IMPACT OF CORPORATE SUSTAINABILITY PERFORMANCE ON FINANCIAL PERFORMANCE OF SOUTH AFRICAN INDUSTRIES VIA BRAND VALUE AND COMPETITIVENESS

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Abstract:

All stakeholders and sustainability managers agree that improving a company's competitive advantage, profit, and performance is the primary benefit of having a unified, integrated, and systematic approach to assessing corporate sustainability performance. Nevertheless, serious concerns exist in the the literature about the non-existence of a single, systematic and integrated model for measuring the impact of corporate sustainability performance (i.e., environmental, social, and economic) on the financial performance of South African industries via brand value/reputation and competitiveness. Thus, the objective is to develop this model by collecting qualitative and quantitative data through a census of 70–74 Johannesburg Stock Exchange companies active in the Socially Responsible Investment Index. Factor analysis was used for data reduction; Chi-square was tested for association between categorical variables, and Cronbach alpha for internal consistency and reliability of instruments. Findings revealed positive impacts between environmental, social and economic aspects of corporate sustainability performance, brand value/reputation, competitiveness and financial performance. Results also showed that the elements/factors of corporate social performance, like ethical behavior, genuine community initiatives and human rights, could translate to brand value/reputation. Likewise, elements/factors of brand value/reputation like competitive edge, comparative advantage, innovation, reputation, employees' loyalty and non-market effect can translate to competitiveness and financial performance. By implication, the model can be helpful to potential managers in South Africa or the world for making easy and prompt decisions on past, pending and future environmental, social and economic sustainability. Hence, the research contributes to developing a single, systematic and integrated evaluation model adaptable to companies, businesses and governments/municipalities for achieving performance targets.

Keywords: Brand Value/Reputation, Competitiveness, Corporate Sustainability Performance, Financial Performance.

INTRODUCTION

Companies are increasingly being asked by their stakeholders to provide a trust-worthy report of their financial performance via investment in environmental, social and economic aspects of sustainability (Ahmad et al., 2019; Jha & Rangarajan, 2020; Schaltegger et al., 2020; Avlonas & Nassos, 2020). In other words, the stakeholders want to know how the opportunities and threats to their investment in these forces affect the company's current and non-current assets and liabilities.

Although, in literature, various approaches to evaluate, measure and monitor corporate contributions/progress towards sustainability have been proposed as internal and external measures, were unique and robust (compare this and the following statements SustainAbility, 2001;

Epstein & Roy, 2001; Székely & Knirsch, 2005; Goyal et al., 2013; Beckmans & Schaltegger, 2020). Internal measures include absolute and relative cost-benefit analysis, which analyses sustainability performance; the value-added approach accounts for surplus value when changes occur in social and economic perspectives. Other examples of internal measures are sustainability accounting for both organizational level performance and investors' interest, as well as benchmarking for achieving strategic position and competitive advantage. External measures include sustainability indexes, identifying investors' risky investments; sustainability indicators, e.g., Global Reporting Initiative (GRI); and eco-efficiency indicators, regulating and monitoring corporate commitment to sustainability performance. Other external measures are metrics for sustainability performance, which assess both internal and external corporate progress, investors' criteria for regulating and checking fund management principles, and award schemes that reward corporate sustainability compliance.

These approaches were challenging to apply, and eventually, if they are applied, their significance is limited (Veleva & Ellenbecker, 2001; Porter & Kramer, 2011; Arushanyan et al., 2017; Beckmans & Schaltegger, 2020). The reason is that these measures were one or two-dimensional, not linked to business strategy, value drivers, or key performance indicators, and not performed in a single and integrated manner (Schaltegger & Wagner, 2006; Khan et al., 2016; Barnett, 2019; Schaltegger et al., 2020). To properly integrate corporate sustainability performance (i.e., environmental, social and economic) into business strategy, value drivers and key performance indicators like brand value/reputation, competitiveness and financial performance, a single, systematic corporate sustainability performance measurement is crucial (SustainAbility, 2001; Epstein & Roy, 2001; Szekely & Knirsch, 2005; Schaltegger & Wagner, 2006; Ramos & Cairo, 2010; Goyal et al., 2013; GRI, 2015; GEMI, 2016; Schaltegger & Burritt, 2018).

Despite the growing number of research on corporate sustainability performance in developed and developing countries, in South Africa, there is no empirical, single, systematic and integrated model/tool for measuring the impact of corporate sustainability performance (i.e., environmental, social and economic) on financial performance via brand value/reputation and competitiveness (Ernst & Young, 2015; Roberts, 2018; JSE SRI, 2019; Barnett, 2019; KPMG, 2020; Beckman & Schaltegger, 2020). The effect of this problem is that companies need to help minimize their value-added or destruction across environmental, social and economic actions, resulting in less corporate sustainability participation and sustainable development. Hence, the purpose of this paper is to develop a model for measuring the impact of corporate sustainability performance on financial performance via brand value/reputation and competitiveness after exploring the following hypothesis or secondary objectives:

To discover theoretically and empirically whether the linkage of corporate environmental performance via the factors (i.e., environmental process and product focus) can translate to a firm's brand value/reputation.

To explore theoretically and empirically whether the linkage of corporate social performance via the factors (i.e., ethical behavior, genuine community initiatives, engagement with non-governmental organizations (NGOs), will lead to a firm's brand value/reputation.

To determine theoretically and empirically whether the linkage of corporate economic performance via the factors (i.e., shareholder value, revenue, operational efficiency, access to capital) can drive a firm's brand value/reputation and

To explore theoretically and empirically the extent to which the linkage of corporate brand value/reputation via the factors (i.e., competitive edge, comparative advantage, innovation,

reputation, employee loyalty, non-market effect) can translate to corporate competitiveness and firms' financial performance.

Thus, companies in South Africa or the world that have incorporated environmental, social and economic values in a product's life by innovating its production process, products and service portfolios can attract and retain customers, build strong brands in the market and achieve profit and financial performance.

Theoretical framework and sustainable development of a company. The theoretical framework discusses or reveals the fundamental ideas and principles on which corporate sustainability performance is based (Jarvis, 2013; Christopher & Collins, 2018). In other words, it demonstrates the theories and concepts that are significant to the study theme and relate to the broader areas of the knowledge being considered (Jarvis, 2013; Christopher & Collins, 2018). The stakeholder theory is considered in this research to understand how corporate sustainability performance affects the financial performance of South African industries.

In that sense, the stakeholder theory states that an organization is sustainable if its business operation is consistent with the demands of its stakeholders as well as the shareholders (Donoher, 2017; Rosati & Faria, 2019; Silva, 2021; Kazemikhasragh et al., 2021; Erin et al., 2022). It stipulates that an organization must be limited to a system that maximizes shareholder profit and fulfills all stakeholders' expectations (Donoher, 2017; Rosati & Faria, 2019; Schniederjans & Khalajhedayati, 2020). It implies that companies must operate responsibly based on the interests and concerns of stakeholders like the government, community/society, customers, and shareholders for their continued existence and performance. Beyond its outward appearance, a company's strategy must incorporate sustainability philosophies, ideas, and stakeholder concepts to transform it from a traditional one.

Corporate social responsibility (CSR) demands that companies adhere to domestic conventions and global values concerning the environment, labor, human rights, anti-corruption practices and corporate governance (Schaltegger & Wagner, 2006; WBCSD, 2015; George et al., 2020). Alternatively, sustainability is a perception grounded in creating a balance between the principles of integrity, fairness and affluence (Jha & Rangarajan, 2020). Sustainable companies face compliance pressures from internal and external stakeholders (Dara et al., 2020). They, therefore, need to adopt and integrate relevant approaches and systems into their business models to avoid disfavor from customers and the public (Donoher, 2017; Rosati & Faria, 2019; Jha & Rangarajan, 2020). Corporate houses must conform to an increasing number of domestic principles and global ideals controlling the environment, labor, human rights, anti-corruption practices and corporate governance (Székely & Knirsch, 2005; GRI, 2015; WBCSD, 2015; Avlonas & Nassos, 2020).

In light of the stakeholder theory, the paper examines the 17 United Nations (UN) Sustainable Development Goals (SDGs) and corporate actions in line with the three pillars of sustainability performance: environmental, social and economic. It also demonstrates how these can be aligned with companies' strategy, value drivers and key performance indicators (KPIs) for better performance.

UN SDGs and corporate environmental responsibility. The UN, under the auspices of its Sustainable Development Goals (SDGs), is calling for the global environmental protection, restoration and promotion of sustainable use of terrestrial ecosystems (compare this and the following statements UN, 2015; GRI, 2015; WBCSD, 2015; Breuer et al., 2019; Kazemikhasragh et al., 2021). Sustainable management of forests, oceans and seas, combat desertification, and halt reserve land degradation and biodiversity loss. Stakeholder theory stipulates that companies conduct their

business operation in a socially, economically and environmentally acceptable manner to the community (Dara et al., 2020; Erin et al., 2022).

Companies, therefore, are expected to take serious action to fight climate change and its impact by integrating climate change measures in line with the international and national policies, strategies and planning in the area where they are located in terms of carbon emission, energy efficiency, increase water use efficiency and material. Encourage education awareness-raising programs and climate change. Corporate bodies must take steps to reduce waste generation through avoidance, recycling and reuse. To a more significant extent, companies' maintenance of sustainability information and reports becomes inevitable. Similarly, companies, especially those operating in developed countries, are expected to lead in these aspects and efficiently and effectively practice consumption and production patterns, considering the expansion and competencies of the companies in developing countries.

UN SDGs and corporate social responsibility. On the social front, through its SDGs, the UN appeals to companies to engage in serene and comprehensive societies for sustainable development (compare this with the following statements: UN, 2015; Epstein, 2018; Barnett, 2019; Breuer et al., 2019). Additionally, stakeholder theory provides that companies' performance be measured by their ability to support and sponsor socio-economic actions like secured and inexpensive housing and simple services and the elevation of shantytowns in the community where they are located and even where they are not. Companies should advocate fairness throughout the construction of active and responsible institutions at all levels.

Substantially, working towards an end to exploitation, corruption, smuggling and all forms of vehemence against children. Eliminate or reduce frauds, bribing in their forms and sustainably engaging in providing essential services to enhance inclusive and sustainable urbanization and affordable housing, thereby making cities and human settlements safe and inclusive. The stakeholder theory compels organizations to turn their traditional business into a sustainable company by penetrating new markets, launching new products and services, and attracting and retaining new customers, leading to competitive advantage and social and financial performance.

UN SDGs and corporate economic responsibility. The Sustainable Development Goals economically want to see that the world is building irrepressible infrastructures, promoting comprehensive and sustainable mechanization as well as practice innovation (compare this and the following statements UN, 2015; Roberts, 2018; George et al., 2020; Kazemikhasragh et al., 2021). Hence, stakeholder theory demands that companies follow up to promote the development of provincial and transboundary structures and setups for sustainable economic development and human well-being. Transnational companies are, therefore, called to enable sustainable infrastructure expansion in developing countries through improved monetary, technical and mechanical support to Africa and other under-developed countries. Additionally, assists in improving technical proficiency and modernizing high-tech capabilities of industrialized sectors in all countries, explicitly developing countries. Companies must effectively support comprehensive and sustainable economic growth, productive employment, and human rights through economic development strategies that inspire creative accomplishments, good job opportunities, free enterprise and the development of micro, small and medium-sized initiatives and financial services.

In front of these UNSDGs and stakeholder theory/pressure, businesses have become more complicated for many other reasons, such as globalization, competitiveness, value creation and customer satisfaction (WBCSD, 2015; UN, 2015; Avlonas & Nassos, 2020). Caring for the environmental, social and economic aspects, i.e., costs, revenues and benefits, has become the primary challenge to companies in many countries around the world (IFAC, 2015; Papagiannakis &

Lioukas, 2017; Dara et al., 2020; Schaltegger et al., 2020). Corporate managers must significantly embrace these UN sustainable goals in line with the stakeholders' concerns, national regulations, and international standards across their environmental, social, and economic business models, as well as innovative and strategic planning. Similarly, sustainability expects that companies operate sustainably by producing innovative products and services that are economically, socially and environmentally contributing to the company, government, customer and society in which they operate (Székely & Knirsch, 2005; Eccles et al., 2020).

Hence, sustainable development (SD) is the development that provides the essentials of the present generation and creates opportunities or provisions for the needs of the future ones (WBCSD, 2015; GRI, 2015; Beckman & Schaltegger, 2020). Corporate sustainable development performance (CSDP) refers to the actions taken by companies to decrease the adverse effects of their operations on environmental, social and economic and significantly increase the positive influence in order to achieve a sustainable economy, environment and society (WBCSD, 2015; GRI, 2015; Beckman & Schaltegger, 2020) whereas corporate sustainability performance is the consequential effect of those actions (Eccles et al., 2020; Avlonas & Nassos, 2020). Long-term sustainable development of a company demands that the mission, vision and values be characterized by sustainability principles, business strategy, governance structures, and societal requirements (Székely & Knirsch, 2005; Beckman & Schaltegger, 2020). Corporate strategy can translate to financial performance when managed and measured along with sustainability activities on environmental, social, and economic performance (SustainAbility, 2001; Székely & Knirsch, 2005; Meurs & Quid, 2018).

Managers should know that different management actions/activities and their factors/elements can improve performance and increase the company's civic trust (reputation) and customer purchases (SustainAbility, 2001; Vu et al., 2020). Increased purchases ultimately lead to long-term profitability, resulting in better financial performance. Thus, corporate sustainability can produce a firm's overall performance across environmental, social and economic issues/factors.

Linkages for the development of the model. For the development of the model, the paper considers the following environmental, social and economic linkages/dimensions of corporate sustainability performance and how their factors affect the key performance indicators (KPIs) like brand value/reputation, competitiveness and financial performance:

Link 1: Environmental performance and brand value/reputation. All organizations are challenged to find a practical framework to reduce environmental impacts, global warming, and production costs, increase competitiveness and measure their actions to achieve financial and environmental performance for the company and society. For the development of the model, the paper considers two environmental factors, i.e., environmental process focus and environmental product focus, which companies can prioritize to increase their brand value/reputation by attracting customers and communities/societies' interest in better performance.

Environmental process focus is the ability of companies to reduce environmental costs/impacts by the UNSDGs by changing material inputs, equipment, production conditions or procedures related to their operation (compare this and the following statements Kanwal, Khanam, Nasreen, and Hameed, 2013; Landroguez et al., 2013; ISO, 2015; Papagiannakis & Lioukas, 2017). Companies that take prompt actions to fight and reduce climate change and its impacts and plan and implement efficiency projects relating to carbon emission, energy, waste, and material use can build brand value/reputation. Customers are likely to buy products or services from companies with higher brands and reputations that operate environmentally and sustainably in line with UNSDGs.

Environmental product focus, on the other hand, refers to the level to which a company has incorporated environmental values and UNSDGs' regulations/procedures in the whole life of a product by improving its product and service to manage and control the unfavorable environmental impacts/costs (Ford Inc., 2011; Schaltegger et al., 2019). Hence, companies that achieve their brand value/reputation by producing and selling environmentally premium products and services can gain competitive advantage and environmental and financial performance.

Link 2: Social performance and brand value/reputation. When linked to social activities, business strategy may produce financial performance (SustainAbility, 2001; Kanwal et al., 2013; Schaltegger et al., 2019). Executive managers should understand that management actions in line with the UNSDGs can translate to improved social performance, a company's public image (reputation), customers' increased purchases, long-term profitability and financial performance (SustainAbility, 2001; Vu et al., 2020; Kazemikhasragh et al., 2021). According to socially responsible authors, ethical behavior, genuine community initiatives, external engagement with NGOs, and human rights are the social factors/elements that companies may engage in to stimulate brand value/reputation, competitive advantage and financial performance.

Literature has shown that ethical behaviors consistent with the UNSDGs can promote stakeholder confidence, a requisite element of a solid company brands/reputation and a firm's financial performance and vice versa (Ford Inc., 2011; Breuer et al., 2019). Companies' ethical behaviors that can drastically reduce corruption and bribery in their forms and substantially end abuse, exploitation, trafficking, and violence are boosters of reputation and brands. Hence, the result of the DePaul University study shows that the average reputation score for a company that adheres to business ethics is between 4.7% and 6.7% higher than for companies without this commitment to ethics (SustainAbility, 2001; PepsiCo, 2011).

Genuine community initiatives aligned with the UNSDGs can enhance a company's reputation and stimulate its resources (PepsiCo, 2011; Breuer et al., 2019). Genuine community activities that promote peaceful and inclusive societies, provide access to justice for all, ensure access to low-cost housing and essential services and upgrade slums can build a company's brands and reputation. According to a study, 86% of consumers are most likely to patronize a company if it makes the world safe (Landroquez et al., 2013; Spahn, 2018). The donation and distribution of Mectizan drug for treating river blindness by Merck organization have substantially increased the company's brand value/reputation and financial performance (Shahzalal & Hassan, 2019).

Additionally, external engagement, especially with opinion-forming NGOs in building accountable institutions at all levels of society, can enhance and protect corporate reputation (Fraering & Minor, 2013). Hence, NGOs can be powerful tools for influencing corporate behavior by providing essential services that promote inclusive and sustainable urbanization and ensure the safety of human settlements and healthcare. A Danish pharmaceutical company, Novo Nordisk, and an American automotive company, Ford Inc., have used stakeholder engagement as a primary driver of their highly respected sustainable development (Ford Inc., 2011). These companies believed that engaging with stakeholders aligned with the SDGs over the years increased their company's reputation, competitiveness, and economic rationale.

Although an excellent human rights record might not enhance brand value significantly, it may help a company recover after an adverse incident (PepsiCo, 2011; Meurs & Quid, 2018). British Petroleum's (BP) efforts to eradicate human rights abuses consistent with the SDGs have built public trust in the company and strengthened its reputation, market competitiveness and financial resources (SustainAbility, 2001; PepsiCo, 2011; Kazemikhasragh et al., 2021). Corporate social performance obtained by way of significantly ending violence against the torture of children, e.g.,

child labor, can build brand value/reputation, influence the financial market assessment of companies, and hence, increase the financial performance of the company (Fraering & Minor, 2013; Gitman, 2019).

Link 3: Economic performance and brand value/reputation. Drivers of corporate economic performance are shareholder value, revenue, operational efficiency and access to capital (Schaltegger et al., 2020; Avlonas & Nassos, 2020). The impact of these economic factors on brand value/reputation, competitiveness and financial performance is identified as follows:

Brand value in literature is a firm's asset for future earnings (cash flows) (Gitman, 2019; Vu et al., 2020). A company's brand or brand equity built on SDGs and economically responsible investments in quality infrastructure, industrialization, innovation, and others., are the market values that positively impact shareholder value. Brands are intangible company assets that help achieve competitive advantage and shareholders' wealth (Wagner, 2015; Wanamaker, 2018; Eccles et al., 2020). Successful brands attract superior prices with high-profit margins, which could result in higher earnings per share (EPS), an important indicator of corporate competitive advantage and financial performance (Schlager et al., 2011; Marney & Tarbert, 2018; Gitman, 2019; Marx et al., 2019).

Brand value/reputation in marketing literature is a corporate asset that attracts customers, hence a source of revenue and financial performance (Schlager et al., 2011; Vu et al., 2020). The superior revenue a brand creates compared to a remote marker product is a functional product-market assessment of brand value/equity and financial performance (Interbrand, 2009; Vu et al., 2020). Superior revenue is, therefore, referred to as the difference in revenue (i.e., net price x volume) between a branded product and the corresponding remote marker (Ford Inc., 2011; Schlager et al., 2011). For example, Sony Ltd.'s equity (revenue) arises from its superior development-oriented policies that support productive activities in decent job creation, entrepreneurship, products, marketing strategies, and company brand value/reputation and expertise (Fraering & Minor, 2013).

Operational efficiency is to transform inputs into creative outputs in a cost-effective manner. It can be achieved in two ways:
1) By controlling costs (capital, operational and financing costs); and
2) Increasing capital productivity and producing more for the amount allocated to workers, assets, and other payments.

Therefore, operational efficiency can be an essential indicator of a company's scientific research innovation and technological capacities, leading to brand value/reputation for current business success (Schlager et al., 2011; Stanković et al., 2013). Enhancing operational effectiveness directly impacts the business's financial performance, competitiveness, bottom line, and brand value.

Furthermore, per the market literature, a company with successful brands creates solid earnings, attracts stakeholders and is more positioned for marketplace growth. Therefore, access to capital can motivate companies' performance and capacity to invest in the future, while capital markets affect or stimulate share prices (Marney & Tarbert, 2018; Marx et al., 2019; Gitman, 2019). Two elements can depict the accessibility and price of capital: expected rate of return and risk. The greater the risk of an investment, the greater the rate of return expected by investors. Due to the direct relationship between risk and return, a firm's financing price/cost (i.e., cost of capital) will change if the acceptance of a project changes the firm's business or financial risk. The cost of capital, therefore, can be more readily ascertained by supposing that new projects do not change these risks (Gitman, 2019; Marx et al., 2019).

Nevertheless, investors and business executives are more interested in information that represents a quantifiable transformation in income or revenue in a market share that demonstrates

a better understanding or knowledge of business success trends, can build confidence and can positively affect almost all sustainable development factors (Székely & Knirsch, 2005; WBCSD, 2015; Eccles et al., 2020; George et al., 2020). Given the above-established factors of corporate sustainability performance and their linkages to brand value/reputation necessary for the development of the proposed model and after insight into the sustainable development of a company, the following section examines, on the one hand, the effect of the value drivers, e.g., brand value and reputation on firm's competitiveness and the other hand the impact of competitiveness on measures of financial performance as under:

Link 4: Brand value/reputation, competitiveness and financial performance. Brand value and reputation are financial drivers and business success measures are relevant to all sustainable development factors (Schaltegger & Wagner, 2006; Vu et al., 2020). Companies that focus on their business strategies and economic drivers and invest in SDGs regarding environmental, social and economic sustainability issues can achieve a competitive edge by consistently handling sustainable development performance. Companies must prioritize brand value and reputation to gain and maintain a competitive advantage (Schlager et al., 2011). Organizations can achieve a firm's performance by effectively linking their business activities to brand value, reputation and competitive strategies.

To attract and retain more customers, firms must be competitive by practically entrenching their brand value and reputation propositions within their marketplace (Fraering & Minor, 2013; Vu et al., 2020). Therefore, brand value and reputation are essential drivers of global competitiveness for a company's future development. Corporate competitiveness is called sustainable economic performance influenced by corporate brand value/reputation and internal and external management strategies (Schaltegger & Wagner, 2006; Schaltegger et al., 2020; Dara et al., 2020). Internal strategy is the ability to remain open to change (i.e., innovation), and external strategy takes advantage of market effect, e.g., capacity to buy, enlarged market segment and solid customer ties (Schaltegger & Wagner, 2006; Dara et al., 2020).

Competition has become crucial over the years due to SDGs, globalization, value creation and customer satisfaction (UNIDO, 2020; Avlonas & Nassos, 2020). Likewise, decreased trade barriers, the influx of technology, favorable costs for communication and transportation, and customer choices have inspired international competition (Naami et al., 2017; World Bank, 2020; Avlonas & Nassos, 2020). The existence of new economic powers in the global market has raised serious concerns in the management boardrooms regarding production structures and firms' competitiveness. This section explores the influence of the components/factors of brand value/reputation, such as competitive edge, comparative advantage, innovation, reputation, employee loyalty, and non-market effects on competitiveness and firm's financial performance in order to strengthen the relationship between firms' brand value/reputation, competitiveness, and financial performance.

Companies that have a competitive edge over others as a result of solid brands and reputation may bring about substantial growth in sales or revenue, profits and possibly employment, resulting in financial performance (Schlager et al., 2011; Jove-Llopis & Segarra-Blasco, 2018; Avlonas & Nassos, 2020; Eccles et al., 2020).

Companies must use branding and reputation building to maintain a steady strategic comparative advantage globally and improve their financial performance (Schlager et al., 2011; Dara et al., 2020). Comparative advantage is, therefore, an essential element/factor for a company's survival and future development.

Innovation is a prerequisite for competitiveness and financial performance (WBCSD, 2015; Dara et al., 2020). A company that is open to change in their operations, e.g., new production technologies, enjoy more customer attractions and perhaps an increase in sales, profits and financial performance (Ford Inc., 2011; Avlonas & Nassos, 2020). In high-tech industries and industries with high brands and reputations, innovations are more frequent, resulting in a high level of financial performance (Schlager et al., 2011; Dara et al., 2020).

Moreover, companies recognize reputation/brand value as a corporate asset for attracting and retaining customers, employees and investors, resulting in financial performance (Schlager et al., 2011; Avlonas & Nassos, 2020). Reputation in literature is the criteria for financial market assessment of companies, while a company's market value is the value of its brands.

Due to on-the-job experience, loyal employees work more effectively with less supervision, which may enhance efficiency in the area of cost of production. Thus, a company's brand value/reputation guarantees employee loyalty (i.e., the hiring and retention rates) and demonstrates how much its employee culture can translate to financial performance (Schlager et al., 2011).

Lastly, less resistance from neighbors to production sites and less political resistance are examples of non-market effects. A company with strong brands and reputation that embarks on socio-economic development as provided by the SDGs can experience less political interference and less resistance from the community to their production sites, leading to more production and customers, which can enhance their financial performance (Schaltegger & Wagner, 2006; Safari et al., 2013; Schaltegger et al., 2020).

Hence, the above literature demonstrates a positive relationship between corporate sustainability performance (i.e., environmental, social and economic), brand value/reputation, competitiveness and firm financial performance.

Linking of themes. This section presents the links between various themes resulting from the first and second qualitative document analyses, after which the survey results and related statistical associations are discussed. Based on the two document analyses, four theoretical links with their factors between corporate sustainability performance, brand value/reputation, competitiveness and financial performance were established:

1. Corporate environmental performance and corporate brand value/reputation
2. Corporate social performance and corporate brand value/reputation
3. Corporate economic performance and corporate brand value/reputation
4. Corporate brand value/reputation, business competitiveness and financial performance.

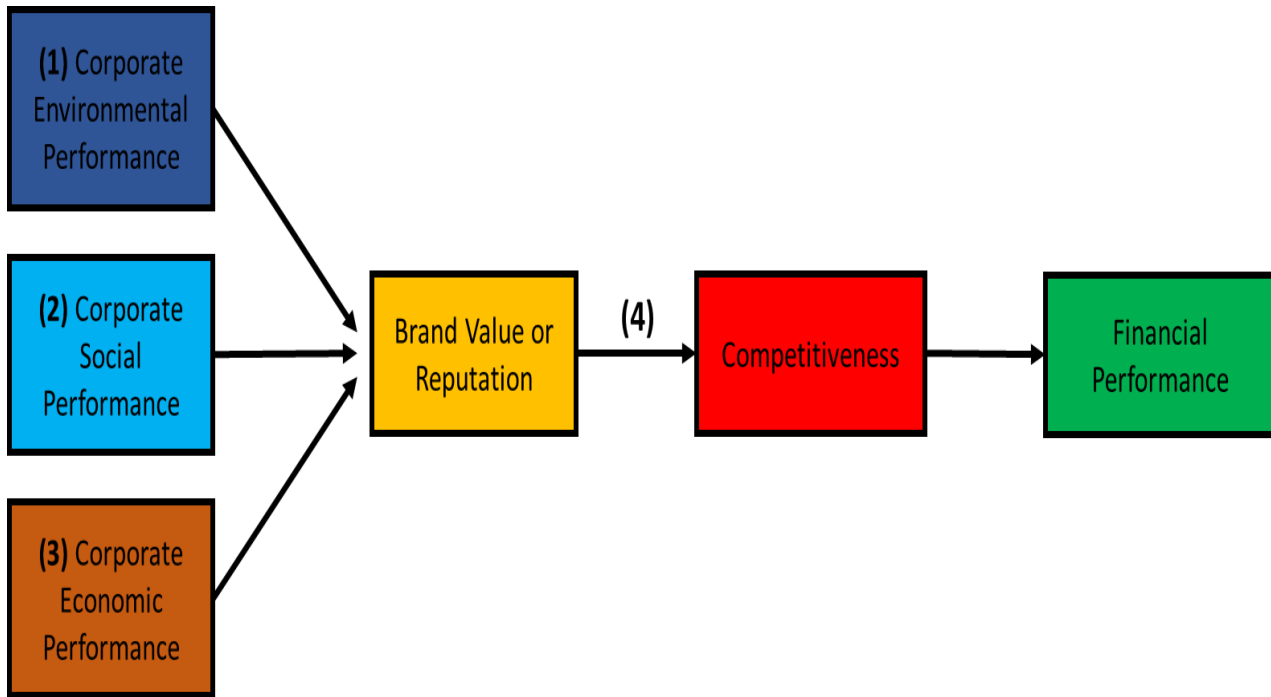The above four statistically tested links are presented in Fig 1 below.

Figure 1. Tested theoretical links for measuring corporate sustainability performance on financial performance

Links 1-3 were tested to determine whether the factors/elements of corporate environmental performance (i.e., environmental process and product focus), corporate social performance (i.e., ethical behavior, genuine community initiatives, external engagement with NGOs and human rights), and corporate economic performance (i.e., shareholder value, revenue, operational efficiency and access to capital) can translate to increased brand value/reputation. Link 4 tests if the factors/elements of brand value/reputation (i.e., competitive edge, comparative advantage, innovation, reputation, employees' loyalty and non-market effects) can give rise to increased business competitiveness and financial performance for the development of the model.

METHODS

Given that most internal and external measures of corporate sustainability performance, as envisaged in the introduction, do not represent systematic, robust, universal, and user-friendly tools for corporate sustainability performance, the question one may ask is how can the business case methodology for corporate sustainability performance and financial performance be derived which can assist in achieving the primary objective of this study, that is, to develop a single, systematic and integrated framework/model for measuring the impact of corporate sustainability performance on financial performance in South African industries via brand value and competitiveness. This study considers the tasks in Table 1 below for the business case methodology.

Table 1. Business case methodology

S.no	Task	Research Methodology
1.	Can a framework/model be developed that measures the firm's business activities and the three aspects of sustainability (i.e., environmental, social and	Triple bottom line commitment: The dimensions of corporate sustainability development performance used were environmental, social and economic.

	economic) since the measures listed above were performed separately?	
2.	Can this initiative be linked to financial performance since most measures were different?	The triple bottom line is linked to financial performance.
3.	Can the management of triple bottom line (i.e., environmental, social and economic) commitments lead to increased environmental performance, social performance and economic performance)?	Managing corporate sustainability performance can lead to corporate sustainability performance if managed along their factors.
4.	Can the factors affecting the three aspects of corporate sustainability performance (i.e., environmental, social and economic) be linked to business strategy or a key performance indicator since this was not assessed in the measures in the introduction?	Factors affecting corporate environmental performance (i.e., environmental process focus, environmental product focus) and key performance indicators such as brand value/reputation; corporate social performance (i.e., ethical behavior, genuine community initiatives, external engagement with NGOs, human rights) and brand value/reputation and corporate economic performance (i.e., shareholder value, revenue, operational efficiency, access to capital) and brand value/reputation.
5.	It is suggested that links with financial drivers and business competitiveness are essential for effective and reliable management and measurement of corporate sustainability performance (Schaltegger & Wagner, 2006; Stanković et al., 2013; GRI, 2015; Schaltegger & Burritt, 2018). Therefore, can the factors affecting brand value/reputation be associated with business competitiveness?	The study links the factors affecting brand value/reputation (financial driver) (i.e., Competitive edge, comparative advantage, innovation, reputation, employee loyalty and non-market effects) to competitiveness to discover relationships theoretically and empirically.
6.	Can the impact of corporate sustainability performance (i.e., environmental, social and economic performance) on brand value/reputation be theoretically and empirically tested?	Factors affecting corporate environmental performance and brand value/reputation were theoretically and empirically tested. Factors affecting corporate social performance and brand value/reputation were tested theoretically and empirically, and factors affecting economic performance and brand value/reputation were also tested theoretically and empirically.
7.	Can the linkages between brand value/reputation and competitiveness theoretically translate to financial performance?	The study theoretically links the factors affecting brand value/reputation to firms' competitiveness and measures of financial performance.
8.	Can the linkages between brand value/reputation, competitiveness and financial performance be theoretically and empirically tested?	The study theoretically and empirically tested the factors affecting the linkages between brand value/reputation, competitiveness and measures of financial performance.
9.	Can the linkages between corporate sustainability performance (i.e., environmental, social and economic), brand value/reputation and	The study theoretically and empirically tested the factors affecting the linkages between triple bottom line performance

	competitiveness translate to business success/financial performance?	and brand value/reputation and between brand value/reputation competitiveness and measures of financial performance.
10.	Can the model to be developed be universally applicable in South Africa and the world, where the measures in the introduction were different?	Data was collected from constituents listed on the Johannesburg Stock Exchange (JSE) and subscribing to the Socially Responsible Investment (SRI) Index, which is considered environmentally, socially, and economically strong. The study tested for the reliability and validity of the instrument empirically using Cronbach alpha and factor analysis to reduce data items where applicable. The study also empirically tested the associations between categorical variables using Pearson's Fisher Exact (Chi-square test).

The paper discusses the data collection process based on the tasks and relationships identified in Table 1 and the linkages and factors identified in the theoretical framework.

A cross-sectional design based on a mixed-method approach was used. The influence of company operations (i.e., the triple bottom line commitment, which includes environmental, social, and economic factors as the three pillars of corporate sustainability performance) on financial performance was ascertained using a document analysis of the body of existing knowledge. On the one hand, the analysis determined theoretically whether the management of business activities could translate to increased environmental, social and economic performance. On the other hand, the analysis determined how the factors of corporate environmental performance (i.e., environmental process focus, environmental product focus), corporate social performance (i.e., ethical behavior, genuine community initiatives, human rights), and corporate economic performance (i.e., shareholder value, revenue, operational efficiency, access to capital) were linked to drivers of the key performance indicators (e.g., brand value, reputation and competitiveness).

Additionally, a document analysis was used to gather secondary qualitative data from companies listed on the Johannesburg Stock Exchange (JSE) to verify the theoretical links established in the first document analysis. The population comprised 74 listed companies subscribing to the JSE's Socially Responsible Investment (SRI) Index (JSE, 2019). Due to the small population and to avoid possible bias, a census was conducted on all the companies in the population. The reason for choosing these companies was to focus on socially, economically and environmentally active companies to facilitate proper inter-temporal comparisons. The analysis used the 74 companies' annual reports, intellectual property archives, and other publicly available documentation. The findings of the two documents were used to develop a questionnaire as part of a survey method to obtain companies'/stakeholders' perceptions.

Furthermore, a survey method was used to obtain the views of various senior managers or chief executives on the impact of corporate sustainability performance on financial performance. Data was collected through face-to-face and telephonic interviews using a structured Likert scale-type questionnaire based on the two document analyses and themes that were developed, with three main sections, namely 1) organizational characteristics (6 questions); 2) the relationship between corporate sustainability performance, brand value and reputation (15 questions); and 3) the relationship between brand value, reputation, competitiveness and a firms' financial performance

(12 questions). The data consists of 6 categories, ranging from 1 being clearly expressed as "strongly disagree" (SD) or "extremely low importance" (ELI) to 5 as "strongly agree" (SA) or "extremely high importance" (EHI), and six as "do not know" (DNK). Of the 74 companies, 70 responded, resulting in a 94.59% response rate.

The data of the survey was analyzed statistically to determine the association between the categorical variables and their factors/elements affecting the impact of corporate sustainability performance on financial performance, using 1) Chi-square (to test for association between categorical variables), 2) p-values (to determine statistical significance), 3) factor analysis (to reduce the data items to meaningful variables) and 4) Cronbach Alpha (to test for internal and external validity and reliability of the instrument/framework).

The associations and the tested linkages will be joined to develop a single, systematic and integrated model that can measure the impact of corporate sustainability performance on the financial performance of South African industries via brand value/reputation and competitiveness.

The paper will provide the research results in the following sections, followed by discussions leading to the development of an integrated model that companies can use to evaluate the effect of corporate sustainability on financial performance. The paper will also discuss the managerial implications, conclusions, limitations and recommendations for further research.

RESULT AND DISCUSSION

Respondents' information. Of the 70 companies that responded, 40 (57%) represented publicly listed companies, 21 (30%) privately listed companies, 7 (10%) closed corporations and 2 (3%) joint ventures. Despite revealing the systems, policies, procedures and practices in terms of the development and use of a measurement tool for measuring the impact of corporate sustainability on financial performance, the respondents also demonstrated the companies' standing concerning the disclosure of environmental, social and economic issues in annual reports. Additionally, the respondents indicated the organization's adherence to environmental regulations, use of sustainability performance indicators and the organization's rating internationally and on the South African Corporate Social Responsibility (CSR) Index or Johannesburg Stock Exchange (JSE) Socially Responsible Investment (SRI) Index. Most of these companies are in Gauteng (90%), with a few in seven other provinces, except for the Western Cape, where no companies were represented in the study due to a lack of response.

The automotive sector was represented by 20 (29%) companies, followed by the banking and financial services sector 18 (26%), mining and minerals sector 10 (14%) and food and beverage sector eight (11%). These numbers represent the role players in sustainability performance by being environmentally, socially and economically friendly. Most companies in this study had an annual turnover of more than a billion Rand (59%) and employed more than 10,000 employees (24%). From this information, the data gathered represent mostly larger companies serious about sustainability issues, mainly situated in the country's financial hub, from the more prominent South African sectors, with a substantial turnover and employee corps, making the data trustworthy.

Information on the respondents includes their position (57%) were financial practitioners, chief financial officers, accountants or management accountants, who work within the field of corporate social and economic performance, followed by environmental managers (17%) and production engineers (17%) of whom were deemed to be conversant with the organization's environmental responsibility, disclosure and performance. The Cronbach alpha for most of the links, sections and sub-sections was reliable except for the sub-section on the relationship between brand value/reputation and competitiveness, where factor analysis was utilized to reduce data items to

ensure the instruments' validity. Chi-square tests for associations between categorical variables. P-values determine statistical significance. For the reliability and validity of instruments, the following tests were undertaken:

Table 2. Cronbach's alpha analysis test on how dimensions of corporate sustainability management (i.e., environmental, social and economic) affect organizations' performance, brand value and reputation

Item	Obs	Sign	Item-test correlation	Item-rest correlation	Average inter-item correlation	Alpha
C91	70	+	0.7222	0.5362	0.3658	0.6976
C92	70	+	0.6997	0.5040	0.3790	0.7094
C9 3	70	+	0.7841	0.6283	0.3293	0.6626
C9 4	70	+	0.7417	0.5646	0.3543	0.6870
C9 5	70	+	0.5871	0.3518	0.4454	0.7626
Test scale					0.3748	0.7498

Reliability tests. Table 2 illustrates that the impacts of dimensions of corporate sustainability management (i.e., environmental, social and economic) on firm brand value and reputation are reliable because Cronbach's alpha (0.7498) is greater than the cut-off point of 0.70.

Table 3. Cronbach's alpha analysis test on the level of priority organizations give to factors of corporate environmental management affecting environmental performance, brand value and reputation

Item	Obs	Sign	Item-test correlation	Item-rest correlation	Average inter-test correlation	Alpha
C12 1	70	+	0.8580	0.6826	0.7283	0.8428
C12 2	70	+	0.9011	0.7697	0.6143	0.7611
C12 3	70	+	0.8858	0.7380	0.6548	0.7914
Test scale					0.6658	0.8567

Similarly, Table 3 illustrates that the level of priority at which organizations rate or give the impacts of corporate environmental management on corporate environmental performance is reliable since Cronbach's alpha analysis test of 0.8567 is more significant than 0.70, the cut-off point.

Table 4. Cronbach's alpha analysis test on the level of priority organizations give to dimensions/factors of social management affecting social performance, brand and reputation

Item	Obs	Sign	Item-test correlation	Item-rest correlation	Average inter-item correlation	Alpha
C11 1	70	+	0.7451	0.5374	0.5173	0.7628
C11 2	70	+	0.8369	0.6865	0.4218	0.6863
C11 3	70	+	0.7388	0.5277	0.5239	0.7675
C11 4	70	+	0.8032	0.6299	0.4569	0.7162
Test scale					0.4800	0.7869

Table 4 demonstrates that the level of priority organizations give or rate the impacts of the dimensions/factors of social management on social performance are reliable because Cronbach's alpha analysis test of 0.7869 is more significant than 0.70, the cut-off point.

Table 5. Cronbach's alpha analysis test on how organizations rate the impact of measures of business success on economic performance, brand value and reputation reputation

Item	Obs	Sign	Item-test correlation	Item-rest correlation	Average inter-test correlation	Alpha
C10 1	70	+	0.7569	0.5433	0.4051	0.6714
C10 2	70	+	0.7951	0.6053	0.3669	0.6349
C10 3	70	+	0.7040	0.4619	0.4579	0.7171
C10 4	70	+	0.7378	0.5133	0.4242	0.6885
Test scale					0.4135	0.7383

Table 5 illustrates that the organization's ratings on the impacts of measures of business success (i.e., shareholder value, revenue, operational efficiency and access to capital) on economic performance are reliable since Cronbach's alpha (0.7383) is more significant than 0.70.

Table 6. Cronbach's alpha analysis test on the level of importance organizations place on corporate brand value serving as drivers of business competitiveness and financial performance

Item	Obs	Sign	Item-test correlation	Item-rest correlation	Average inter-test correlation	Alpha
C15 1	70	+	0.5936	0.4296	0.2590	0.7099
C15 2	70	+	0.7009	0.5664	0.2347	0.6823
C15 3	70	+	0.6179	0.4598	0.2535	0.7039
C15 4	70	+	0.6918	0.5544	0.2368	0.6847
C15 5	70	+	0.5757	0.4076	0.2630	0.7142
C15 6	70	+	0.4524	0.2616	0.2909	0.7417
Test scale					0.2591	0.7367

Likewise, Table 6 demonstrates that the level of importance organizations rate or place on factors/elements of brand value translating to business competitiveness and financial performance is reliable because the Cronbach's alpha analysis test of 0.7367 is more significant than 0.70, the cut-off point.

Thus, in conclusion, the above Cronbach's alpha tests confirm that the sections and sub-sections in this study are reliable in terms of internal consistency and reliability because their alphas exceed the cut-off point of 0.7. The only exception is the ability of the elements/factors of brand value-driving business competitiveness (i.e. 14.1 to 14.4), where Cronbach's alpha is 0.5338, as in Table VI, which led to the factor analysis test.

Table 7. Cronbach's alpha analysis test for the relationship between brand value/reputation and competitiveness

Item	Obs	Sign	Item-test correlation	Item-rest correlation	Average inter-test correlation	Alpha
C14 1	70	+	0.6559	0.3353	0.2138	0.4492
C14 2	70	+	0.7408	0.4658	0.1407	0.3294
C14 3	70	+	0.6448	0.3193	0.2233	0.4631
C14 4	70	+	0.5413	0.1803	0.3124	0.5768
Test scale					0.2225	0.5338

In Table 7 above, Cronbach's alpha results for items of the factors/elements of brand value being a driver of competitiveness as in (14.1 – 14.4) are smaller than the cut-off point of 0.70. Item

14.1 is a competitive edge, comparative advantage, better and stronger firm, a platform for innovative practices for enhancing firms' market-based assets such as reputation, trust from potential and existing customers, and others. Item 14.2 is customers' higher willingness to pay, 14.3 is employee loyalty, and 14.4 is innovative practices for enhancing firms' market-based assets such as reputation and trust from potential and existing customers. The reason might be that the respondents might have understood the items differently. Alternatively, from a physical point of view, it is observed that the items in the test are 4, whereas, in this paper, the factors/elements of brand value comprise 6 items; the reason, therefore, might be the incompleteness of the items. However, Factor analysis was employed for data reduction to ensure the instrument's validity, as seen in Table 8 below.

Table 8. illustrates the rotated factor analysis of the relationship between brand value/reputation and competitiveness (Rotated factor loadings (pattern matrix) and unique variances)

Variable	Factor 1	Factor 2	Uniqueness
D14 1	1.0571		-0.1137
D14 2	0.4451		0.7066
D14 3		0.9961	-0.0001
D14 4			0.9487

Table 8 above represents a factor analysis test result for items c14.1 and c14.2, constituting a particular factor 1 or latent construct, while item c14.3 forms the second factor 2 or latent construct. Therefore, the new result for c14.3 is 0.9961 alpha, and c14.4 is 0.9487, which is greater than the cut-off point of 0.70.

Furthermore, the validity of the instruments used in this study was ensured by conducting a pilot study.

Pilot study. This study, with the help of a pilot test/study, ensured the validity of the instruments by analyzing and comparing the results of the data for a particular criterion through both face-to-face and telephonic interviews and correlating them with the results of the data of the same criterion from the questionnaires. It showed that the questionnaire was thorough and met the study's aims.

Challenges of census sample. As earlier communicated in the methodology section, the study utilized the whole population to avoid the problem of sample bias and more because the population is small to handle. As a result, a census was conducted on the 70 companies. However, some imminent challenges were addressed as follows: Cost: The majority of the industries (90%) are located in Gauteng, the commercial capital of South Africa, where the researcher also resides. The remaining 10% were interviewed online, and questionnaires were forwarded, completed and returned through the Internet. Hence, there were little or no cost challenges on the researcher's part.

1) Time-consuming: This also posed a manageable challenge to the researcher since most companies/industries are concentrated in the same region/province.
2) Incomplete data: There was no challenge of incomplete data as the response rate was 70 out of 74 industries, resulting in a 95% response rate.
3) Confidentiality: The researcher ensured that the data generated and analyzed during the current study was kept secret due to companies' confidentiality issues.

Results on the empirical linkages/associations. Link 1: Relationship between corporate environmental performance and brand value/reputation. This link demonstrates the respondents'

views on the linkage between corporate environmental performance and corporate brand value and reputation. The following results were obtained:

Most respondents (i.e. 92.86%, n=65) agree that the factors/elements of corporate environmental performance (i.e., environmental process focus and environmental products focus) can drive corporate environmental performance and, in turn, translate to the organization's brand value and reputation. The result conforms to Schaltegger Horisch and Freeman's (2019) findings, who say that a company that reduces its environmental process and product issues by material input and costs/impacts can attract and retain customers, thereby building a solid brand value and achieving environmental performance.

Limitation: 1.43%, n=1 (disagree); 4.29%, n=3 (neutral); 1.43%, n=1 (do not know).

Again, (92.86%, n=65) believe that the focus of the environmental process, lowering the production process's material and energy intensity, enhances a company's environmental performance. This result agrees with the findings of Kanwal et al. (2013) and Schaltegger, Horisch and Freeman (2019), who found that a company that has incorporated environmental values in a product's whole life by innovating its production process can achieve environmental performance and build strong brands in the market.

Limitation: 2.86%, n=2 (strongly disagree); 4.29%, n=3 (neutral).

The majority of the respondents (i.e., 91.43%, n=64) think that the environmental product process, like the sturdiness of its products and the rise in the service performance of goods and services, can increase environmental performance and brand value. Again, this result conforms to the findings of research performed by Ford Inc. (2011) and Schaltegger Horisch and Freeman (2019), who say that a company that is environmental product conscious by improving its products and service collection to lessen dangerous environmental impacts can enjoy the environmental performance and brand value and reputation in the market system.

Limitation: 1.43%, n=1 (strongly disagree); 7.14%, n=5 (neutral).

A Chi-square test further confirmed these results.

Table 9. Chi-square test for the relationship between elements of corporate environmental performance and brand value/reputation

Variable 1	Variable 2	P/values (1&2)	Association
Corporate environmental performance:			
Environmental process focus	Brand value/reputation	0.000	Significant 0.000<0.05
Environmental product focus	Brand value/reputation	0.005	Significant 0.005<0.05

The statistical result demonstrates a positive association between a company's environmental performance and its brands and reputation via the environmental process and product focus pathway. It implies a high probability for environmental performance translating into brand value and reputation. The result is consistent with the findings of Papagiannakis and Lioukas (2017), Dara et al. (2020), and Schaltegger Horisch and Loorbach (2020), who found that a company that is environmentally sensitive towards the choice of its materials purchases for production and the packaging materials for its products, pollution and wastes and emissions may significantly increase their market brands, reputation and financial performance through more sales and profits.

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Link 2: Relationship between corporate social performance (corporate ethical behavior, genuine community initiative, external engagement with NGOs, human rights) and brand value/reputation. Under this link, the paper discusses the respondents' opinions on the effects of the elements of corporate social performance on value drivers like brand value/reputation. The results demonstrate as follows:

(95.71%, n=67) believe that the elements of corporate social performance, such as ethical behavior, genuine community initiatives, external engagement with NGOs and human rights, can promote corporate brand value and reputation. This result supports the findings of social practitioners like Kanwal et al. (2013) and Schaltegger, Horisch and Freeman (2019), who found that a company's positive socio-economic actions can translate to improved social performance, public image (reputation), customers' increased purchases, long-term profitability and financial performance.

Limitation: 1.43%, n=1 (disagree); 2.86%, n=2 (neutral)

(91.43%, n=64) believe that the element/factor of social performance, i.e., ethical behavior, can translate to brand value/reputation. This result concurs with the findings by Fraering and Minor (2013), Kanwal et al. (2013), and Naami et al. (2017). These authors stated that ethical behavior influences corporate social performance and builds brand value/reputation.

Limitation: 2.86%, n=2 (disagree); 5.71%, n=4 (neutral).

(88.57%, n=62) believe that genuine community initiatives, a factor of corporate social performance, can translate to brand value/reputation. This result supports the findings of Meurs and Quid (2018), who stated that genuine community initiatives like donations and employment for the local community can enhance a company's reputation and escalate a firm's assets.

Limitation: 1.43%, n=1 (disagree); 7.14%, n=5 (neutral); 2.86%, n=2 (do not know).

(67.14%, n=47) think that external engagement with NGOs is an element/factor of corporate social performance that can build corporate brand value and reputation. This result is consistent with the findings of Ford Inc. (2011) and Fraering and Minor (2013). According to these authors, engaging with stakeholders, e.g., NGOs, over the years can increase a company's social performance as well as brand value/reputation.

Limitation: 2.86%, n=2 (strongly disagree); 1.43%, n=1 (disagree); 7.14%, n=5 (do not know).

(87.14%, n=61) believe that factors/elements of corporate social performance, like human rights, can drive brand value/reputation and financial success. This result conforms to the findings of PepsiCo (2011) and Fraering and Minor (2013), who found that strong human rights records can influence corporate social performance and build brand value/reputation by attracting and retaining customers and investors.

Limitation: 1.43%, n=1 (disagree); 10%, n=7 (neutral); 1.43%, n=1 (do not know).
However, these claims were further verified in the following Chi-square tests.

Table 10. Chi-square test for the relationship between the elements of corporate social performance and brand value/reputation

Variable 1	Variable 2	P/values (1&2)	Association
Corporate social performance:			
Ethical behaviour	Brand value/reputation	0.094	Not significant 0.094>0.05
Genuine community initiatives	Brand value/reputation	0.044	Significant 0.044<0.05

External engagement with NGOs	Brand value/reputation	0.283	Not significant 0.283>0.05
Human rights	Brand value/reputation	0.381	Not significant 0.381>0.05

There are mixed results in the relationship between the elements of corporate social performance and brand value/reputation from Table 10. On the one hand, the result shows an insignificant association, i.e., the possibility of the factors/elements of corporate social performance like ethical behavior, external engagement with NGOs and human rights translating to brand value/reputation. It indicates a low probability that corporate social performance can drive brand value and reputation. This result agrees with the findings of Schniederjans and Khalajhedayati (2020). The authors stated that while ethical behavior builds stakeholder trust, engagement with NGOs can be a powerful tool for influencing corporate behavior, and a company that eradicates human rights abuses may be a requisite element for a solid corporate brand/reputation and a firm's financial performance.

On the other hand, the result demonstrates a significant association between the factor/element of corporate social performance, like genuine community initiative and brand value/reputation, indicating a strong probability of corporate social performance translating to brand value and reputation. This result conforms with the findings of Fraering and Minor (2013) and Vu Minh Ngo (2020), who stated that a strong company, by investing in genuine community initiatives like donations, employing local staff and others., can attract and retain more customers, increases its brands, reputation, competitiveness and financial performance.

Link 3: Relationship between corporate economic performance (shareholder value, revenue, operational efficiency and access to capital) and brand value/reputation. Under this link, the paper discusses the respondents' opinions on how the elements/factors of corporate economic performance affect brand value/reputation. The following results were obtained:

(82.86%, n=58) consider shareholder value, revenue, operational efficiency and access to capital as prerequisites for achieving corporate economic performance and brand value and reputation. This result concurs with Ford Inc. 2011, Schlager et al. 2011, Fraering and Minor (2013), and Vu Minh Ngo (2020) findings. According to these authors, companies that are proactive in adopting sustainable principles can significantly increase their shareholder value, revenue, operational efficiency and access to capital due to strong brands in the market and enjoy economic performance.

Limitation: 1.43%, n=1 (disagree); 14.29%, n=10 (neutral); 1.43%, n=1 (do not know).

(97.14%, n=68) believe that corporate shareholder value is a factor of economic performance and brand value/reputation. This result agrees with the findings of Wagner (2015) and Wanamaker (2018), who stated that brands are intangible corporate assets capable of creating competitive advantage and shareholders' wealth.

Limitation: 1.43%, n=1 (strongly disagree); 1.43%, n=1 (neutral).

(95.72%, n=67) think that corporate revenue is extremely important for corporate economic performance, brand value and reputation. This result supports the findings of Vu Minh Ngo (2020), who confirmed that the quality of profits a trademark produces matched with that of an isolated creation is a valuable product-market assessment of brand value/equity and economic performance.

Limitation: 1.43%, n=1 (strongly disagree); 1.43%, n=1 (disagree); 1.43%, n=1 (do not know).

(94.29%, n=66) corporate operational efficiency is significant for economic performance, brand value, and reputation. This result is similar to the outcomes of Schlager et al. (2011) and Stanković, Novićević and Đukić (2013), who stated that operational efficiency directly affects the company's brand value/reputation, competitiveness and bottom line as well as better economic performance.

Limitation: 5.71%, n=4 (neutral).

(97.14%, n=68) believe that access to capital is an indispensable factor/element for economic performance, brand value and reputation. This result concurs with Schlager's (2011) findings, who found that a company with successful brands, as per the market literature, creates stronger earnings/access to capital, attracts investors and is more stable in the marketplace, leading to economic performance.

Limitation: 2.86%, n=2 (neutral).

Table 11. Chi-square test for the relationship between factors of corporate economic performance and brand value/reputation

Variable 1	Variable 2	P/values (1&2)	Association
Corporate economic performance:			
Shareholder value	Brand value/reputation	0.002	Significant
			0.002<0.05
Revenue	Brand value/reputation	0.016	Significant
			0.016<0.05
Operational efficiency	Brand value/reputation	0.125	Not significant
			0.125>0.05
Access to Capital	Brand value/reputation	0.022	Significant
			0.022<0.05

On the one hand, the statistical result (p-values) demonstrates significant associations between the elements of corporate economic performance like shareholder value, revenue, access to capital and brand value/reputation. It implies a high probability that corporate economic performance can translate to brand value/reputation. This result conforms to Kanwal et al. (2013) and Schaltegger et al. (2019), who found that a company with strong brands and reputation can increase shareholder value, leading to cash inflows, access to capital and more investments and favorable returns.

Similarly, the result revealed that operational efficiency and brand value have an association but are insignificant, meaning that the effect on the organization's products may be of a lesser degree in terms of the market reputation. This outcome is consistent with the findings of Schlager et al. (2011), Stanković et al. (2013), and Marx et al. (2019). According to these authors, improvement in operational efficiency may directly affect the company's brand value/reputation, competitiveness, and bottom line, i.e., financial performance.

Link 4: Relationship between brand value, competitiveness and financial performance. In this link, the paper demonstrates the respondents' opinion on the effects of solid brand value/reputation on companies' competitiveness and financial performance. The results are as follows:

(95.71%, n=67) believe that factors of corporate brand value/reputation (i.e., competitive edge, comparative advantage, innovation, reputation, employee loyalty and non-market effects) can translate to increased competitiveness and financial performance. This result supports the findings

of Schaltegger and Wagner (2006) and Vu Minh Ngo (2020), who stated that brand value and reputation are financial drivers and business success measures relevant to competitiveness and all sustainable development factors.

Limitation: 1.43%, n=1 (disagree); 2.86%, n=2 (neutral)

(97.14%, n=68) believe that brand value, i.e., competitive edge, is a prerequisite for a company to achieve financial performance. This result is in line with the outcomes of Jove-Llopis and Segarra-Blasco (2018) and Avlonas and Nassos (2020), who found that companies that have a competitive edge over others due to solid brands and reputations may bring about substantial growth in sales or revenue, profits and possibly employment, resulting in financial performance.

Limitation: 1.43%, n=1 (disagree); 1.43%, n=1 (do not know).

(94.29%, n=66) agreed that the factor of brand value, i.e., comparative advantage, can translate to competitiveness and financial performance. This outcome concurs with the findings by Schlager et al. (2011) and Dara et al. (2020). These authors found that comparative advantage becomes inevitable for companies to achieve brand value and financial performance.

Limitation: 2.86%, n=2 (disagree); 2.86%, n=2 (neutral).

(90%, n=63) affirm that brand value, i.e., innovation, can be a product of competitiveness and financial performance. Again, this result is in line with the findings of Eccles, Ioannou and Serafeim (2020), who stated that a company that is open to change in operations, e.g., new production technologies, enjoys more customer attraction and increases sales profits and financial performance.

Limitation: 1.43%, n=1 (disagree); 7.14%, n=5 (neutral); 1.43%, n=1 (do not know).

(92.86%, n=65) believe that reputation, a factor of brand value, can translate to competitiveness and financial performance, supporting the findings of Schlager et al. (2011) and Avlonas and Nassos (2020). According to these authors, reputation is a corporate asset for attracting and retaining customers and achieving competitive advantage and financial performance.

Limitation: 2.86%, n=2 (disagree); 1.43%, n=1 (neutral); 2.86%, n=2 (do not know).

(84.29%, n=59) believe that employee loyalty, a function of brand value, can be the platform for achieving competitive advantage and financial performance. Again, this result conforms to the finding of Dara et al. (2020), who stated that a company's brand value/reputation guarantees employee loyalty (i.e., hiring and retention rates), enhancing its competitiveness and financial performance.

Limitation: 12.86%, n=9 (neutral); 2.86%, n=2 (do not know)

(67.14%, n=47) A strong brand value/reputation guarantees non-market effects like less political interference from communities, leading to more production sites, customers, competitive advantage, and financial performance. This outcome conforms to the findings of Safari, Mehdi and Eram (2013) and Schaltegger, Horisch and Loorbach (2020), who found that companies with strong brands and reputations enjoy the non-market effect of less resistance from communities, making room for more production sites, customers, competitiveness and financial performance.

Limitation: 1.43%, n=1 (strongly disagree); 5.71%, n=4 (disagree); 20%, n=14 (neutral); 5.71%, n=4 (do not know).

(91.43%, n=64) are of the view that business competitiveness is essential for a company to achieve financial performance. Additionally, this result confirms the findings of Fraering and Minor (2013), Schaltegger, Horisch and Loorbasch (2020) and Dara et al. (2020), who stated that brand value

and reputation are therefore essential drivers of global competitiveness for a company's future development and financial performance.

Limitation: 1.43%, n=1 (disagree); 5.71%, n=4 (neutral); 1.43%, n=1 (do not know)

Table 12. Chi-square test for the relationship between factors of corporate economic performance and brand value/reputation

Variable 1	Variable 2	P/values (1&2)	Association
Corporate brand value/reputation: Elements/factors of brand value/reputation			
Competitive edge	Competitiveness financial performance	0.000	Significant 0.000<0.05
Comparative advantage	Competitiveness and financial performance		Significant 0.001<0.05
Innovation	Competitiveness financial performance	0.000	Significant 0.000<0.05
Reputation	Competitiveness financial performance	0.000	Significant 0.000<0.05
Employee loyalty	Competitiveness and financial performance	0.012	Significant 0.012<0.05
Non-market effects	Competitiveness financial performance	0.000	Significant 0.000<0.05

The statistical results of this link demonstrate a substantial association between corporate brand value, competitiveness, and financial performance. The reason is that the elements of corporate brand value in Variable 1 (i.e., competitive advantage, comparative advantage, innovation, reputation, employees' loyalty and non-market effects) directly impact those in Variable 2, i.e., competitiveness and financial performance. It implies a high probability that the elements of brand value translate into competitiveness and financial performance. These results conform to the findings of Naami et al. (2017), World Bank (2020), Avlonas and Nassos (2020), Schaltegger et al. (2020) and UNIDO (2020), who found that companies recognize reputation/brand value as a corporate asset for attaining the competitive advantage by attracting and retaining customers, employees and investors, leading to financial performance.

Development of the model. A single, systematic and integrated model for measuring corporate sustainability performance's impact on South African industries' financial performance via brand value and competitiveness was developed by joining all the tested linkages as in Fig 2. The management link was introduced to show that sustainability management, i.e., corporate environmental, social and economic issues, if prioritized along the factors above, can translate into performance. These links, therefore, were not statistically tested because this research aims to develop a model for measuring the impact of corporate sustainability performance rather than management.

Firstly, the three links relating to corporate sustainability performance dimensions are (1) corporate environmental performance, (2) corporate social performance and (3) corporate economic performance and using their elements/factors (i.e., environmental process focus, environmental product focus, ethical behavior, genuine community initiatives, external engagement with NGOs,

human rights, shareholder value, revenue, operational efficiency and access to capital) to establish their impact on brand value show mixed trends:

Concerning link 1 (Corporate environmental performance and brand value/reputation). There is a significant association between all the factors/elements of corporate environmental performance (i.e., environmental process and product focus) and brand value/reputation. It indicates the high probability of environmental process activities like an environmentally conscious choice of operations translating to brand value. A company that reduces its environmental process and product issues by way of the impacts associated with materials and costs can enjoy a large market in sales and profits, thereby building a solid brand value and achieving environmental performance.

Additionally, producing environmentally friendly products will assist in attracting and retaining customers, resulting in brand value/reputation.

Concerning link 2 (Corporate social performance and brand value/reputation): On the one hand, there is a significant association between one factor/element of social performance, i.e., genuine community initiatives and brand value/reputation. It indicates the high probability of genuine community activities like donations, building hospitals, schools, and others for the community, translating to corporate brand value/reputation. Similarly, companies with a good record of genuine community initiatives like donations and employment for the local community can enhance a company's reputation and escalate a firm's assets.

On the other hand, there is an insignificant association between the elements/factors of corporate social performance like ethical behavior, external engagement with NGOs and human rights and brand value/reputation. It implies a low probability of ethical behavior, external engagement with NGOs, and human rights, which translate to brand value/reputation. It also demonstrates that corporate ethical behavior and engaging NGOs' activities that build stakeholder trust can be powerful tools for influencing corporate behavior. A company that eradicates human rights abuses may be a requisite element for a solid corporate brand/reputation and a firm's financial performance.

Concerning link 3: (Corporate economic performance and brand value). On the one hand, there is a significant association between shareholder value, revenue and access to capital, i.e., elements/factors of corporate economic performance and brand value/reputation. It shows the high probability of shareholder value, revenue, and access to capital, which translates to brand value/reputation. This is because brands are intangible corporate assets capable of creating competitive advantage and shareholders' wealth. The amount of profits or revenue from a product a trademark produces matched with an isolated creation is a valuable product-market assessment of brand value/equity and economic performance. Similarly, companies with successful brands, as per the market literature, create more robust earnings/access to capital, attract investors, and are more stable in the marketplace, leading to better financial performance.

On the other hand, elements/factors of corporate economic performance, such as operational efficiency, revealed an insignificant association with brand value/reputation. It demonstrates a low probability of corporate economic performance translating to brand value/reputation. However, operational efficiency can directly affect the company's brand value/reputation, competitiveness and economic performance.

Hence, links 1-3, i.e., corporate environmental, social and economic performance, demonstrate relationships with brand value and reputation. It implies that a company that operates in an environmentally, socially and economically sustainable manner may build substantial brand value and reputation in a market system.

Concerning link 4: (Corporate brand value/reputation, competitiveness and financial performance). In this linkage, all the elements/factors of brand value/reputation (i.e., competitive edge, comparative advantage, innovation, reputation, employees' loyalty and non-market effects) demonstrate strong association and probability for brand value translating to competitiveness and financial performance. Companies with a competitive edge due to strong brands and reputations may substantially grow sales or revenue, profits and employment, resulting in financial performance. Similarly, comparative advantage becomes inevitable for companies to achieve brand value and financial performance. Innovation-intensive companies often open to new production technologies can increase sales and profits by attracting and retaining customers, thus translating to financial performance.

While reputation is a corporate asset for attracting and retaining customers and achieving competitive advantage and financial performance, employee loyalty, a function of brand value, can be the platform for achieving competitive advantage and financial performance. Likewise, non-market effects like less political interference from communities resulting in more production sites and customers can drive competitive advantage and financial performance.

In summary, brand value/reputation and competitiveness are, therefore, essential elements/factors for a company's survival and future development.
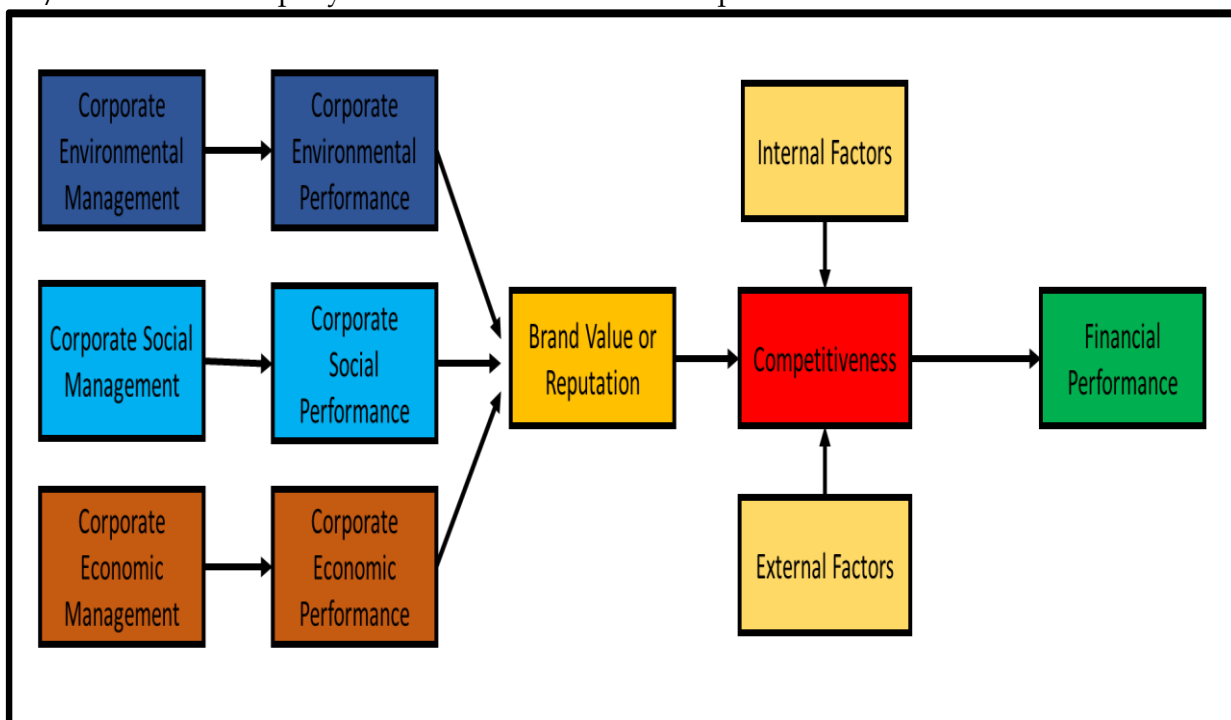

Figure 2. Integrated framework for measuring corporate sustainability performance

The objective of this research is demonstrated in the above model (i.e., Fig. 2), which displays all the theoretical and empirical linkages between corporate sustainability performance (i.e., environmental, social and economic) and financial performance/business success. Thus, from a sustainability point of view, corporate managers need to know that a robust model should be able to result in financial performance when the management and performance of the factors/elements (e.g., environmental process and product focus, ethical behavior, genuine community initiatives, engagement with NGOs, human rights, shareholder value, revenue, operational efficiency and

access to capital) can potentially produce increased business success measures like brand value, reputation and competitiveness.

Hence, following the theoretical and empirical validations, the developed model can help potential managers make easy and prompt decisions on past, pending, and future sustainability issues. By prioritizing firms' actions like environmental, social and economic and their elements/factors across value drivers and strategic business trends, firms can achieve competitive advantage and increase bottom lines by being more environmental process and product-focused/conscious in their operations, increasing their investments in genuine community initiatives and maintaining good human rights records.

CONCLUSION

This research has assisted in providing a wide range of methods for discovering the dimensions, linkages and essential factors/elements that can lead to the development of a single, systematic and integrated framework for measuring the impact of corporate sustainability performance on financial performance via brand value and competitiveness. The research utilized the data from organizations of Johannesburg Stock Exchange (JSE) subscribing to the Socially Responsible Investment (SRI) Index that are environmentally, socially and economically sustainable to establish theoretically and empirically how the linkages and the critical factors affecting the intensity of the association between corporate sustainability performance (i.e. environmental, social and economic performance) impact on brand value/reputation and how the factors of brand value, in turn, translates to competitiveness and financial performance. According to the paper, solid human rights records can influence corporate social performance and brand value/reputation by attracting and retaining customers and investors. Similarly, shareholder value, revenue, operational efficiency and access to capital are prerequisites for achieving corporate economic performance, corporate brand value, and reputation. The paper also found that factors of corporate brand value/reputation (i.e., competitive edge, comparative advantage, innovation, reputation, employees' loyalty and non-market effects) can translate to increased competitiveness and financial performance.

The research contributes to development science by advancing the field of corporate sustainability with a single, systematic and integrated evaluation system for corporate sustainability performance that may be adaptable to companies, governments or municipalities that achieve stakeholder impacts, competitive advantage, profits and performance targets. Hence, the research recommends that organizations and governments in South Africa and the world prioritize key performance indications like brand value/reputation and competitiveness to achieve a competitive edge, comparative advantage, innovation, reputation, employee loyalty and non-market effects. Companies must articulate their sustainability performance or firm actions like environmental, social and economic across their elements/factors, value drivers and strategic business trends as enumerated in this research to achieve future development and financial performance for the company and the Society.

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