| **RESEARCH ARTICLE**

Impact of Financial and Non-Financial Factors on the Performance of Companies in the Global Health Care Sector

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| **ABSTRACT**

This paper evaluates the impact of financial and non-financial factors on the performance of companies in the Global Health Care Sector while also promoting sustainable development goals (SDGs), specifically, SDG 3 (Good health and well-being) and SDG 5(Gender equality). The S&P 700 healthcare index is chosen, and a purposive sampling technique is used to obtain the top 50 companies in the index with 12 years of annual data of the given variables. This research applies a multiple linear regression test on panel data collected utilising the S&P CapitalIQ database. Notably, the research findings indicate that factors including market capitalisation, firm size, capital expenditures, and dividend per share (partially) have a positive and significant relationship, while the cost of goods sold hurts a company's profitability. These outcomes are consistent with the impact that these variables will have on business financial success. However, empirical data analysis results did not support other variables, especially, governance-related variables. The findings show that business profitability is unaffected by capital expenditures as a percentage of sales, leverage levels, liquidity levels, board independence, board size, board tenure, and women's representation. This discrepancy between expected and observed results emphasises how complicated business dynamics are and how many different factors can affect success. Profitability, corporate governance, innovative capacity, environmental sustainability, and social responsibility are only a few of the variables that contribute to the value of healthcare companies. This can help us learn more about ethical and environmentally friendly business methods.

| **KEYWORDS**

Health Care Organisations, Profitability, Sustainable Development Goals (SDG), Corporate Governance.

1. Introduction

When it comes to supporting long-term economic growth and resolving pressing social issues, few industries can compare to the global healthcare sector. It includes a large number of businesses providing a variety of healthcare-related goods and services. The S&P International 700 Health Care sector represents the healthcare business which is a sizable subset of the index consisting of about 11.1%. Its constituent firms are leaders in healthcare innovation, access to excellent healthcare, and the management of public health issues (Ramos et al., 2022).

The Sustainable Development Goals (SDGs) established by the United Nations give an all-encompassing plan of action for resolving global issues and promoting long-term prosperity. Goal 3 of the SDGs focuses on ensuring that all people have excellent health and well-being, whereas Goal 5 strives to accomplish gender equality and empower all women and girls (Sandberg et.al., 2022). These objectives are inextricably linked to the healthcare industry because of the emphasis placed on lowering healthcare costs, increasing women's participation in healthcare decision-making, and eliminating health disparities. While financial success has always been a top priority for businesses, ESG (environmental, social, and governance) aspects are increasingly being recognised as important factors to consider. Businesses need to include environmental, social, and governance (ESG) considerations in their

decision-making processes to successfully manage risks, improve long-term sustainability, and better align their business activities with society's standards and the SDGs (Satapo, 2021).

The link between financial and non-financial elements and firm performance is of the highest significance in the context of the healthcare sector of the S&P International 700. When it comes to achieving Sustainable Development Goals 3 and 5, among others, the private sector has a unique set of problems and possibilities. Companies' financial success in this market is highly susceptible to external factors such as research and development spending, innovative products, safeguarding patients, accessibility to healthcare, satisfaction with work, and gender diversity at the top (Moutinho and Lopes, 2009). However, there is a dearth of studies that thoroughly investigate the precise influence of financial and non-financial elements on the performance of S&P International 700 healthcare sector companies, especially regarding their contribution to SDG 3 and SDG 5. As a result, stakeholders are unable to make well-informed choices or create plans that efficiently combine sustainable development goals with financial objectives.

The S&P International 700 index, which is intended to be extremely liquid and efficient to reproduce, gauges the non-U.S. portion of the global equity market. Except for the United States, which is represented by the S&P 500, the index includes all the regions that are part of the S&P Global 1200 (S&P International 700 Index, 2023). The analysis aims to shed light on the complex interactions between financial and non-financial factors and their significant effects on business performance within the dynamic environment of the S&P International 700 Health Care sector. The noteworthy data gathered—a price return of 6.97% and a total return of 10.69% over the past year—underscores this significance. These measures show the sector's potential connection with SDGs 3 and 5 as well as its financial resilience and sustainability.

The S&P International 700 Total Return Index and the S&P International 700 Index trends shown in Figure 1 give a solid platform for demonstrating the urgency and importance of this research. The total Return Index continuously outperforms the Standard Index, demonstrating the significance of taking dividends and price appreciation into account when assessing a company's overall performance (Fig. 1). The market's intrinsic volatility is further illuminated by the periodic swings seen in both indices, which supports the investigation's focus on gender equality and sustainable business practises as potential market stabilisers. Additionally, the graph's consistent upward trajectory supports the research's justification by emphasising the possibility for synergy between improvements in the healthcare industry and the accomplishment of Sustainable Development Goals 3 and 5. The importance of this study essentially resides in its ability to offer practical knowledge that enables companies to seek sustainable development while assuring financial success. The significant returns seen, lay the groundwork for further investigation and show that economic success and a beneficial social impact are not incompatible goals. By adopting this viewpoint, the research benefits both academia and businesses, promoting informed decision-making and encouraging the development of a more resilient, inclusive, and lucrative healthcare industry.
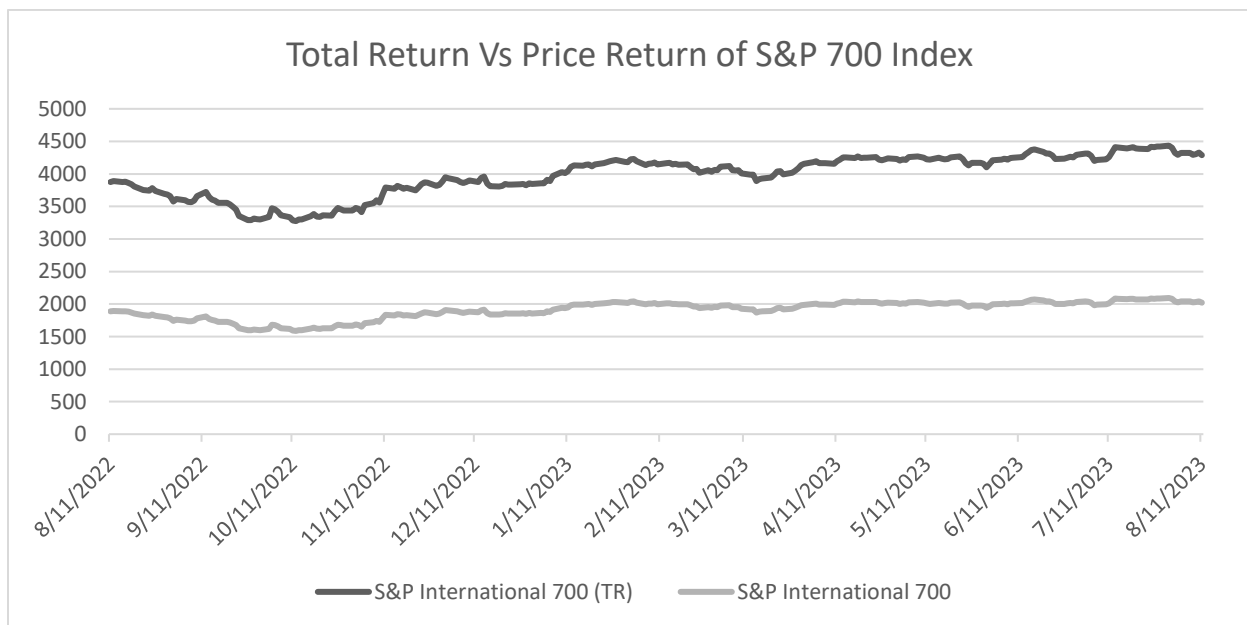

Fig. 1 *Total Return Vs Price Return of S&P 700 Index*

Return on Assets (ROA) acts as a crucial financial metric in this analysis to evaluate the performance of businesses in the healthcare industry. The performance ranges from 6.94% to 8.67% when looking at the ROA statistics from 2002 to 2022 (Fig. 2). The stability in the Return on Asset (ROA) emphasises the capacity of the healthcare sector to make positive use of its assets to realise returns and contains changes in its return in the last periods. However, it is important to note that the performance assessment of a

company goes beyond the profit and loss columns. With this, non-financial considerations that include; corporate governance, sustainability, and stakeholders' management create a significant part of future performances and organisational resilience. Adopting SDGs, especially SDG 3 (Good Health and Well-Being) and SDG 5 (Gender Equality), is essential for generating good effects that go beyond financial gains. Businesses that actively support these objectives can benefit society and the environment, improving their reputation and luring investors who care about the environment.

The dedication to sustainable practices of enterprises in the healthcare industry is likely to have an impact on their stock values in addition to their financial performance. Although the data shows a consistent ROA (Fig. 2), stock price changes might be related to things like the company's commitment to social and environmental causes as well as its efforts to be inclusive, hence playing a crucial role in gaining prosperity in the healthcare sector. These non-financial factors are increasingly being considered by investors as measures of a company's overall resiliency and long-term value.
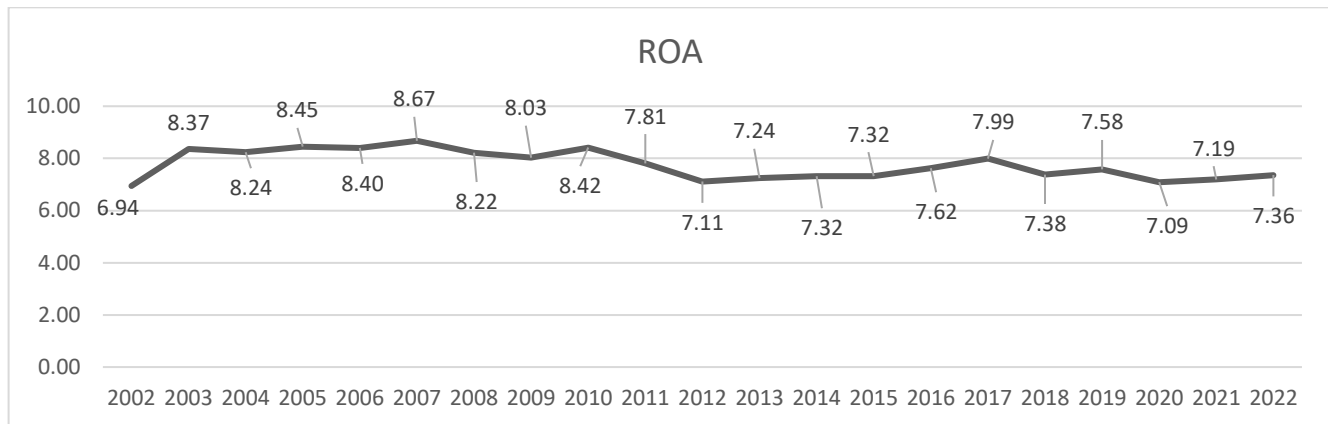
Fig. 2 *Average movements in ROA(%)*

On these grounds, this research would investigate relationships between financial indicators, sustainability practices, and market perceptions to gain a better understanding of how financial and non-financial factors affect firm value in the S&P International 700 Health Care sector and to advance SDGs 3 and 5. Investors seeking to make informed decisions that are in line with their ethical and sustainable investment goals while promoting good societal change must adopt a holistic strategy that integrates financial performance with social and environmental responsibilities. The goals of this study, therefore are to determine the financial and non-financial factors that influence the performance of companies in the S&P International 700 Health Care sector and hence, the outcomes may serve as a catalyst in promoting the UN sustainable development goals (SDG 3 and SDG 5) among the companies operating in healthcare sector worldwide.

This research seeks to fill the gaps in knowledge in sustainable development and corporate performance, more especially in the healthcare industry. As a result, the study will be useful to policymakers, investors, and healthcare workers as it identifies decision-making aiding information to the formulation of essential policies needed for the proper implementation of economic growth that considers social and environmental accountability. The envisioned goal is the realization of a more stable and fair healthcare system that would help achieve the SDGs 3 and 5. Therefore, the paper aims to identify both financial and non-financial drivers of S&P International 700 Health Care companies as key players in achieving SDG health targets of SDG 3 and 5. The novel way is that guidance on the interaction between financial indicators and sustainability projects is crucial for an investor focused on achieving sustainable investment objectives.

This study will particularly examine the role played by the financial and non-financial variables in the performance of firms in the S&P International 700 healthcare sector in support of SDG 3 and SDG 5. This study seeks to make this contribution with an extensive findings review of the evidential experience for the financial and non-financial aspects that affect business performance in this sector. In an attempt to present possible explanations for the multifaceted processes that define the healthcare sector, this paper will employ both financial and non-financial performance measures including revenue, liquidity, capital investment, health outcomes, and gender equality measures.

2. Literature Review

A company's success and probability of existence in the future are greatly defined by its financial position. Generally accepted practice involves assessing the soundness of a company and its performance through the basic profitability, liquidity and capital structure ratios. These factors are necessary to attract the investors, retain the business and ensure the company's sustainability to run its operations. In whatever sector, often financial performance makes the company more valuable (Chen et al., 2020; Li et al., 2019). However, the importance of working with some of the extra-financial elements and the main peculiarities of the healthcare sector must be considered here.

Recent years have revealed that non-financial assets of companies like the one addressing concerns touching upon ESG are of great significance. Current possible investment potential and subsequently firm value cannot be assessed as adequately without accounting for how much of a focus the company has placed on ESG considerations. This paper affirms that non-economic objectives such as health status and gender are vital in the healthcare sector. There is patient protection, availability of health care services, welfare of employees, and an appropriate representation of women in executive positions. Measures applied to non-financial items have been identified as effective for enhancing corporate performance and sustainability in many research works (Ortiz-Martínez et al., 2023). Nevertheless, no study was found that examined the impact of alignment between the S&P International 700 Health Care firms and SDG 3 and 5, on non-financial factors and the performance of the firm.

Sustainable Development Goals (SDG) are a common way for the United Nations to determine the strategies of sustainable development, targeting such critical spheres of today's health care as SDG 3 and SDG 5. SDG 5 aims for the UNSD's gender parity and empowering women and girls, on the other hand, SDG 3 focuses on the promotion of healthy lives and well-being throughout their age brackets. It means that the objective of generating good social impact and addressing health-related issues of inequalities should be incorporated in the functioning and business strategy of the organisations that are a part of the S&P International 700 Health Care sector. Nevertheless, this study identified a lack of empirical literature examining the position of financial and non-financial factors within the sector in promoting SDGs 3 and 5 (Leal Filho et al., 2022). Despite the number of previous related investigations that have researched the link between financial and non-financial firms' characteristics on the performance across industries, little consideration has been given to the performance of the healthcare firms S&P International 700 companies. Quite some research studies have also linked innovation, research and development spending, and the quality of treatment offered to the financial health of healthcare organisations (Kruk et al., 2018). Hay et al. (2019) highlighted the ways in the healthcare industry including patient effects, accessibility to health care and gender diversity in leadership (Hay et al., 2019).

2.1 Theoretical Framework

The study uses signalling theory, trade-off theory and stakeholder theory. The theory of signalling claims that firms tend to portray financial information in a way that positively changes the market's action and receive a desired response by the market (Spence, 1973). Trade-off theory, in contrast, suggests that firms have to achieve favorable costs and benefits of debt and equity (Modigliani & Miller, 1963). Signalling theory also accounts for the effect of business size on the value of a firm. Therefore, the higher total asset of the firms compensates the less expected bankruptcy probability in the eyes of the market (Kusumayanti & Astika, 2016). The firm size model using total assets indicates that large organisations have a higher likelihood of profits generation based on availability of assets. Hence when earnings are high the news can be considered as positive and were able to boost the company value from the side of the investors who have positive perceptions towards the outcome. Manoppo & Arie's (2016) and Pratama & Wiksuana's (2016) research also confirms the findings of the current research on incremental corporate value based on firm size. According to the trade-off hypothesis, a corporation needs to have a certain amount of debt and equity to balance its costs and profits (Modigliani & Miller, 1963). The present research is conducted within the framework of the stakeholder theory to investigate the effect of financial and non-financial variables on the performance of firms in the S&P International 700 Health Care sector when supporting SDGs 3 and 5. By completing the stakeholder matrix that reveals the expectations of the strategic stakeholders like shareholders, employees, customers, suppliers, regulators, local communities, and environmental groups on financial and non-financial performances the study can identify the diverse interests of strategic stakeholders. It enhances an understanding of how companies manage stakeholder-specific considerations and how their strategies relate to a specific subset of the SDGs.

The performance evaluation will involve two categories of measures – financial ratios (such as Return on assets (ROA)); and non-financial factors (emerging out of environmentally friendly policy, diversity & inclusion policies, the need for CSR etc.). Moreover, it will assess the implications of participative decision-making and stakeholders' commitment to the sustainability of these firms. Finally, based on stakeholder theory, the research will present constructive suggestions for improving the sustainable activities of healthcare businesses and the betterment of the whole network of relationships to address the stated goals and objectives of achieving SDG 3 and 5.

2.2 Hypothesis Development

Market capitalisation acts as one of the significant business measures when it comes to the values and performance potential of investors and shareholders. It has specific importance to the overall performance of a healthcare firm in determining its return on assets (ROA). A higher market capitalisation suggests overall market confidence in growth and profit-earning capacity of the firm hence pointing out that they are expected to earn excellent returns. This perception can work positively towards ROA as the company's assets are expected to generate better profits and returns on shareholder equity, (Ferdous et al., 2023). Therefore, this study sees the variable market capitalisation, which reflects the total value of a firm's outstanding stock, as having a positive impact on the return on assets. This literature review helps in formulating the following hypothesis:

H₁: **Firm profitability is Affected Positively and Significantly by Market Capitalisation.**

This research uses the three theories namely signalling, trade-off, and the stakeholder. Public financial information may serve as a visible signal that will assist corporations in communicating a positive signal to the market and getting a positive response to it (Spence, 1973). The amount of debt and equity a corporation should have can be explained by the trade-off theory, which was developed by Modigliani and Miller (1963). In contrast, legitimacy theory elucidates how social contracts—a type of public backing for corporations' internal workings—can propel businesses towards their objectives (Dowling & Pfeffer, 1975). The impact of total asset size on healthcare companies' return on assets is an area of interest in financial analysis. Research has shown that higher return on assets and return on equity have a significant impact on increasing a firm's competitiveness and profitability (Shaqqour, 2022). According to Tsiapa (2021), there are empirical evidences to suggest that managerial efficiency of total assets and higher financial liability has positive significant relationship with profitability particularly during a period of economic downturn. Likewise, Handayani (2022) notes that Return on Asset or ROA is another crucial assessing factor for the financial performance of a company reflecting on how effective a healthcare firm is in utilising its assets to generate income. This understanding from the literature supports the formation of the following hypothesis:

H₂: **Firm profitability is Affected Positively and Significantly by Firm Size.**

Over the last few years, there emerged heightened concern and research focusing on the association between capital investment and the performance of healthcare firms mainly about their return on assets. Cheema et al., (2021) and Sharma & Gupta, (2017) serve to provide relevant literBeer & Jiang (2016) also acknowledges performance as a crucial determinant of the relationship between capital expenditure and healthcare companies. This expenditure is usually evaluated about the amount provided for the acquisition of fixed assets, and sometimes relative to the acquisition cost of other assets, providing valuable information when evaluated about the value of the assets recorded in the company's balance sheet. Moreover, these works use different control variables like the size of the company, market value, the age of the company, and growth to control for various effects. The conclusions raise that to variables, increasing capital investments has a positive effect on firm performance by increasing product quality, decreasing operation cost, and increasing production efficiency (Denton, 1998). In addition, capital expenditure has its place as part of increasing customer satisfaction and providing a foundation for future revenue streams. Based on this literature, the following hypothesis is developed:

H₃: **Firm profitability is Affected Positively and Significantly by Capital Expenditures.**

Over the last few years, there emerged heightened concern and research focusing on the association between capital investment and the performance of healthcare firms mainly about their return on assets. Cheema et al., (2021) and Sharma & Gupta, (2017) also acknowledge performance as a crucial determinant of the relationship between capital expenditure and healthcare companies. This expenditure is usually evaluated about the amount provided for the acquisition of fixed assets, and sometimes relative to the acquisition cost of other assets, providing valuable information when evaluated about the value of the assets recorded in the company's balance sheet. Moreover, these works use different control variables like the size of the company, market value, the age of the company, and growth to control for various effects. The conclusions raise that to variables, increasing capital investments has a positive effect on firm performance by increasing product quality, decreasing operation cost, and increasing production efficiency (Denton, 1998). In addition, capital expenditure has its place as part of increasing customer satisfaction and providing a foundation for future revenue streams. Based on this literature, the following hypothesis is developed.

H₄: **Firm profitability is Affected Positively and Significantly by Dividend per share.**

The investment on R&D and the profitability of firms can be analysed in the framework of signalling theory. Investing in R&D is a strong signal that's associated with the level of innovation and growth thus the value of a company is likely to rise. This expenditure is in the direction of undertaking new product services and technologies, and the creation of competitive advantages. Curtis et al., (2020) have classified expenditure on research and development as a source of future growth since it helps institutions to meet the ever-changing needs of customers. They also found out that R&D activities had the potential to produce new revenues and other properties. Since innovation is a critical ingredient for sustained success, there is a priori expectation of a positive and significant relationship between spending on R&D and corporate profitability as reported in the signalling theory and evidence. This literature review leads to the formulation of the following hypothesis:

H₅: **Firm profitability is Affected Positively and Significantly by Research and development costs.**

According to signalling theory, capital expenditure/sales ratio is an indicator of a company's investment in its future growth and better operating efficiency. Sharma and Gupta (2017) pointed out that more current assets for short-term liabilities reduce the longstanding risk, including other general and sundry expenses such as penalty fees. If a firm spends a large percentage of its sales on capital expenditures, it is demonstrating the commitment to worthy objectives of high productivity and competitiveness. Such investment can also foster efficient use of resources in an organisation, increase operational efficiency and hence, enhance profits. Since deployment of resources for value creation projects increases firm value, there is a significant positive relationship between capital intensity defined by capital expenditure per sales and firm profitability proved by signalling theory (Denton 1998). This literature review aids in the development of the following hypothesis:

H$_6$:   Firm profitability is Affected Positively and Significantly by Capital expenditures as a percentage of revenue.

The relationship between leverage and firm value is highlighted by signalling theory and trade-off theory. Based on signalling theory, leverage is a signal that can influence investor decisions. Meanwhile, trade-off theory states that retained earnings are the best source of internal funding. The use of debt at a certain level will affect investor perceptions. High leverage can be an indication of the magnitude of liquidation risks faced by the company (Basaria & Sjarif, 2020). Liquidity risk reduces investor trust because it is seen as a negative signal (bad news), this may negatively impact the stock price and lead to a decrease in the firm's value. Interest expense is the consequence of the use of debt (Alarussi & Alhaderi, 2018). A very high-interest expense can increase investment risk; this can cause the company to go bankrupt. Therefore, investors tend to compare total debt with total assets in making investment decisions to avoid the risk of liquidation. Kasmir (2014) found the negative effect of leverage on firm value. This literature review aids in the development of the following hypothesis:

H$_7$:   Firm profitability is Affected Positively and Significantly by Leverage levels.

According to signaling theory, the proper allocation of funds is an indication of the company's good performance which can increase firm value because it is seen as a positive signal by investors. The higher the proportion of current assets that can be used to pay off short-term liabilities, the risk of additional costs that may arise due to the fulfilment of liabilities past the period can be avoided, for example, late fees (Hanafi& Halim, 2005). Therefore, high liquidity can optimize firm value because it is considered a positive signal for investors. This literature review aids in the development of the following hypothesis:

H$_8$:   Firm profitability is Affected Positively and Significantly by Liquidity levels.

The cost of goods sold is a critical factor that affects the financial performance of companies in various industries, including the healthcare sector. Numerous studies have examined the relationship between the cost of goods sold and firm performance, often measured by return on assets. Nugroho et al. (2018) examined supply chain management maturity and the financial performance of small and medium enterprises by considering the COGS of the firm. For instance, the research focused on, sales growth rate, operating cash flow, Turnover of inventory, cost of goods sold COGS, gross margin, operating margin, net margin, return on assets and return on investment to assess supply chain performance. This will explain why COGS is vital in analysing the financial effect. Based on signalling theory, the association between activity ratio and firm value is explained. Murhadi (2015) alluded that, an activity ratio tells much about the efficiency level of the management in turning its assets into revenues. This efficiency fortunately operates as proof of a company's capability in terms of asset management and usually elicits positive reactions from the market; many times leading to a rise in the stock prices and this therefore translates into a rise in firm value. Based on this literature review, we develop the following hypothesis:

H$_9$:   Firm profitability is Affected Negatively and Significantly by the Cost of goods sold.

Stakeholder theory also underlines that an independent board is essential for making fair decisions involving stakeholders with the company. Based on their study conducted by Ferdous et al (2023), reveal that the independent board is better placed to offer unbiased supervision of the managerial and, strategic choices. Independent directors have different opinions and they reduce outside influence making good governance ethical, transparent and responsible. The overall result of all this is improved investor confidence and thereby consolidating on the good reputation of the firm. In support of this idea, Vieira and Madaleno (2019) provided a confirmation of significant and positive correlation between governance practices like; board of independence and company value. Since better governance adds value to the company We have used stakeholder theory and empirical evidence that reveal the significant and positive association between board independence and firm profitability. This literature review leads to the formulation of the following hypothesis:

H$_{10}$:   Firm profitability is Affected Positively and Significantly by Board Independence.

The trade-off theory serves as a source of understanding of the connection between board size and firm performance. Large number of directors gives a broad range of information across the organisational network thus enhancing the chances of accurate decision making. But they may also experience some difficulty in terms of information sharing and collaboration. Chatterjee and Nag (2023) established that large boards are normally associated with low firm value implying that large boards may not be efficient. On the other hand, low board of directors comprises can make specific responsibilities easily distinguishable and quick decisions making. According to the study conducted by Sari (2023), the right number of board members should reflect its productivity as well as have competent members within. Therefore, the trade-off theory and empirical evidence support the idea that an ideal board size positively and significantly influences firm profitability, leading to the formulation of the following hypothesis:

H$_{11}$: Firm profitability is Affected Positively and Significantly by board size.

From the stand point of the trade-off theory both the board tenure and the corporate profitability have been explained. Lengthy board tenue can be an advantage in delivering stability and in giving continuity to strategic plans and operating model comprehension. But, length of service may also result to employee negligence and unresponsiveness to change. According to Livnat (2021), board tenure had favorable effects on performance but argued that the board tenure should offer adequate experience when appointing new people who could bring new ideas to the boards. Long service also provides the board with hindsight to properly monitor the management and provide wisdom; short service provides the board with fresh and different perspective from other boards. Primary research based on the board of directors, like Ardiyanto & Haryanto (2017) suggest that the best duration of the tenure can balance the experience with the board diversity. Consequently, the trade-off theory supports a positive and significant relationship between board tenure and firm profitability, forming the basis for the following hypothesis:

H$_{12}$: Firm profitability is Affected Positively and Significantly by board tenure.

Stakeholder theory highlights the need to involve people with various capabilities and perceive all of them in decision-making. There is better female representation on Boards, and this results in more diverse consideration and a better evaluation of options in companies. Chatterjee and Nag (2023) provide evidence that shows that, companies with woman directors on their boards, have better financial performance due to increased diversification that brings with it innovation, better management of risks and better conflict resolution as board look at organisations from diverse perspectives to the latter. Also, it becomes easier for the boards with diverse staff to consider the customer base of the whole society hence coming up with decisions that would suit the society. Therefore, given the support provided by stakeholder theory and empirical studies emphasising the advantages of various viewpoints, it may be hypothesised that there is a positive and significant association between women's representation on boards and business profitability (Luh et.al, 2023). This literature review aids in the development of the following hypothesis:

H$_{13}$: Firm profitability is Affected Positively and Significantly by women's representation.

2.3 Operationalization of the Variables

Table I below shows the list of abbreviations while Table 2 shows the operationalisation of the variables that are used in this research.

Table 1: List of abbreviations

Abbreviation	Meaning
CAPEX	Capital Expenditures
CAPEXPEROFREV	Capital Expenditures as a % of Revenue
CGS	Cost of Goods Sold
DPS	Dividend per share
ESG	Environmental, Social, and Governance
MCAP	Market Capitalization
MLR	Multiple Linear Regression
ROA	Return on Assets
R&D	Research and Development
RDEXP	Research and Development Expenses
(S&P)	Standard & Poor's
(SDG)	Sustainable Developments Goal
TA	Total Assets

The table 2 below shows the operationalisation of the variables that are used in this research.

Table 2 *Operationalisation of the Variables*

No.	Variable	Definition	Measurement
	Dependent Variable		
1	Profitability	The company can generate profits every period (Pioh, 2018)	ROA = Profit after tax / Total Assets (Basaria & Sjarif, 2020)
	Independent Variables - Financial		
2	Market Capitalisation	It is the total value of a publicly traded company's outstanding shares of stock in the stock market.	$Market\ capitalisation\ =\ outstanding\ shares\ *\ market\ price$ (Ferdous et al., 2023)
3	Firm Size	The total assets of the firm. (Thavikulwat, 2004)	$Firm\ Size\ =\ Log\ of\ Total\ Assets$ (Manoppo & Arie, 2016)
4	Capital Expenditures	The money invested by a company to acquire or upgrade fixed, physical, or non-consumable assets	$CapEx\ =\ Noncurrent\ assets\ -\ Noncurrent\ liabilities\ +\ Depreciations\ +\ Amortization$ (Cheema et al., 2021)
5	Dividend per share	It's the sum of declared dividends issued by a company for every ordinary share outstanding (Arsal, 2021).	$DPS\ =$ Total dividends $\div$ Total Issued Shares (Arsal, 2021).
6	Research and development cost	Expenses incurred by a company in its efforts to innovate, develop, and improve products, services, processes, and technologies (Curtis et al., 2020).	$R\&D\ Cost\ =$ $Log\ of\ Total\ research\ and\ development\ cost$ (Curtis et al., 2020)
7	Capital Expenditures as a % of Revenue	The proportion of a company's total capital expenditures to its total revenue (Denton, 1998).	$Capital\ Ependiture\ as\ percentage\ of\ revenue\ =$ $Capital\ Ependiture\ \div\ Revenue\ )\ \times\ 100$ (Sharma & Gupta, 2017)
8	Leverage	Compares the amount of a company that is owned by creditors to the amount that the company owns in equity from its shareholders (Basaria & Sjarif, 2020).	$Leverage\ =\ (Total\ debt\ \div\ Total\ Equity)\ \times\ 100$ (Basaria & Sjarif, 2020)
9	Liquidity	Is the ability of the company to meet its short-term obligations (Hanafi & Halim, 2005).	$Current\ Ratio\ =\ Current\ Assets\ \div\ Current\ Liabilities\ \times\ 100)$ (Hanafi & Halim, 2005)
10	Cost of goods sold	Used in measuring the effectiveness of management to utilise resources to generate profits (Murhadi, 2015).	$Log\ of\ Cost\ of\ goods\ sold$ (Murhadi, 2015).

	Independent Variables - Non-Financial		
11	Board Independence	The proportion of independent non-executive directors on corporate boards (Vieira & Madaleno, 2019)	$Board\ Independence = No.\ of\ Independent\ directors \div No.\ of\ total\ directors\ ) \times 100$ (Ferdous et al., 2023)
12	Board Size	Indicating the total number of directors on the board of a company (Chatterjee & Nag, 2023).	$Board\ Size = Count\ of\ total\ board\ directors$ (Chatterjee & Nag, 2023).
13	Board Member Term	The length of time that individual board members have been serving on a company's board of directors. (Ardiyanto & Haryanto, 2017)	$Tenure = Log\ of\ No.\ of\ years$ (Livnat, 2021)
14	Women Representatives	Number of women directors on a company's board to total number of directors on that board	$Diversity = (Women\ directors \div Total\ directors\ ) \times 100$ (Chatterjee & Nag, 2023).

3. Methodology

The research adopts a positivist research philosophy, which is based on the assumption that there is a single, objective reality that can be measured and analysed using quantitative methods. The research uses a deductive research approach, which involves testing a hypothesis using data and statistical analysis. The research used a longitudinal research strategy, which involves collecting data over a period of time (in this case, 12 years) and analysing changes and trends over that time period. In the context of a research article, gathering panel data over 12 years is crucial, especially when analysing the connection between firm-related characteristics and profitability. This longer time frame has several benefits that are closely related to a business's economic life cycle. There are several forms of economic life cycle that any business goes through and these are the introduction phase, the growth, maturity and the decline phase. Through the use of panel data, researchers are able to monitor self-development of a company with reference to these stages over a 12 year timeline (Sharma, 2023). This dynamic perspective also fits well into the analysis of various factors that may affect business profitability at any stages of the economic cycle. In terms of data analysis, the study was quantitative whereby regression and correlation analysis were used to test the relationships between the financial and non-financial aspects as well as the performance of companies operating in S&P International 700 Health Care sector. The intention is to use the results to broaden the generalization of data about the financial performance of companies in this sector throughout various stages of their economic development cycle. The econometric model for this study based on Multiple Linear Regression (MLR) will be given as:

$$ROA_{it} = \beta_0 + \beta_1 X_{1it} + \beta_2 X_{2it} + \beta_3 X_{3it} + \beta_4 X_{4it} + \beta_5 X_{5it} + \beta_6 X_{6it} + \beta_7 X_{7it} + \beta_8 X_{8it} + \beta_9 X_{9it} + \beta_{10} X_{10it} + \beta_{11} X_{11it} + \beta_{12} X_{12it} + \beta_{13} X_{13it} + \varepsilon_{it}$$ .... *Equation (i)*

The econometric model for this study based on Multiple Linear Regression (MLR) will be given as:

Where, β_0 is the Intercept and from $\beta_1\ to\ \beta_{12}$ are the coefficients for each of the variables (X_1 to X_{12}) and ε_{it} is the error term where 'i' represents the cross-sectional units and 't' is the time.

1. X1(Market Capitalisation)
2. X2(Firm Size)
3. X3(Capital Expenditures)
4. X4(Dividend per share)
5. X5(Research & Development cost)
6. X6(Capital Expenditures as a % of Revenue)
7. X7(Leverage)
8. X8(Liquidity)
9. X9(Cost of goods sold)
10. X10 (Board Independence)
11. X11(Board Size)

12. X12(Board Member Term)
13. X12(Women Representation)

3.1 Sampling and Data Collection

The research used a census sampling approach, which involved 50 companies in the S&P International 700 Health Care sector in the sample. The diverse regional background has also been considered while selecting the sample (Fig 4). The study obtained secondary data from the CapitalIQ database that included details about the variables used in this research. The 12-year time frame covered by this data is from the final year of 2011 to the financial year 2022.
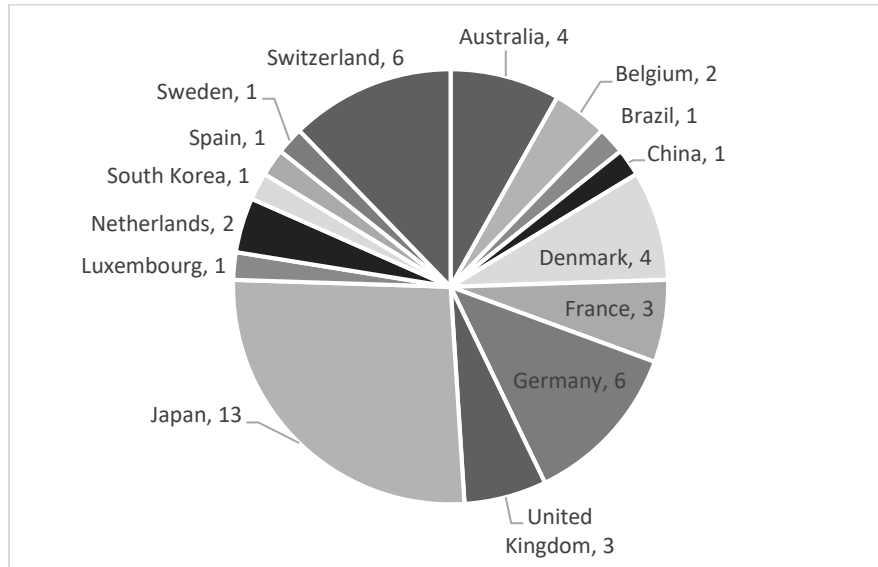
Fig. 3 *Selection of regional healthcare companies*

4. Results and Discussions
4.1 Descriptive Statistics
Financial Variables

Based on Tables 3, analysis is articulated for the financial factors to show the descriptive statistics.

Table 3 *Descriptive statistics for financial variables*

Variables	Obs	Mean	Std. Dev.	Min	Max	Skew.	Kurt.
ROA	568	8.003	5.743	.12	34.5	1.849	6.844
MCAP	554	9.864	1.167	5.057	12.685	-.111	3.795
TA	579	9.114	1.525	3.131	11.888	-.421	3.608
CAPEX	572	5.399	1.745	-2.408	8.321	-1.281	5.727
DPS	573	1.112	1.485	0	10.3	3.254	17.226
RDEXP	473	6.34	1.633	1.732	9.653	.015	2.124
CAPEXPEROFREV	572	5.948	7.719	.416	107.3	7.88	82.093
Leverage	554	0.644	0.932	.003	0.1337	0.352	0.715
Liquidity	573	1.81	2.093	.353	18.5	4.649	29.483
CGS	561	7.645	1.432	1.836	10.379	-5.860	3.679

The average return on assets for the companies in the Health Care sector is approximately 8.003, with a standard deviation of 5.743. The values range from 0.12 to 34.5, indicating a considerable variability in the performance of companies. The high positive skewness and kurtosis in ROA (skewness = 1.849, kurtosis = 6.844) suggests a distribution with a long tail on the right side, indicating potential outliers or extreme values. The average market capitalisation is around 9.864 with a relatively low standard deviation of 1.167. The market capitalisation (MCAP) values show a relatively narrow range from 5.057 to 12.685, indicating that companies in the healthcare sector have consistent market sizes. The average MCAP of 9.864 suggests that most companies are

moderately capitalized. A higher market capitalisation might be associated with increased resources and access to capital, potentially positively impacting profitability.

The average total assets stand at 9.114 with a standard deviation of 1.525. The total assets range from 3.131 to 11.888, implying diverse asset sizes among the companies. The higher average value of TA suggests a potential positive influence on firm profitability. A larger asset base might provide more resources for operations and growth, potentially influencing profitability. The negative skewness and kurtosis indicate the presence of companies with relatively smaller asset sizes, which could be explored further in the context of their impact on profitability. The mean of capital expenditures is about 5.399 and standard deviation is 1.745, meaning that the companies included in the study investment differently. The CAPEX values are positive varying from -2.408 to 8.321 depending on the investment strategies whereby changes indicate that high expenditures may be related to investment in innovation, expansion or improvements on efficiency that may lead to increased profitability. More on how CAPEX impacts on profitability there can be further analysis using regression analysis.

On average, the dividend per share of these companies amounts to approximately 1.112 USD, with separation from the mean by 1.485 USD, which was indicated by positive skewness and kurtosis coefficients. In this aspect, we have the distribution of dividend per share being between 0 and 10.3, thus giving a clue that firms' dividend policies differ considerably. The firms may be in a position to develop dividend policies that capture both SDG 3 and 5 with prospect to increase the profitability due to investors who are interested in sustainable investments. Concerning research and development expenses (RDEXP) the mean is equal to 6.34 which means that firms invest in research and development. Higher investment in research and development can help in finding various healthcare solutions which can fit into the market, which can reciprocate to both the bottom line as well as the journey towards achieving the SDGs. The overall average CAPEX as a percentage of revenue is 5.948; however, the standard deviance of 7.719 means that the spending proportions are highly volatile. This implies that some firms are surely investing a lot compared to their revenue hence implying various practices in capital management. A higher percentage might indicate a commitment to sustainable growth, positively influencing profitability. The values range from 0.416 to 107.3, indicating a wide range of spending proportions.

The average leverage is about 0.644 with a standard deviation of 0.932. Leverage values range from 0.003 to 0.133, suggesting varying levels of debt utilisation among the companies. High leverage might enhance returns but also introduce financial risk. The non-normal distribution (positive skewness) suggests some companies might have higher leverage levels, which could impact profitability and SDGs. The average liquidity is approximately 1.81 with a standard deviation of 2.093. Liquidity values range from 0.353 to 18.5, indicating differences in cash and liquidity management among the companies. Companies with higher liquidity might be better positioned to navigate uncertainties and seize growth opportunities, potentially contributing to profitability while aligning with SDGs.

Descriptive analysis provides an average CGS of around 7.645 units based on 561 observations, which represents the typical cost of producing things. The data points tend to cluster quite closely around this mean value, as seen by the standard deviation of approximately 1.432 units, which denotes a moderate level of dispersion. The dataset's minimum CGS value, 1.836 units, suggests that some businesses have successfully managed their cost of products, while the dataset's greatest value, 10.379 units, suggests that some have experienced greater production costs. The CGS variable's skewness value of -5.860 is remarkable. The distribution of CGS values is said to be left-handedly skewed by this negative skewness, with a tail extending towards the lower values. This skewness may be due to a small number of outlier data points with abnormally high CGS values. Additionally, the CGS values are centered around the mean and have fewer extreme values, according to the kurtosis value of 3.679, which denotes a reasonably peaked distribution.

Non-Financial Variables

Based on Tables 4, analysis is articulated for the non-financial factors to show the descriptive statistics.

Table 4 Descriptive statistics for non-financial variables

Variables	Obs	Mean	Std. Dev.	Skew.	Kurt.
ROA	568	7.369	5.107	.995	3.308
BoardInd	554	.852	.136	-.814	2.808
BoardSize	579	2.522	.319	-.025	2.878
BoardTenure	572	2.486	1.579	.345	1.534
WomenRepresentation	568	.106	.054	-.17	3.775

The descriptive data supports SDGs 3 and 5 by providing useful insights into the factors affecting how corporate governance affects the performance of businesses in the S&P International 700 Health Care sector. Although the significant standard deviation

of 5.107 indicates a significant diversity among companies, the Return on Assets (ROA) statistic shows an average of 7.369, reflecting the profitability of the industry. A few outliers with incredibly high ROA values are suggested by the distribution's positive skewness of 0.995, which points to a rightward skew in the distribution. The occurrence of such outliers is highlighted by the kurtosis value of 3.308, which may be a reflection of the sector's competitive environment and variable financial performance. Board independence (BoardInd) has a reasonably high mean of 0.852, which represents significant proportion of the independent directors on board of directors. A level of adherence to corporate governance practices may be shown by the low standard deviation of 0.136, which suggests that most businesses retain a similar level of board independence. The low negative skewness value of -0.814 indicates that most businesses may have more independent boards that adhere to governance norms. Additionally, the distribution's positive kurtosis value of 2.808 suggests some degree of non-normality, which could be ascribed to some businesses having unusually high board independence.

An average of 2.522 members per board is shown by Board Size (board size), indicating a small board size. The low standard deviation of 0.319 indicates some stability in the governance structure and that most corporations continue to keep a comparable board size. An essentially symmetric distribution of board sizes is shown by the skewness value near zero (-0.025), which may suggest a balance between a smaller board for efficiency and a larger board for a variety of perspectives. Further indicating the existence of certain outliers or board size variations is the kurtosis score of 2.878.

Women represent 10.6% of the representation in the context being investigated on average, according to the variable "WomenRepresentation" in the dataset, which has a mean value of around 0.106. Women's representation across observations appears to vary moderately, according to the standard deviation of about 0.054 among data. In some circumstances, women's representation may be lower than the mean, according to the distribution's minor leftward skewness, which is indicated by the distribution's negative skewness of -0.17. Additionally, the positive kurtosis score of 3.775 suggests that there may be some extreme values in the dataset's representation of women because it shows that the distribution has heavier tails and more outliers than a normal distribution.

4.2 Diagnostic tests

The Hausman test reveals that the coefficient differences between the fixed effect and random effect models are statistically significant at the 0.05 significance level based on the presented findings with a chi-square test value of 17.811 and a p-value of 0.023 (Table 5). As a result, the null hypothesis that the variations in coefficients are not systematic is rejected. This suggests that the fixed effect model, which accounts for individual-specific effects not taken into consideration in the random effect model, is more suitable for assessing the panel data in this instance. This is consistent with the works of Ariabima et al. (2023).

Table 5 *Hausman test*

	Coef.
Chi-square test value	17.811
P-value	.023

If there is evidence of first-order autocorrelation, which denotes a correlation between the error components of the same observation across different time periods, the Wooldridge test for autocorrelation in panel data is employed to ascertain whether this correlation exists (Safitri et al., 2022), table 6 refers. This test is essential because panel data models may contain biased and ineffective parameter estimations if the assumption of no autocorrelation is violated. The test results are below:

Table 6 *Wooldridge test*

H0: no first-order autocorrelation	
F(1, 40) =	9.143
Prob > F =	0.0043

The associated p-value (Prob > F) is 0.0043, and the test statistic F (1, 40) has a value of 9.143. In hypothesis testing, the null hypothesis is often rejected in favor of the alternative hypothesis if the p-value is smaller than the selected significance level (commonly 0.05). In this instance, the null hypothesis would be rejected because the p-value (0.0043) is less than 0.05. This implies that the panel data contains indications of first-order autocorrelation. The issue related to the data showing indication of first-order autocorrelation is dealt with by the application of robust standard errors technique in Stata as explained below under the discussion of regression and correlation analysis.

4.3 Regression and Correlation Analysis
Financial Factors
Based on table 7 and 8 below, the correlation and regression analysis of the financial factors is discussed including the model fit.

Table 7 *Correlation matrix for financial variables*

Variables	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
(1) ROA	1.000									
(2) MCAP	0.144	1.000								
(3) TA	0.318	0.801	1.000							
(4) CAPEX	-0.092	0.818	0.880	1.000						
(5) DPS	0.181	0.586	0.466	0.489	1.000					
(6) RDEXP	-0.127	0.793	0.855	0.712	0.489	1.000				
(7) CAPEXPEROFREV	-0.006	0.023	-0.140	0.134	-0.053	-0.228	1.000			
(8) Leverage	-0.139	0.052	0.187	0.185	0.050	0.083	-0.032	1.000		
(9) Liquidity	-0.071	-0.231	-0.278	-0.370	-0.264	-0.115	0.025	-0.263	1.000	
(10) CGS	-0.224	0.729	0.922	0.896	0.435	0.735	-0.138	0.239	-0.382	1.000

In regression analysis, robust standard errors are a statistical method used to deal with heteroscedasticity and, in some situations, autocorrelation problems. When our panel data show signs of first-order autocorrelation, utilising robust standard errors is a wise strategy to draw reliable conclusions. Our coefficient estimates and hypothesis tests will be more accurate since these standard errors account for heteroscedasticity and, to some extent, serial correlation. This is in line with the study conducted by Alajmi and Worthington (2023). After the application of the robust standard errors technique in Stata, we have received the results as shown in Table 8 (The null values in the significance column show the value greater than the set confidence level).

The R-squared value of 0.286 indicated that the included independent factors could account for about 28.6% of the variation in the dependent variable, return on assets. This shows that a significant percentage of the variation in return on assets is well captured by their model. 454 observations made up the dataset used for the analysis. The regression model's overall statistical significance was shown by the F-test, which produced an F-statistic of 6.105 and a corresponding p-value of 0.000. A considerable influence of at least one independent variable on the dependent variable is suggested by the low p-value. In order to evaluate model quality, the Akaike Information Criterion (AIC) and Bayesian Information Criterion (BIC) were also calculated, yielding values of 1887.327 and 1920.272, respectively. A better balance between model fit and metric values is indicated by lower values for both.

Table 8 *Regression matrix for financial variables*

Returnonassets	Coef.	St.Err.	t-value	p-value	Sig
MCAP	1.627	.456	3.57	.001	***
TA	-4.859	1.052	-4.62	0	***
CAPEX	2.459	.631	3.90	0	***
DPS	.644	.359	1.79	.08	*
RDEXP	.397	.691	0.57	.569	
CAPEXPEROFREV	-.223	.089	-2.50	.016	**
Leverage	-.002	.001	-1.30	.199	
Liquidity	.378	.231	1.64	.109	
CGS	-20.522	6.688	-3.07	.004	***

Mean dependent var		7.715	SD dependent var		5.832
R-squared		0.286	Number of obs		454
F-test		6.105	Prob > F		0.000
Akaike crit. (AIC)		1887.327	Bayesian crit. (BIC)		1920.272

*** p<.01, ** p<.05, * p<.1*

Note: *The degrees of significance show how strongly the independent factors and dependent variables are correlated. *** denotes statistical significance at the highest level (p .01), ** denotes statistical significance at the next level (p .05)*

Having carried out the diagnostic tests and satisfied with the quality and suitability of the data we can confidently analyse and discuss our various hypotheses.

H_1: Firm profitability is Affected Positively and Significantly by Market Capitalisation
Market Capitalisation (MCAP) and Return on Assets (ROA) have a 0.144 correlation as shown in table 7. This positive but modest correlation shows that market capitalisation and profitability have only a tenuous relationship. It suggests that there is little correlation between increasing market capitalisation and profitability. The coefficient of MCAP is 3.57 times greater than its standard error, according to a t-value as shown in Table 8. This implies that the relationship between market capitalisation and ROA is statistically significant and that there is a substantial positive correlation between market capitalisation and ROA. According to the coefficient of 1.627, a unit increase in MCAP corresponds to a roughly 1.627-unit rise in ROA. The extremely low p-value (.001) suggests that MCAP has a considerable impact on ROA. This backs up H_1 and is confirmed as per the trade-off theory as well.

H_2: Firm profitability is Affected Positively and Significantly by Firm Size
In the regression results, Total Assets (firm size) have a coefficient of -4.859 and a robust standard error of 1.052 as shown in Table 8. The link between total assets and the dependent variable, the likely return on assets, is measured by this coefficient. The negative coefficient shows that the return on assets tends to decline as total assets rise. This coefficient's t-value is -4.62, and the related p-value is 0.000, which is below the usual significance threshold of 0.05. This suggests that the total assets coefficient is statistically significant. To put it another way, there is compelling data that suggests total assets significantly lower return on assets in the regression model. This reject H2 which is also confirmed by studies conducted by (Azhar and Ahmed, 2019), (Abeyrathna and Priyadarshana,2019). According to the stakeholder theory, the inverse link between company profitability and firm size may indicate that as businesses grow and amass more assets, they may need to take a wider range of stakeholders into account and their individual interests. This growth might increase expenses, complicate things, and create potential conflicts of interest among stakeholders, which would hurt overall profitability (Clarkson, 1995)

H_3: Firm profitability is Affected Positively and Significantly by Capital Expenditures
The coefficient has a standard error of 0.631 and is 2.459 as shown in table 8. The positive correlation implies that a rise in the dependent variable (presumably return on assets) is correlated with an increase in capital expenditure. This association is statistically significant, as shown by the t-value of 3.90 and the p-value of 0.000, which means that increased capital expenditure typically has a favourable effect on return on assets. This backs H_3 and is confirmed as per the signalling theory as well.

H_4 - H_9: Other Hypotheses Related to Financial Factors
There are some, although typically minor, correlations between ROA and factors like Dividend per Share (DPS), Research and Development Expenditure (RDEXP), Capital Expenditures as a Percentage of Revenue (CAPEXPEROFREV), Leverage, Liquidity, and Cost of Goods Sold (CGS). These correlations (Table 7) imply possible connections between profitability and these variables, but they are not strong enough to draw firm conclusions. The correlation between capital expenditure and return on assets (ROA) is weakly negative (-0.092), indicating that increasing capital expenditure may be associated with a minor decline in return on assets. The correlation between R&D spending and return on assets (ROA) is weakly negative (-0.127), indicating that more R&D spending may be associated with a minor decline in return on assets. The correlation coefficient between capital expenditure to revenue and ROA is 0.006, which indicates that there is a negligibly little negative association between these two variables. A higher level of leverage may be linked to a minor decline in return on assets, according to the correlation coefficient of -0.139 between leverage and ROA. The correlation between liquidity and return on assets (ROA) is weakly negative (-0.071), indicating that greater liquidity may be associated with a minor decline in ROA.

DPS and ROA (Return on Assets) have a 0.181 correlation coefficient, which indicates a slight positive correlation between these two variables. The coefficient for DPS in the regression matrix is 0.644, with a standard error of 0.359. The t-value and p-value for DPS are 1.79 and 0.08 respectively. The p-value indicates that there is a marginally significant association between DPS and the other financial variables in the regression model, even though it does not satisfy the 5% significance level but do fall under the 10% customary threshold for statistical significance. This partially backs H_4.

With regards to R&D cost, the coefficient is 0.397 with a 0.691 standard deviation as shown in table 8. Research and development costs and return on assets do not statistically correlate, as shown by the low t-value of 0.57 and high p-value of 0.569. In the regression, this variable does not appear to have any discernible effects on the dependent variable. This rejects H_5.
The coefficient for capital expenditure as a percentage of revenue has a standard error of 0.089 and a negative coefficient (-0.223). The negative coefficient implies that return on assets tends to decline as capital expenditure as a percentage of revenues rises. The statistical significance of this association is shown by the t-value of -2.50 and the p-value of 0.016. This rejects H_6.
The standard error for leverage as represented by the debt-to-equity ratio is 0.001 and the coefficient is -0.002. The total debt-to-equity ratio and return on assets do not have a statistically significant relationship, according to the low t-value of -1.30 and the low p-value of 0.199. The dependent variable does not seem to be significantly impacted by this variable. This rejects the H_7.

With regards to liquidity, the coefficient is recorded as 0.378 with a 0.231 standard deviation. Though the coefficient indicates a positive link, the t-value of 1.64 and the p-value of 0.109 show that this relationship is not statistically significant at the 0.05 level of significance. There is not much proof that liquidity has an impact on the return on assets. This rejects the H_8. The Stakeholder Theory suggests that these factors may not have a significant positive effect on firm profitability. It could be due to factors like industry dynamics, economic conditions, or specific organisational strategies affecting the outcomes differently than anticipated. The correlation coefficient between Firm profitability (ROA) and the Cost of Goods Sold (CGS) is -0.224 based on tables 7 and 7's correlation and regression results. The weak negative correlation indicates an inverse relationship between the two variables. The cost of goods sold (CGS) showed a negative coefficient in the regression analysis of -20.522, indicating a definite inverse association between CGS and return on assets (ROA). The associated p value of 0.004 proves the statistical significance of the fact that the negative coefficient value highlights a major influence on firm profitability as the return on assets significantly decreases when the cost of goods sold rises. This accepts the H_9 and is found to be consistent with the signaling theory.

Non-Financial Variables.
Based on Tables 9 and 10 (The null values in the significance column show the value greater than the set confidence level), the analysis of the non-financial factors has been discussed except for the model fit which is has already been explained above.

Table 9 *Correlation matrix for non- financial variables*

Variables	(1)	(2)	(3)	(4)	(5)
(1) ROA	1.000				
(2) BoardInd	0.083	1.000			
(3) BoardSize	-0.193	-0.296	1.000		
(4) BoardTenure	-0.309	0.323	0.064	1.000	
(5) WomenRepresention	-0.103	0.124	-0.178	0.019	1.000

Table 10 *Regression matrix for non-financial variables*

ROA	Coef.	St.Err.	t-value	p-value	Sig
BoardInd	8.197	11.24	0.73	.475	
BoardSize	-2.468	3.842	-0.64	.528	
BoardTenure	-1.208	.772	-1.57	.134	
WomenRepresentation	-.254	.3048	-0.67	.51	
Constant	11.326	15.9	0.71	.485	

*** p<.01, ** p<.05, * p<.1*

H_10: Firm profitability is Affected Positively and Significantly by Board Independence
The weakly positive association between business profitability and board independence is indicated by the positive correlation coefficient between ROA and BoardInd (0.083) as shown in Table 9. This could suggest that businesses with more independent boards may have a little higher chance of achieving better financial results, possibly because of better governance supervision in line with our research goals and H_{10}. BoardInd's coefficient is 8.197 as shown in table 10, however, the p-value of 0.475 indicates that it is not statistically significant. This shows that the association between board independence and business profitability (ROA) may not be robust and substantial. This outcome is consistent with the descriptive statistics, which revealed a weakly positive correlation with ROA (0.083) and a relatively low average value for BoardInd (0.852) (Table 4). This also suggests that having more members on the board does not have any impact on the firm's ROA. The lack of significance suggests that although the coefficient is positive and suggests a potential benefit for profitability, the effect may not be very significant. The insignificant relationship is compatible with the results from Garg (2007), Cybinski and Windsor (2013), Leung et al. (2013) and Sharifah et al. (2015). This rejects H_{10}.

H_11: Firm profitability is Affected Positively and Significantly by board size.
The correlation between ROA and BoardSize is negative (-0.193) as shown in Table 9, suggesting that higher board sizes may be associated with marginally worse business profitability. This is consistent with the idea that larger boards may complicate decision-making thereby hurting firm performance and thus rejecting H_{11}. Board Size has a coefficient of -2.468, and the p-value of 0.528,

table 10 refers, indicating that there is no statistical significance. This suggests that there is no connection between board size and business success. Board Size's average value is likewise rather low (2.522) as can be seen in Table 4, and its negative correlation with ROA (-0.193) raises the possibility that there may be a bad association. The lack of significance in the regression, however, raises the possibility that board size may not be a reliable indicator of business profitability in the healthcare industry. This finding is consistent with Florackis and Ozkan (2004), Byard et al. (2006) and Cheng (2008). This rejects H_{11}.

H_{12}: Firm profitability is Affected Positively and Significantly by board tenure.

The ROA and BoardTenure correlations are negatively correlated (-0.309) as shown in Table 9, suggesting that longer board tenures may be associated with marginally worse business profitability. Board Tenure's coefficient is -1.208, and its p-value of 0.134 indicates that it is not statistically significant. This suggests that there may not be much of a connection between board tenure and company profitability. The average value for Board Tenure of 2.486 (Table 4) is relatively moderate, and the association with ROA (-0.309) indicates a potential adverse effect. The regression results' lack of significance and suggests that the relationship between board tenure and profitability might not be strong. This rejects H_{12}.

H_{13}: Firm profitability is Affected Positively and Significantly by women's representation.

The slight negative correlation between business profitability and the proportion of women on boards is indicated by the correlation between ROA and WomenRepresent (-0.103). This may indicate that businesses with higher levels of female representation have somewhat lower ROA on average, but this finding needs to be interpreted with caution and further examined to fully comprehend the dynamics of gender diversity and how it affects performance, as described in H_{13}. Women Representation's coefficient is -0.254, and its p-value of 0.51 indicates that it is not statistically significant. This implies that there may not be a strong link between the proportion of women on boards and corporate profitability. This result is consistent with the marginally negative connection with ROA (-0.103) as shown in Table 9. The average value for women's representation in descriptive statistics is rather low (0.106), and the lack of significance in the regression results suggests that gender diversity on boards may not be a significant predictor of profitability. The insignificant relationship is compatible with the results from Rose (2007), Lückerath-Rovers (2013) and Yang et al. (2019).

The rejection of these hypotheses might imply that the governance aspects put to the test in the environment under investigation don't have a major and immediate effect on profitability. These correlations may be affected by other unexplained factors or intricate interactions.

Table 11 *Summary of hypothesis testing*

Hypothesis	Sig Value	Conclusion
H_1: Firm profitability is Affected Positively and Significantly by Market Capitalisation	.001	Accepted
H_2: Firm profitability is Affected Positively and Significantly by Firm Size	.000	Rejected
H_3: Firm profitability is Affected Positively and Significantly by Capital Expenditures	.000	Accepted
H_4: Firm profitability is Affected Positively and Significantly by Dividend per share	.08	Partially Accepted
H_5: Firm profitability is Affected Positively and Significantly by Research & Development cost	.569	Rejected
H_6: Firm profitability is Affected Positively and Significantly by Capital expenditures as a percentage of revenue	.016	Rejected
H_7: Firm profitability is Affected Positively and Significantly by Leverage levels	.199	Rejected
H_8: Firm profitability is Affected Positively and Significantly by Liquidity levels	.109	Rejected
H_9: Firm profitability is Affected Negatively and Significantly by Cost of goods sold	.004	Accepted
H_{10}: Firm profitability is Affected Positively and Significantly by Board Independence	.475	Rejected
H_{11}: Firm profitability is Affected Positively and Significantly by board size	.528	Rejected

H$_{12:}$ Firm profitability is Affected Positively and Significantly by board tenure	.134	Rejected
H$_{13:}$ Firm profitability is Affected Positively and Significantly by women's representation	.510	Rejected

5. Conclusion

The performance of companies in the S&P International 700 Health Care sector was examined in-depth in this thorough analysis, which explored the complex interplay between financial and non-financial elements. The study shed light on complex relationships that support company profitability and sustainable growth with the overriding goal of bringing business practices in line with Sustainable Development Goals (SDGs) 3 and 5. The study examined a wide range of variables, including market capitalisation, total assets, capital expenditures, dividends per share, costs associated with research and development, leverage, liquidity, and the cost of goods sold. These financial measures were carefully examined to determine their impact on Return on Assets (ROA), coupled with board-related factors such as board independence, board size, board duration, and women's representation.

The results provided insightful information about the variables that statistically significantly affect firm profitability. The relationships of numerous financial variables with ROA shed light on their intricacies, while significant factors that impacted on profitability included market capitalisation and firm size. On the other hand, the board related variables including board independence, size, tenure and female representation with insignificantly different impacts on profitability available from prior research suggesting that these elements of the corporate governance system do influence board decisions but the findings suggest that they may have varying effects on profitability in the health care industry.

The research analysed the relationships and match of the financial and non-financial factors and its link to the specifications of SDGs 3 and 5 revealing a systematic echelon view of how those constituents can complementarily gain advantageously on the firm performance, sustainability and social causes. Since the healthcare field is oriented to social and ethical obligations this research offers important information to theoreticians and practitioners equally who are interested in delivering welfare and profit at the same time.

These findings are significant beyond deducing the relationships and effects between financial and non-financial elements on firms within the S&P International 700 Health Care index. The findings provide recommendations for practical implementation for the scientists and practitioners designing sustainable packaging and aiming at the achievement of SDGs 3 and 5. One of the lessons to be learned for the future is for healthcare organisations to incorporate both financial and non-financial performance indicators into their strategic decision-making. Market capitalisation, firm size, and capital expenditure highlight the ways that financial performance must be achieved responsibly – that is, about external stakeholders including society and the environment. This implies that subsequent interventions should incorporate more of the gender, health and wellbeing aspects which are a characteristic of both the SDGs 3 and 5 sustainable development goals respectively. The study creates opportunities for subsequent long-term research to track the dynamics of these financial and non-financial commodities and their impact on organisational performance in subsequent periods. This can be achieved by first implementing a long-term vision by understanding the nature of their business and the types of changes that may occur in the external environment, the legal environment and general societal expectations. Moreover, the result of this research is not only applicable to the healthcare profession but also offers a guideline that every business can implement to achieve both profitability and sustainability. The lessons and approaches expounded in this undertaking can be easily transferred to different industries in designing interventions that may favour the achievement of the SDGs without overriding the need to operate profitably.

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