, improve customer satisfaction and operational efficiency, ultimately decreasing SG&A expenses intensities and increasing profitability.

In conclusion, CSR is increasingly being recognized as a moderating variable for the relationship between SG&A expenses and companies' performance. The studies discussed in this paper suggest that CSR initiatives can compensate for high SG&A expenses by offering companies opportunities to differentiate themselves from competitors, increase brand value, and reduce long-term expenses. These findings are essential for managers seeking to develop effective CSR strategies that positively contribute to the company's bottom line. It is,

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therefore, vital for businesses to embrace CSR initiatives if they plan to remain competitive in the future.

Previous literature extensively addressed the relationship between CSR and companies' financial performance, and contradicting findings was clearly observed whether in terms of the extent to which there was a relationship between CSR and companies' financial performance, or in the positivity/negativity of this relationship when existed. And although the relationship between SG&A expenses and company performance is well established in accounting literature, not many studies examined the impact of CSR on the relationship between SG&A expenses and company performance. As a result of this gap in literature, this paper addresses the impact of CSR as moderator for the relationship between SG&A expenses and company performance, thus the second research hypothesis is as follows.

H_2 : There is no moderating impact of CSR on the relationship between SG&A expenses and companies' financial performance.

Based on the deduced relations among research variables and the direction between each set of variables, figure 1 shows the research model, though which research hypotheses are determined.

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Figure 1: research model
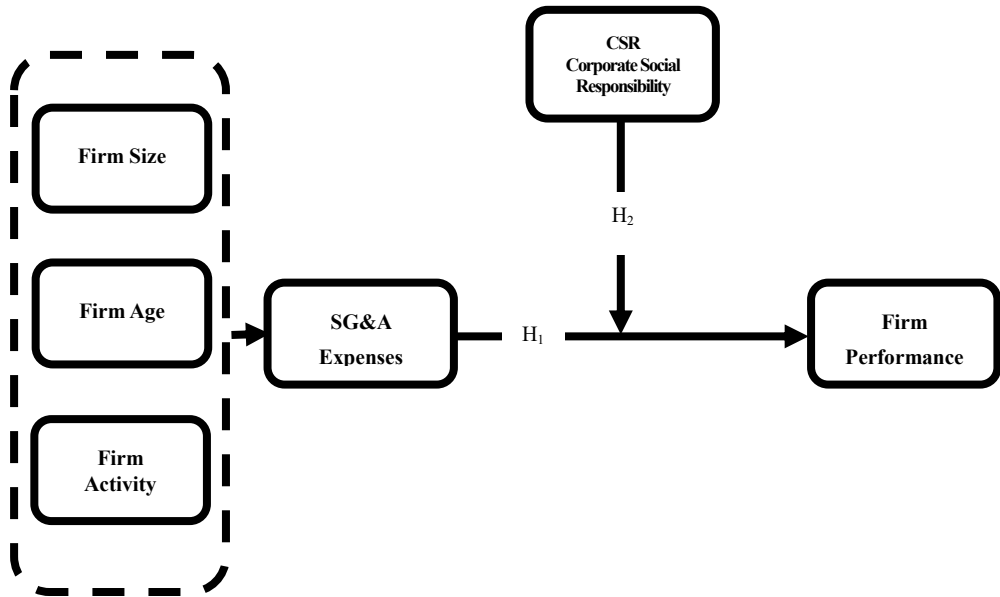
3. Method

This section addresses sample, variable measurement, testing research hypotheses, data analysis, statistical results, and discussion. Sample includes setting research population and selecting sample from this population. Sample includes descriptive statistics of the companies selected. Method also includes measuring research variables and statistical analysis used to test the research hypotheses.

3.1. Sample selection

Financial and non-financial information for all EGX 100 are extracted from Egypt for Information Dissemination (EGID) for years 2010 to 2019. Business companies within the sample are

distributed across 12 different industry sectors as presented by table no. 1 and as illustrated by figure no. 1. Food and beverage, followed by real estate, basic resources, and building materials industries represent the dominating sectors of industry within which companies operate. The final sample included 670 observations for 75 industrial companies. The author considered the following criteria for sample selection: (1) All companies are listed in EGX for highest level of transparency in financial reporting, (2) excluding financial institutions to unify nature of activities across the sample, (3) the companies should be listed in EGX 100 for at least 2 years within the period of time covered by the study.

Table (1): sample distribution across industry sectors

Distribution of Sample across industry sectors		
	Number of Companies	**Frequency**
Energy & Support Services	2	3%
Basic Resources	11	15%
Building Materials	9	12%
Food, Beverages and Tobacco	16	21%
Industrial Goods , Services and Automobiles	5	7%
Real Estate	13	17%
Textile & Durables	2	3%
Utilities	1	1%
Shipping & Transportation Services	4	5%
IT , Media & Communication Services	2	3%
Contracting & Construction Engineering	5	7%
Health Care & Pharmaceuticals	5	7%
Total	75	100%

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Figure (2): Distribution of sample across industry sectors

- Energy & Support Services
- Basic Resources
- Building Materials
- Food, Beverages and Tobacco
- Industrial Goods , Services and Automobiles
- Real Estate
- Textile & Durables
- Utilities
- Shipping & Transportation Services
- IT , Media & Communication Services
- Contracting & Construction Engineering
- Health Care & Pharmaceuticals
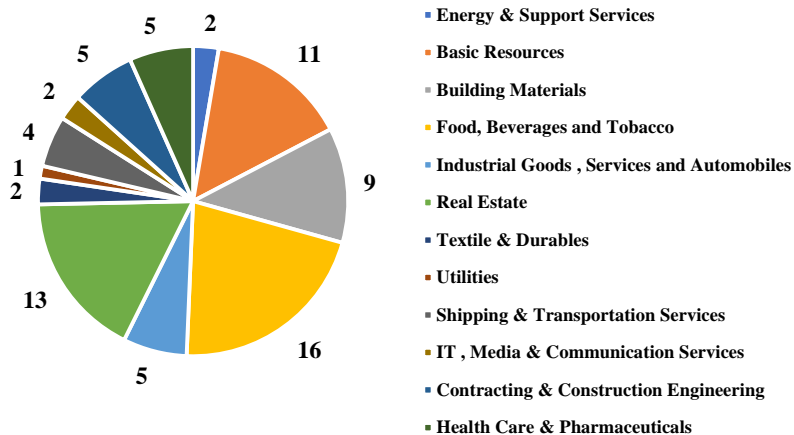
3.2. Variables measurement

Variables included in this research can be classified in two groups of variables. First, main variables: SG&A expenses, CSR, and companies' financial performance of the companies. Second, control variables: company size, company age, and company activity. Regarding main variables, SG&A is measured by logarithm of SG&A expenses, financial performance is measured by logarithm of revenue, CSR is measured by the CSR indicator which is introduced in the regression equation as dichotomous variable (0 if CSR index equal zero, and 1 if CSR index greater than zero). Company size, commonly measured by either assets value, sales vales, or number of employees. In this empirical study company size is measured by combining two of these measures

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together through computing the ratio total assets to total sales of the companies, and to add company size to the research model, logarithm of total assets/total sales of each company is used. Company age is measured by the number of years operated by the company, i.e., the time period from the date of establishment of the company until 2020. Finally, kind of activity, as a nominal variable, is measured by giving a number to each type of activity to convert it from qualitative to quantitative variable.

To test the first hypothesis addressing the relation between SG&A expenses and financial performance of the company, simple regression equation (1) is formulated.

$$\log[FP_{i,t}] = \beta_0 + \beta_1 \log[SG\&A_{i,t}] + \varepsilon_{i,t} \ \dots\dots\dots\dots\dots \ (1)$$

Where, log: natural logarithms; β_0: Constant of regression equation; β_1: parameters of the explanatory or independent variable included in regression equation; $SG\&A_{it}$ expense represents selling, general and administrative expenses of the company (i) for the year (t); FP_{it} represents financial performance of company (i) for the year (t), $\varepsilon_{i,t}$ random error of the regression equation.

To test the impact of the moderating variable of CSR on the relation between SG&A expenses and financial performance of the companies, the second hypothesis, moderated regression equation (2) is formulated.

$$log[FP_{i,t}] = \beta_0 + \beta_1\, log[SG\&A_{i,t}] + \beta_2\, CSR_{i,t} + \beta_3\, CSR_{i,t}\,* \\ log[FP_{i,t}] + \varepsilon_{i,t} \ldots \quad (2)$$

Where, log: natural logarithms; β_0: Constant of regression equation; β_1, β_2, β_3: Parameters of the explanatory variables included in regression equation; FP_{it}: companies' financial performance of the company (i) for the year (t), $SG\&A_{it}$ expenses: Selling, General & Administrative expenses of the company (i) for the year (t); CSR_{it} , corporate social responsibility indicator of the company (i) for the year (t); $CSR_{it}*FP_{it}$, represents the moderated variable in the regression equation (2), ε_{it}: Random error in the regression equation.

3.3. Analysis, testing hypotheses, results, and discussion

Descriptive and deductive statistics are used to analyze the data collected. Descriptive statistical analysis is used to describe the main characteristics and features of the sample and to provide brief summary about the sample of the study. Deductive statistical analysis is mainly used to test the research hypotheses. Table (2, panel A and B) provide descriptive analysis of the main three variable of the research and also control variables.

Table (2): Descriptive analysis of the main variables

Panel A	Descriptive Statistics for main variables				
	N	Minimum	Maximum	Mean	Std. Deviation
SG&A	670	271.780	4000625.000	194088.083	370888.498
CSR	670	.00000	.04783	.0072469	.01334036
Revenue	670	10449.810	49161647.000	2910099.846	5855556.515
Valid N (listwise)	670				

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Descriptive analysis of the main variables of the research (SG&A, CSR, and companies' performance; Revenue) shows means L.E. 194088, 0.0072469, L.E. 2910099 respectively, with standard deviation 370888, .01334036, 5855556 respectively.

Panel B			Descriptive Statistics for two of control variables		
	N	Minimum	Maximum	Mean	Std. Deviation
Assets / sales ratio	670	.155	36.068	2.469	2.865
Company Age	670	12	113	38.290	21.199
Valid N (listwise)	670				

Descriptive analysis of the quantifiable control variables of the research (assets/sales, and company age) shows mean values of L.E. 2.469, and 38.290 years respectively, with standard deviation 2.865, and 21.199 respectively.

To test the first hypothesis regression analysis is used. Equation (1) shows company performance measured by revenue as a dependent variable and SG&A expenses as independent variable. Table (3) shows the model goodness of fit (model summary), analysis of variance (ANOVA) of the regression equation, and the coefficient of the regression equation.

Table (3): Deductive statistical analysis

R	R Square	Adjusted R Square	Std. Error of the Estimate
.801[a]	.642	.641	3508054.6

Panel B			ANOVA[a]		
Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	14717658597792532	1	14717658597792532	1195.931	.000[b]
Residual	8220707069347981	668	12306447708604		
Total	22938365667140512	669			

a. Dependent Variable: Revenue

b. Predictors: (Constant), SG&A

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Panel C   **Coefficientsᵃ**

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	455606	152988.110		2.978	.003
SG&A	12.646	.366	.801	34.582	.000

a.   Dependent Variable: Revenue

Substituting the (β_i) coefficient calculated in table (3) panel C. Equation (1) can be reformulated as follows.

$$log[FP_{i,t}] = 455606 + 12.646\, log[SG\&A_{i,t}] + \varepsilon_{i,t} \;\ldots\ldots\ldots\ldots\; (1/1)$$

Panel A of table (3) shows the goodness of fit of the regression model, it shows correlation coefficient (R) equals 0.801, and coefficient of determination equal to 0.642, finally Adjusted R^2 equals 0.641. All these statistical measures confirm the goodness of the regression model to express the relation between SG&A expenses and Revenue. Panel B of table (3) shows the results of analysis of variance (ANOVA), in which the probability value (P) or the sympathetic value is equal to (0.000) which is greater than the predetermined and accepted level of significant (0.05). Therefore, the null hypothesis which indicates there is no effect of SG&A expenses on financial performance of the company is rejected and the alternative one is accepted, which means there is significant positive relationship between SG&A expenses and financial performance of the company. This positive relationship supports many accounting literature such as: Rababah, Molavi, and Doust (2022), Tsui, Lee, and Yau (2022), Memarista and Gestanti (2018). Finally, panel C in table (3) shows that the

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coefficient of SG&A expenses (β_1) equals 12,646 with (P) value less than (0.05), which means there is a significant effect of SG&A expenses on companies' financial performance.

The differences in prior studies' results which addressed the relationship between SG&A expenses and companies' financial performance is due, from the author's point of view, to the measures or proxies used to measure the financial performance of the company. When using objective measures or proxies based on published financial statements, the results of the studies indicate a statistically significant and positive relationship between SG&A expenses and the companies' financial performance. On the other hand, when using non-financial list-based quantitative measures or proxies, the results of the study of the relationship between SG&A expenses and companies' financial performance indicate that this relationship has disappeared.

Regarding the second hypothesis represented in equation (2) and which express the moderated impact of CSR on the relation between SG&A expenses and companies' performance. Table (4) shows the analysis of variance (ANOVA), table (5) shows the coefficient of regression equations parameters.

Table (4): analysis of Variance

ANOVA[a]

Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	3.309	3	1.103	77.615	.000[b]
Residual	9.466	666	.014		
Total	12.776	669			

a. Dependent Variable: LOG(Revenue)
b. Predictors: (Constant), DCSR_FP, LOG(SG&A), CSR_DUM

Table (5): coefficient of regression equation

Coefficients[a]

	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	.045	.006		7.946	.000
LOG(SG&A)	.103	.029	.119	3.564	.000
CSR_DUM	-.050	.012	-.154	-4.337	.000
DCSR_FP	.980	.068	.516	14.474	.000

a. Dependent Variable: LOG(Revenue)

Based on the data included in table (5), equation (2) can be reformulated as follows.

$$log[FP_{i,t}] = 0.45 + 0.103\, log[SG\&A_{i,t}] - 0.50\, CSR_{\,i,t} + 0.98\{CSR_{\,i,t}* \\ log[FP_{i,t}]\} + \varepsilon_{i,t} \quad (2/1)$$

Table (5) shows the probability value (P) is equal to (0.000), which is less than the pre-determined significance level for accepting or rejecting search hypotheses (0.05). Therefore, table (5) revealed the significance of the regression equation (2/1), which shows the

relationship between the companies' financial performance measured by revenue, and the SG&A expenses as an independent or explanatory variable and the CSR as a moderator variable.

Accepting or rejecting the second hypothesis of this research can be taken based on statistical information included in Table (5). Focusing on the moderated variable line in table (5) which is statistically calculated by multiplying CSR as a dichotomous variable by revenue as a proxy for companies' financial performance. $\beta_3 = 0.980$ with positive sign which means positive relationship between the CSR as a moderator variable and the relation between SG&A and financial performance of the companies. The significance of this positive relationship between the moderator variable and the relationship between the SG&A expenses and the financial performance of the companies, is determined by the probability value (P), Since the probability value (P) is less than the pre-determined significance level for accepting or rejecting the search hypothesis. Thus, it is statistically conceivable to reject the null hypothesis which indicating that the moderator variable has no effect on the relationship between SG&A expenses and companies' financial performance. In other words, the statistical results extracted from table (5) revealed that their a positive and significant effect of CSR on the relation between SG&A and companies' financial performance. This positive relationship supports many accounting literature that addressed the CSR as a moderator

variable in relation to companies' performance. such as: Al Taiar et al. (2020), Chen et al. (2019), and Yu (2018).

Regarding the role of the three control variables addressed in this research, equation (3) gathered the control and the main variables in one equation to test the effect of control variable on the main variables of the research.

$$log[FP_{i,t}] = \beta_0 + \beta_1 \, log[Ass./sales._{i,t}] + \beta_2 \, Firm \, Exp._{i,t} + \beta_3 \, Act._{i,t} + \beta_4 log[SG\&A_{i,t}] +$$
$$\beta_5 \, CSR_{\,i,t} + \beta_6 \, CSR_{\,i,t}* \, log[FP_{i,t}] + \varepsilon_{i,t} \quad ………….. \quad (3)$$

Where: log: natural logarithms; β_0: Constant of regression equation; β_1, β_2, β_3, β_4, β_5, β_6: parameters of the explanatory or independent variables included in regression equation; FP_{it}: companies' financial performance of the company (i) for the year (t), $Ass.sales_{,it}$: assets/sales ratio of the company (i) for the year (t), as a proxy to company size, Exp_{it}: company experience of the company (i) for the year (t), Act_{it}: type of Activity of the company (i) for the year (t), $SG\&A_{it}$: Selling, General & Administrative expenses of the company (i) for the year (t); CSR_{it}, corporate social responsibility of the company (i) for the year (t); $CSR_{it}*FP_{it}$, represents the moderated variable in the regression equation (2), ε_{it}: Random error in the regression equation.

Table (6) shows the analysis of variance (ANOVA) for all research variables, whether control or main variables of the research. Table (6) shows the significance of the regression equation No. (3), which means that there is a significant

relationship between the control variables, SG&A expenses and CSR, and that it is not due to random factors.

Table (6): analysis of Variance

ANOVA^a

Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	3.519	6	.586	42.002	.000[b]
Residual	9.257	663	.014		
Total	12.776	669			

a. Dependent Variable: LOG(Revenue)

b. Predictors: (Constant), DCSR_FP, Kind of Activity, LOG(SG&A), company Age, assets/sales ratio, CSR_DUM

Results of statistical analysis of the comprehensive research model comprising the six research variables, is shown in table (7).

Table (7): Multiple regression coefficients

Coefficients^a

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	.038	.013		2.871	.004
Assets/sales ratio	-.006	.002	-.127	-3.701	.000
Company Age	.000	.000	.025	.729	.466
Kind of Activity	.002	.001	.052	1.558	.120
LOG(SG&A)	.100	.029	.116	3.487	.001
CSR_DUM	-.039	.012	-.120	-3.226	.001
DCSR_FP	.989	.067	.520	14.722	.000

a. Dependent Variable: log(Revenue)

Statistical analysis based on the regression equation (3) revealed the following results. First, both company age and kind of activity has no impact on the financial performance of the

companies, where the probability value (P) of these two control variables are greater than the predetermined level of significance (0.05). On the other hand, statistical results revealed that the is negative and significant relationship between assets to sales ratio as a proxy of company size and financial performance of the companies. Statistical data extracted from table (7) conclude that there is a positive and significant relationship between SG&A expenses and CSR as a moderator variable from one hand and financial companies' performance. From the other hand. Finally, table (7) also revealed that there is a significant and negative relationship between CSR as dichotomous variable and financial companies' performance.

4. Conclusion, limitations, and future research

This research investigates the moderating effects of CSR on the relationship between SG&A expenses and companies' financial performance using archival data extracted from 670 Egyptian companies listed in EGX100 starting 2010 to 2019. Relation between SG&A expenses and financial performance of the companies is examined. Statistical analysis of data collected revealed that there is a positive and significant relationship between SG&A expenses and companies' revenues as a proxy of financial performance of the companies. The moderating impact of CSR on the relation between SG&A expenses and financial performance of the companies is verified. Three control variables are addressed in the research model to formulate the

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comprehensive research model. These three variables are: (1) size of the company which is measured by assets/sales ratio as a compound proxy gathering revenue and assets. (2) Company age or company experiences which is measured by the numbers of years that the company operates. (3) Kind of activity represented in the research model and regression equation by the sector the compony belongs. Results of the moderated and multiple regression analysis and its analysis of variance (ANOVA) revealed that there is only a significant and positive relationship between company size and financial performance of the companies. On the other hand, statistical analysis of data collected also revealed that there is no significant relationship between company age and kind of activity and financial performance of the companies.

The moderating versus the mediating impact of CSR on the relation between SG&A expenses and financial performance of the companies represents one of the research limitations. Second limitation is the narrow scope of the control variables. Financial and operating leverage, company strategy, employees' intensity may enhance the goodness of fit of the research model and the regression equations. Finally, future research may substitute or replacing Environmental, Social, and Governance (ESG) rather than CSR as a moderator or as a mediator variable and investigating the impact of ESG as a moderator or mediator on the relation between SG&A and financial performance of companies.

References:

- Abedalqader Rababah Homa Molavi and Shayan Farhang Doust, (2022). "Creating value via R&D, marketing costs and financial matters," Journal of Applied Accounting Research, Emerald Group Publishing Limited, 23:4, pages 863-883.

- Aguilera, R. V., Rupp, D. E., Williams, C. A., and Ganapathi, J. (2007). Putting the S back in corporate social responsibility: A multilevel theory of social change in organizations. Academy of Management Review, 32:3, 836-863.

- Aguinis, H. (2011). Organizational responsibility: doing good and doing well, in: S. Zedeck, ed., APA Handbook of Industrial and Organizational Psychology, Maintaining, Expanding, and Contracting the Organization (American Psychological Association, Washington, DC), 855–879.

- Al Taiar, F., Al Shamsi, S. M., Al Habsi, S., and Al Kiyumi, Y. (2020). Corporate social responsibility, selling, general and administrative expenses, and the financial performance of Omani hotels: Moderation effect. Journal of Business Research, 107, 319-329.

- Barney, J., Wright, M., and Ketchen, D. J., Jr. (2001). The resource-based view of the firm: Ten years after 1991. *Journal of Management, 27*:6, 625–641

- Belverd E. Needles, Marian Powers, Susan V. Crosson. (2011). Financial and Managerial Accounting Ninth (9th). Cenage Learning.

- Carroll, A. B. (2008). A history of corporate social responsibility: Concepts and practices. The Oxford handbook of corporate social responsibility, 1, 19–46.

- Carroll, A. B., and Shabana, K. M. (2010). The business case for corporate social responsibility: A review of concepts, research, and practice. International Journal of Management Reviews, 12:1, 85-105.
- Carroll, A. (1999). Corporate social responsibility. Evolution of a definitional construct. Business and Society, 38, 268-295.
- Chen, Y., Gao, Y., and Wu, Y. (2019). Corporate social responsibility, selling, general, and administrative expenses, and financial performance: New evidence from the US market. Sustainability, 11:10, 2879.
- Cheng, L. T. W., Chan, R. Y. K., and Leung, T. Y. (2018). Impact of perk expenditures and marketing expenditures on corporate performance in China: The moderating role of political connections. Journal of Business Research, 86, 83-95.
- Chouaibi, S., Rossi, M., Siggia, D., & Chouaibi, J. (2022). Exploring the moderating role of social and ethical practices in the relationship between environmental disclosure and financial performance: Evidence from ESG companies. Sustainability (Switzerland), 14(1), 1-17.
- Clarkson, M. B. E. (1995). A stakeholder framework for analyzing and evaluating corporate social performance. Academy of Management Review, 20:1, 92-117.
- Cunha, F. A. F. D. S., Meira, E., and Orsato, R. J. (2021). Sustainable finance and investment: Review and research agenda. BusinessStrategy and the Environment, 30, 3821–3838.
- European Commission (EC). (2001). Green Paper. Promoting a European Framework for Corporate Social Responsibility.
- Freeman RE (1984) Strategic management: a stakeholder approach. Adv Strateg Manag 1:31–60

- Gbolagade, A, Adesola, M A, Oyewale,I O, (2013), Impact of marketing strategy on business performance; A study of selected small and medium enterprises (SME) in Oluyole local government, Ibadan, Nigeria', IOSR Journal of Business and Management (IOSR-JBM), 11:4, 59-66

- Gbolagade, Adesola and Oyewale (2013). Impact of Marketing Strategy on Business Performance A Study of Selected Small and Medium Enterprises (SMEs) In Oluyole Local Government, Ibadan, Nigeria. IOSR Journal of Business and Management (IOSR-JBM) e-ISSN: 2278-487X, p-ISSN:2319-7668. Volume 11:4, 59-66

- Greening, D. W., and Turban, D. B. (2000). Corporate social performance as a competitive advantage in attracting a quality workforce. Business & Society, 39:3, 254-280.

- Hannah Oh; John Bae and Sang-Joon Kim, (2017), Can Sinful Firms Benefit from Advertising Their CSR Efforts? Adverse Effect of Advertising Sinful Firms' CSR Engagements on FirmPerformance, Journal of Business Ethics, 143:4, 643-663.

- Harrison, Brandon M. Di Paolo, Cockrell, Susan R., Ferrell, Benjamin P. and Edison, William (2022) The influence of financial performance on marketing expenditures among U.S. hospitals participating in the Medicare program, Health Marketing Quarterly, 39:2, 150-158.

- Heal, G. (2009). Corporate Social Responsibility – An Economic and Financial Framework. Columbia Business School; National Bureau of Economic Research (NBER).

- Huang, D. Z. X. (2021). Environmental, social and governance (ESG) activ- ity and firm performance: A review and consolidation. In An integrated theory of the firm approach to environmental, social and governance performance. Accounting & Finance.

- Hunjra, A. I., Boubaker, S., Arunachalam, M., & Mehmood, A. (2021). How does CSR mediate the relationship between culture, religiosity and firm performance? Finance Research Letters, 39, 1-12.

- Husted BW, Allen DB (2006) Corporate social responsibility in the multinational enterprise: strategic and institutional approaches.Journal of International Business Studies, 37, 838–849

- Iwata, K., Humphrey, S. J., and Nagano, M. S. (2011). Corporate social responsibility: A comparative analysis of Japan and the US. Journal of Business Ethics, 101:2, 259-276.

- Javed, M., Rashid, M. A., Hussain, G., & Ali, H. Y. (2020). The effects of corporate social responsibility on corporate reputation and firm financial performance: Moderating role of responsible leadership. Corporate Social Responsibility and Environmental Management, 27(3), 1395-1409.

- Jensen, M. and Meckling, W. (1976): "Theory of the firm: managerial behavior, agency costs and ownership structure", Journal of Financial Economics 3, 305–360.

- Kim, Y., Park, M. S. and Wier, B. (2012) Is earnings quality associated with corporate social responsibility? The Accounting Review, 87: 761-796.

- Kishimoto, T., Hobday, M., and Onishi, H. (2018). The strategic implications of corporate social responsibility for corporate reputation in different industry sectors. Business Horizons, 61:1, 133-142.

- Margolis, J. D., and Walsh, J. P. (2003). Misery loves companies: Rethinking social initiatives by business. Administrative Science Quarterly, 48:2, 268-305.

- Margolis, J. D., and Walsh, J. P. (2003). Misery loves companies: Rethinking social initiatives by business. Administrative Science Quarterly, 48:2, 268-305.
- Markowitch, D. G. – Huang, D. – Ye, P. (2020). Marketing intensity and firm performance: Contrasting the insights based on actual marketing expenditure and its SG&A proxy. In Journal of business research, 118, 223– 239.
- Maury, B. (2022). Strategic CSR and firm performance: The role of prospector and growth strategies. Journal of Economics and Business, 118, 1-16.
- McWilliams, A., and Siegel, D. (2000). Corporate social responsibility and finan- cial performance: Correlation or misspecification? Strategic Management Journal, 21, 603–609.
- McWilliams, A., and Siegel, D. (2001). Corporate social responsibility: A theory of the firm perspective. Academy of Management Review, 26:1, 117-127.
- Memarista, G., and Gestanti, L. (2018). Sunk Cost dilemma behavior: The contribution of marketing expenses towards financial performance. Jurnal Keuangan Dan Perbankan, 22:4, 625–642.
- Meyer JW, Rowan B (1977) Institutionalized organizations: formal structure as myth and ceremony. Am J Sociol 83:340–363
- Mohr, L.A., Webb, D.J. and Harris, K.E. (2001) Do Consumers Expect Companies to Be Socially Responsible? The Impact of Corporate Social Responsibility onBuy- ing Behavior. Journal of Consumer Affairs, 35, 45-72.
- Orlitzky, M., Schmidt, F. L., and Rynes, S. L. (2003). Corporate social and financial performance: A meta-analysis. Organization Studies, 24(3), 403-441.

- Porter, M. E., and Kramer, M. R. (2002). The competitive advantage of corporate philanthropy. Harvard Business Review, 80:12, 56-68.
- Prieto ABT, Shin H, Lee Y, Lee CW (2020) Relationship among CSR initiatives and financial and non-financial corporate performance in the ecuadorian banking environment. Sustainability 12(4):1621
- Samet, M.; Jarboui, A. (2017). How does corporate social responsibility contribute to investmentefficiency? J. Multinatl. Financ. Manag.,40, 33–46.
- Scott, W. R. (1987). The adolescence of institutional theory. Administrative ScienceQuarterly, 32:4, 493–511.
- Sharma, J. K., and Husain, S. (2015). Marketing expenses & profitability: Evidence from the telecom sector in the Kingdom of Saudi Arabia. Marketing, 7:35, 69–70.
- Thottoli, M.M. and Thomas, K.V. (2023), "The impact of web marketing on corporate social responsibility (CSR) and firms' performance", Rajagiri Management Journal, 17:1, 37-51.
- Tsui, A. S. C., Lee, B., and Yau, O. H. M. (2022). The impact of executive board gender diversity, R&D investment, marketing expenses on company performance in the health- care industry.Journal of Transnational Management, 21:1, 3–36.
- Waddock, S., and S. Graves 1997. The corporate social performance–financial performance link. Strategic Management Journal 18 :4: 303-319.
- Wang, Chuan-San (2015) How Useful Are CSR-related Expenditures in Predicting Future Earnings? ASBBS Proceedings; San Diego , San Diego: American Society of Business and Behavioral Sciences, 22:1, 448-471.
- Yu, H. (2018). The effect of corporate social responsibility on the relationship between SG&A expense and profitability. Journal of Service Science and Management, 11:04, 413-431.