-RESEARCH ARTICLE-

IMPACT OF ECONOMIC INDICATORS ON COMPANY SUSTAINABILITY AND CORPORATE PERFORMANCE FOR SUSTAINABLE DEVELOPMENT: COMPARABILITY ANALYSIS BETWEEN NIGERIAN AND SOUTH AFRICAN LISTED COMPANIES

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─Abstract─

The study examined the impact of economic indicators on corporate sustainability performance and the performance of South African and Nigerian listed companies using secondary data retrieved from the annual reports of the selected companies. Stakeholder, Social Contract and Signalling Theories were combined to form the theoretical foundation of this study. Data retrieved from 40 companies for the period 2014 -2020 was analysed using panel ordinary least square (POLS) and generalized method of moments (GMM) methods, representing all sectors with the help of a convenience sampling method. Three Dependent variables were used, namely ROA, ROE and Earnings per share. Explanatory variables were staff costs, sales growth, Net Profit Margin, Environmental and Social governance, corporate tax, inflation, exchange rate and share price. Findings revealed a strong relationship between corporate sustainability

performance and company performance and economic indicators and company performance. This was substantiated by the results from GDP, share price, sales growth and net profit margin which revealed positive and significant results for both countries. However, other variables revealed mixed results. For instance, while staff costs, exchange rate and inflation were negatively significant within the Nigerian context, they revealed negative and insignificant results within the South Africa context. Moreover, while Environmental and Social performance are positive and significant in South Africa, it was also positive but insignificant in Nigeria. Lastly, while corporate tax revealed a negative but significant result for South Africa, it was negative and insignificant in the Nigerian context. Further studies can also be conducted on a cross-country basis in order to ascertain whether similar results can be achieved.

Keywords: Corporate Sustainability Performance, Sustainable Development Goal, Economic Indicators, Company Performance, Social Contract Theory, Stakeholders Theory and Signalling Theory.

1. INTRODUCTION

It is imperative to periodically assess the level of preparedness of countries towards the achievement of the Sustainable Development Goals (SDGs), especially immediately after the Novel Coronavirus pandemic, although some countries are still battling with a third-wave recurrence, and now the Omicron variant. One of the main purposes of the SDGs is the coordination of policies across different domains. However, the achievement of this goal relies solely on the collective efforts from both private sector and public sector company levels of every country. This study investigated the bi-directional impact of both the private and public sectors to achieve this goal. Moreover, this study also covered part of important essential SDGs on economic, social and environmental variables; company-specific variables; data monitoring; and accountability across countries and sectors. Sustainable business performance and sustainable economic development cannot be separated from the environment, as activities in business affect its immediate environment, while external activities around companies also affect its performance and its economic wellbeing. Healthy economies help companies to survive and to be sustainable, which in turn improves the economy through the movement of its indicators (Pham et al., 2021). For companies to survive and be sustainable, they need a good and healthy economic environment, and they must devise strategies to reduce their negative impact on their environment (Aifuwa, 2020). The earth is endowed with so many natural resources that have been created for people to enjoy all over the world through good governance by each sovereign country. All efforts to tap into these natural resources for use have negatively impacted the ecosystem and if care is not taken, generations to come may be greatly and negatively affected. Oluseyi-Sowunmi et al. (2020) buttress this by stating that it is a joint responsibility between individual, government and corporate bodies to preserve and restore all activities on planet earth (Briard et al., 2020). In the past, individual and corporate bodies

have been after their own self-interest, which is profit maximisation and shareholder wealth maximisation, with no plan for future generations (Duke et al., 2020). Previously, attention was not paid to human activities such as ploughing, gas flaring, oil rigging, sewage disposal, oil spillage, etc., which continued until their effect was linked to global warming and the extinction of animals (The Royal et al., 2020; Valavanidis, 2019). This was the root of the Millennium Development Goals (MDGs) which ended in 2015 and later metamorphosed into the Sustainable Development Goals (SDGs), targeted to be achieved by 2030.

In order to achieve this, Sustainable Development Goals (SDG) were set with many member countries of the United Nations (Gudalov et al., 2020). Since then, there have been growing trends of countries to move towards achieving these goals on or before the end of 2030, shortly after the Millennium Development Goals (MDG) in 2015. Several countries have joined the race towards achieving these goals (Ogbodo et al., 2021), although the upsurge of Covid-19 has hindered it for the past two years. While some countries have risen above this pandemic, some are experiencing a third wave. For these goals to be achieved, there must be a reaction from all countries to re-strategize and to align all their activities towards SDG implementation and success from different sectors (Habanabakize, 2020). The achievement relies solely on individual country's policies and plans towards the said goals (Opoku, 2016).

Part of the reactions from all countries is a combined effort from both the public sector and private sector to help in achieving the SDGs. If there will truly be total sustainability for future generations, there must be total integration and implementation of sustainability principles into companies' daily operations, especially from corporate organisations which fall under the private sector of all countries' economies (Kikulwe et al., 2020). In addition, there has also been a rising demand for corporate sustainability as part of the steps to achieve sustainable growth and development by stakeholders in corporate organisations around the world (Donkor et al., 2020; Egbunike et al., 2018; Oluseyi-Sowunmi et al., 2020). Companies' sustainability reporting and performance are highly important because the private sector of any country is a major contributor to any healthy economy, both locally and internationally (Matar et al., 2018). Furthermore, the private sector dictates the quality of macroeconomic indicators; drives the economy of any nation by creating employment opportunities and reducing poverty rates; helps in regulating the inflation rate; helps in price stability; improves the stock market; reduces insecurity and crime rates; and facilitates exchange rate stability, which later transforms into economic growth and development (Matthews et al., 2020). Government on the other hand regulates, puts policies in place and monitors to ensure the compliance of all activities of every sector for all round stability and for SDGs to be achieved. For these goals to be achieved, government needs to provide a sound and conducive economic environment for the private sector to thrive well. For instance, government must provide a stable power supply, local and international markets for their products, raw materials, good road networks, good security, good governance, etc. Therefore, for SDGs to be

achieved, both the public and private sectors of these countries have a great task ahead, and a good interaction of both sectors would lead to better performance (Matar et al., 2018). Researchers have proven that there are internal and external factors affecting companies and while companies have control over internal factors, they do not have control over external factors. Both factors are directly correlated to a company's financial and sustainability performance (Valencia, 2020). The truth is that the most dangerous factors are those that companies do not have control over, and which determine the survival and sustainability of companies (Gikombo et al., 2018). Many companies have liquidated, while many others have re-located to better countries as a result of a bad economic environment (Osoro, Gor and Mbithi 2016). For example, Dunlop Plc has moved to Ghana as a result of power problems in Nigeria.

For total sustainability performance to be achieved at a firm level, there is need for companies to be proactive by harmonising and integrating three core elements (economic, social and environmental costs) into their daily operations. This will improve the level of trust in the company from all the stakeholders. Although being sustainably committed may negatively affect the immediate profit of such companies in the short-run, it will have long-run positive effects on shareholders' wealth maximisation without jeopardising other stakeholders' interests in the future. For companies to be sustainable, both macro- and micro-economic variables are germane to their survival because these are signals to both international and local investors to boost the economy through local investment and foreign direct investment. This is substantiated by Donkor et al. (2020) and Egbunike et al. (2018), who stated that GDP and inflation affect financial performance in Ghana. Additionally, Leben and Euske (2006) confirmed that performance indicators provide information to achieve set goals. Therefore, at an operational level, companies need to align to this new niche in order to improve stock market performance. Thus, the management of companies also need to be sustainable in practice by aligning profit with social, economic and environmental variables through their governance (de Castro Sobrosa Neto et al., 2020). Several other studies by Olowo et al. (2021) and Akani et al. (2016) asserted that economic indicators do have positive relationships with company performance. Osoro, Gor and Mbithi (2016) also posited that how effectively and efficiently a company performs depends on how favourable the economic environment of that country is. In this era of globalisation, it is imperative that companies align and integrate their activities with global sustainable development for the achievement of this goal. Collective effort is needed in order for this goal to be attained, most especially when there is goal congruence between the private sector and public sector of a nation, which makes it less stressful to achieve (Wallenius et al., 2020). This is because all companies' activities have both direct and indirect impacts on their environment, which can be classified into economic, social and environmental impacts on their environment. Accounting for all these three classifications by a company is called Corporate Sustainability Performance. Corporate Sustainability Performance determines how much effort a company has committed to economic, social and

environmental preservation for future generations (Ganda, 2022a). All companies' activities must be sustainably ascertained and accounted for in a way that will take all stakeholders' interests into consideration. For instance, companies' activities can aggravate green-house gasses, which are harmful to the atmosphere and toxic to human existence. In addition, oil spillage is another adverse effect of companies which needs to be adequately accounted for in order to preserve the immediate environment for future generations (Oluseyi-Sowunmi et al., 2020).

Having determined the relationships between economic indicators and corporate sustainability performance, corporate performance and their relationship to the attainment of SDGs by 2030, it is expedient to streamline and establish the study problem and the study objective. One of the motivations that draws attention to this study is the alarming volatility rate and deteriorating and downward movement of the economic indicators of these two countries under study. Oluseyi-Sowunmi et al. (2020) affirmed that companies' macro-economic environments dictate and moderate the type of operational and strategic decisions, such as investing, operational and financing decisions, that are made by companies (Yoon et al., 2020). Nigeria's macro-economic indicators for the past few years are worse, but the case of South Africa, are fair when they are compared. In South Africa, Covid-19 seems to be the major cause of their fluctuations, especially this third wave, the Omicron variant of Covid-19 and corruption, which have led to high inflation, the price volatility of commodities, poverty, the financial distress of companies and corporate failures. Nigeria seems not to be getting it right at all. How can a right-thinking Nigerian citizen explain that her own naira has been de-valued to the extent that a dollar goes for 450 naira ($1 = #450), even above #500 on the parallel market. Although major reasons attached to these menaces in Nigeria are many, a few are insecurity, corruption, selfish leaders, poor governance, Nepotism, ethno-tribalism, religious extremists and Covid-19, which have resulted in insurgency, kidnapping, killings, high rates of exchange, corporate failure, high unemployment rates, poverty, migration, inflation, food scarcity, high prices and recession. Apart from the above, very few studies have related sustainability performance with economic indicators in the world literature, as extant studies in this area have either related it to disclosure or reporting rates. In this line of study, there have been many studies on macro-economic indicators and financial performance, but limited studies have related macro-economic indicators with corporate sustainability performance and companies' total performance in the world literature (Akani et al., 2016; Nwobu et al., 2021; Olowo et al., 2021). Moreover, there have been conflicting, inconclusive and mixed results from past studies, which this study intends to clear and add to the existing literature. In addition, the uniqueness of this study is that it is a comparability study, which to the best knowledge of this study's authors has not been carried out as at the time of this study. The only comparable study is between macro-economic indicators and financial performance, and it is not within the African context. This study also covered essential parts of SDGs on economic, social, environmental

variables, company-specific variables, data monitoring and accountability across countries and sectors. It is also an insight into assessing the readiness of countries in Africa towards the achievement of the SDGs by 2030, using Nigeria and South Africa as a case study. These are the gaps that this study covers in the world literature.

The motivation behind the choice of these two countries was that they are both ranked as the 1st and 2nd largest economies in Africa, but their macro-economic performance in the recent past indicates that they are struggling, which is worrisome. For instance, South Africa's economy is the most classified, diversified, technologically advanced and industrialised economy in Africa (Valavanidis, 2019), whilst Nigeria has the largest population and economy. Both countries' economies and markets are very germane to the whole of Africa as any negative impact may negatively affect the entire African continent. Other motivations, as previously mentioned, are the alarming volatility rate and deteriorating and downward movement of the economic indicators of these two countries under study. A further reason was the conflicting and confusing results from past scholars, whereby some suggested further studies on this topic for better justification and the SDGs' global ranking. Therefore, to fill this gap, this study examines the impact of economic indicators on both corporate sustainability performance and corporate financial performance. The remaining part of this study is arranged as follows: concept definition, review of theoretical foundation and prior studies, model specifications, analysis and interpretations and conclusion.

2. LITERATURE REVIEW, CONCEPTS AND THEORIES

This study adopts corporate sustainability as defined by Labuschagne et al. (2005), as 'adopting business strategies and activities that meet the needs of the enterprise and its stakeholders today, while protecting and enhancing the human and natural resources that will be needed in the future'. This work sees and supports adopting the broad approach of integrating sustainable practices into companies' operational activities that include social, environmental and economic sustainability towards the achievement of SDGs by 2030, as suggested by scholars (Ganda, 2022b; Ogbodo et al., 2021). Alshehhi et al. (2018) grouped companies' total sustainability performance into economic, social and environmental performance and they stated that companies are major contributors to environmental degradation, having direct impacts on the social, environmental and economic lives of people. For instance, gas flaring and green-house gases can affect human health, motivation and employment opportunities can change, transforming the lives of employees and enhancing corporate performance, which will have a positive impact on economic growth and development and other macro-economic variables of any nation. The study therefore considers social, environmental and other financial data in the annual report as the level of commitment to those variables (Ding, 2008; Labuschagne et al., 2005), with the following theoretical foundation:

This work combines Social Contract, Stakeholder and Signalling theories as the theoretical framework. Social Contract preaches that companies have a contractual responsibility to their environment, which if breached may lead to litigation that may give the company a bad image in the public space (T Donaldson, 1983; Thomas Donaldson et al., 1994). Stakeholder Theory, as against Agency Theory, states that all stakeholders should be considered and included in the strategic decision-making process, not only the shareholders of companies (Abdullah et al., 2009). Signalling Theory posits that financial statements and economic indicators signal to all stakeholders about the financial, economic and sustainability wellbeing of companies and nations (Akerlof, 1970; Wolf et al., 2001). These theories are used to combine the impact of both sustainability performance and corporate financial performance as a boost to economic performance. Extant studies have proven that both sustainability performance and macro-economic indicators improve corporate performance. Moreover, the private sector to which all companies belong drives the economy of any country. The good performance of companies in a country improves such a country's economy, while poor performance hinders the economy of such a country. Economic indicators (external factors, eg, GDP, inflation, etc.) and companies' performance indicators (internal factors, eg. social, environmental) through ratios from their annual reports are signals to all stakeholders. For instance, investors will assess both internal and external factors before committing their resources to any investment. Both internal and external factors signal to all stakeholders about the performance of the nation and how sustainable the country is. Sustainability performance and corporate performance communicate to all stakeholders how much the activities of companies contribute to the achievement of the Sustainable Development Goals, or how much the activities hinder their countries from achieving these goals. For instance, how committed companies are in their annual reports on social and environmental activities yearly will signal to all stakeholders their readiness towards sustainable growth, which will lead to value maximisation in the long-run. This leads to a review of prior studies to discover gaps from literature.

2.1 Prior studies on Corporate Sustainability Performance, Economic Indicators and Corporate Performance

The works of Lu et al. (2015) revealed that sustainability performance improves financial performance through a meta-analysis. In addition, Phan et al. (2020) examined the relationship between companies' sustainability practices and financial performance. The results revealed that sustainable practices impact financial performance positively. This result was corroborated in the work of Pham et al. (2021), which revealed that sustainability practices improve financial performance with all variables used, except Tobin's Q which produced inconclusive results. Surprisingly, Aggarwal (2013) found no association between the sustainability rating employed and corporate financial performance, which could be as a result of the low disclosure rates of sustainability reporting, as discovered by Nwobu et al. (2021). These authors found that the sustainability disclosure rate in Nigeria was only 13.8%. Oluseyi-Sowunmi et al. (2020)

examined environmental reputation management impacts on firm performance and revealed that the two variables employed are positively and significantly related. Bassetti et al. (2021) also revealed the same result by examining the effect of environmental performance on economic performance, which found that environmental performance has a positive effect on ROA and ROE. Ikram et al. (2019) assessed how environmental management systems improve corporate corporate sustainability in Pakistan, revealing that company EMS adoption is an effective tool to determine the economic, social and environmental issues of a company. Gupta et al. (2020) also examined the effect of corporate environmental sustainability on company performance, finding that environmental sustainability and company performance are positively and significantly related. Jawaad et al. (2020) investigated the connection between businesses and SDGs, and found a strong link between business operations, company performance and SDGs. Ogbodo et al. (2021) analysed Nigerian strategies towards achieving the SDGs by 2030 and discovered a big gap between research on policy-making and implementation towards achieving this goal. The general conflicting and mixed nature of results and findings by scholars led to a general review by Alshehhi et al. (2018), who reviewed past literature and found that 78% of past research supports positive relationships between corporate sustainability practices and company performance. However, they suggested more research to clear the doubt. Further research was carried out by Aifuwa (2020) to bridge the gap. During his review, a greater number of extant studies revealed that sustainability reporting improves firm performance. This forms part of the motivation and part of what this study adds to the body of knowledge- to establish clear relationships between the sustainability practices of companies and their financial performances in order to improve stakeholders' levels of confidence and knowledge about sustainability accounting. This requires an interrogation of past studies on economic indicators and financial performance, as presented below.

Balotić et al. (2016) employed a comparative analysis to examine Business sophisticated and economic indicators. The results revealed that business sophistication greatly impacted GDP, exports and industrial value-added, which were employed in the study as the economic variables. Donkor et al. (2020) employed panel data to study the impact of economic indicators on corporate financial performance in Ghana. Findings revealed that inflation and GDP are positively and significantly related to ROE but negatively related to ROA, while company size, sales growth and efficiency are positively related to ROA. They concluded with mixed results. The researchers recommended that government should promulgate policies that can boost the economy in order to have ripple positive effects on stock market performance. Almagtome et al. (2020) explored the effect of the quality of corporate governance on sustainable, environmental and economic indicators, with results revealing that both corporate governance practices and stakeholder pressure are important for companies' sustainable performance. In addition, Kanwal et al. (2013) considered macro-economic variables and commercial banks and concluded that a strong relationship does exist between interest rate and ROA, ROE and

equity multipliers, while they were revealed to be negative and insignificant in relation to GDP. The results of Akani et al. (2016) study on economic indicators and bank performance revealed a mixed result but concluded that economic variables do impact the performance of banks. Gikombo et al. (2018) employed inflation, GDP, exchange rate, interest rate on ROA and ROE and concluded that all variables impact ROA, while only GDP, interest rate and exchange rate impact ROE. However, Kiganda (2014) found no significant influence on bank performance, but Rao (2016) revealed a significant impact on financial performance. Olowo et al. (2021) examined macro-economic variables and the performance of banks and found that both are positively related. The authors suggested that governments should embark on policies that can support sustainable growth and development through a peaceful and conducive environment. Egbunike et al. (2018) found mixed results between macro-economic variables, firm characteristics and the performance of firms. While GDP, inflation and ROA revealed a significant impact, interest rate and exchange rate showed no impact on firm performance.   Moreover, Abaidoo et al. (2021) explored corporate performance volatility at a micro-level and revealed mixed results, whilst Mohd et al. (2020) revealed that inflation, labour unit cost and exchange rate contributed immensely to company performance. Additionally, Mugambi (2020) found a mixed result in that inflation and the exchange rate are non-significantly and negatively related to company performance, but interest rate revealed a positive and significant relationship. The current study reviewed past works that combine the three variables in order to discover the impact of both sustainability performance and macro-economic variables on the performance of a company. Kocmanová et al. (2016) found a positive association between economic indicators and corporate sustainability with Environmental and Social Governance (ESG), while Kim et al. (2018) explored sustainability performance, corporate performance and economic development from the Asia-Pacific region and North America. The study revealed that both financial variables and economic variables are positively important to sustainable performance using GDP, ROI, ROA and ROIC. It also revealed that sustainable investment impacts economic development. Fijałkowska et al. (2018) empirically verified whether social-environmental performance enhances bank financial performance and revealed that bank performance enhances a higher efficiency of CSR. A summary of gaps from prior studies reviewed are as follows:

3.   DISCUSSION OF GAPS FROM THE LITERATURE

While several studies found positive relationships between those variables under study, others found negative or even inconclusive results, but surprisingly some found no relationship at all. For instance, many prior studies on sustainability performance and Corporate financial performance revealed positive results (Jones et al., 2012; Oluseyi-Sowunmi et al., 2020; Phan et al., 2020), while some revealed an inverse relationship (Hussain et al., 2018; Inoue et al., 2011) and yet others revealed inconclusive results (Pham et al., 2021) and no link, as reported by Aupperle et al. (1985) and Kiganda

(2014). By implication, the summary from prior studies' reports is enough to discourage the management of companies in terms of whether to implement the policies of sustainable development. For this reason, Alshehhi et al. (2018) and Phan et al. (2020) called for more research from other continents (developing and emerging markets) so that a clear understanding and better inference can be drawn from their works. When there are more results and findings, better inferences can be drawn by stakeholders. This gap forms part of what this study covers in the world literature and in the assessment of the two countries under review. Macro-economic indicator movements for the past five years are worrisome, especially for Nigeria. From 2015 when the SDG race started, Nigeria seems not to be getting it right at all compared to South Africa. If South Africa is proactive, the likelihood that the country can meet the goals is over 30%, but the probability that Nigeria will meet these goals is less than 5%. This forecast is substantiated by the 2020 SDG Global Ranking, which ranks South Africa 8th and Nigeria 43rd in Africa and globally, 110th and 160th respectively (Bellantuono et al., 2020; Ogbodo et al., 2021).

4. DATA SOURCE AND METHODOLOGY

The data used in this analysis is based on 40 companies (20 from each country), representing all sectors from South Africa and Nigeria listed on the Nigeria Stock Exchange (NSE) and the Johannesburg Stock Exchange (JSE) for the years 2014-2020 respectively. The choice of these companies was based on convenience sampling and the availability of their annual reports online. Most companies that have their data readily available online were selected for the purpose of this work. Data was retrieved from the annual reports of all the sampled companies. The dependent variables, which included returns on assets (ROA), returns on equity (ROE) and environmental and social performance (ESP), are all utilised as indicators of financial and sustainability performance. The explanatory variables included macro-economic variables as well as firm-specific characteristics, such as sales growth (SGT), net profit margin (NPM), consumer price index as a measure of inflation (INF), gross domestic production as a proxy for economic growth (GDP), environment and social commitment of the firm (ESG), staff cost (STF), corporate tax (TAX), exchange rate (EXC) and share price (SRP). All the macro-economic variables are sourced from the World Development Indicators (WDI). To examine the impact of economic indicators and corporate sustainability performance on company performance in Nigeria and South Africa, the study begins with a descriptive statistics analysis. This is done by examining the descriptive statistics and correlation matrices of those companies. The descriptive statistics provide the sample statistics such as minimum value, maximum value, mean and median, skewness and kurtosis and Jarque-Bera statistics. Tables 1 and 2 present the descriptive statistics as well as a correlation matrix for the two countries under consideration. The descriptive statistics show that there is evidence of variability in the two countries considered. Specifically, the statistics indicate that the average values of

ROA are 5.695 and 11.133 in both countries. This is not surprising as the returns on assets in South Africa have been rising over time and have doubled the returns on assets in Nigeria. However, the average values of the net profit margin (NPM) and economic growth (GDP) in Nigeria are greater than in South Africa. Furthermore, the sales growth (SGT) and inflation rate (INF) in Nigeria are higher than in South Africa. The evidence implies that despite the persistent inflation rate in Nigeria, firms still generate more sales growth in the economy. However, the statistics indicate that the corporate tax rate (TAX) in South Africa is greater than the tax rate in Nigeria. The lower panel of Tables 1 and 2 present the correlation matrix amongst the variables. The analysis shows that none of the variables display evidence of multi-collinearity and their coefficient values do not exceed 0.650. Correlation analyses for both countries reveal negative relationships between the exchange rate, corporate tax, staff cost and sustainability indicators. Moreover, there is evidence of a positive relationship between the inflation rate and profitability in Nigeria, but a negative correlation is reported in South Africa.

Table 1 Descriptive Statistics for South Africa

Variables ESG	ROA STF	ROE TAX	EPS EXC	SGT SRP	NPM	INF	GDP
Mean 35.080	11.133 98.888	21.259 32.573	9.322 11.636	7.886 16.085	11.347	4.977	0.917
Median 15.590	7.730 60.890	8.000 14.580	7.210 12.140	7.000 12.580	10.950	5.100	2.000
Max 35.380	92.890 7.000	10.640 18.153	71.030 17.370	82.940 40.500	60.020	7.000	3.700
Min 0.000	27.280 34.380	-65.100 26.360	48.490 6.610	42.550 5.030	48.280	2.200	1.700
Std.Dev 59.040	15.202 84.141	20.328 42.875	16.152 3.082	14.107 29.278	13.777	1.057	3.970

5. METHODOLOGY

In this paper, the Generalized Method of Moments (GMM) proposed by Arellano et al. (1995) and Blundell et al. (1998) is used to examine the effect of macro-economic indicators on corporate sustainability and performance. The technique is best suited for this study due to the short-term period of the current investigation and the different cross-sections of firms considered for both countries. The GMM approach could also simultaneously help to address the issue of endogeneity problems and the issue of unobserved intercept heterogeneity. The use of traditional econometric techniques such as Ordinary Least Squares (OLS) may result in inconsistent and biased findings when the regressors are correlated with unobserved individual effects.

Correlation Matrix

	ROA	ROE	EPS	SGT	NPM	INF	GDP	ESG	STF	TAX	EXC	SRP
ROA	1.000											
ROE	0.753	1.000										
EPS	0.437	0.461	1.000									
SGT	0.260	0.299	0.214	1.000								
NPM	0.319	0.472	0.600	0.222	1.000							
INF	0.029	0.112	0.122	0.006	0.033	1.000						
GDP	0.100	0.199	0.207	0.021	0.124	0.580	1.000					
ESG	-0.095	-0.179	0.014	0.046	0.132	0.066	0.160	1.000				
STF	-0.265	-0.249	-0.013	0.036	0.112	0.025	0.093	0.338	1.000			
TAX	0.148	0.206	0.648	0.105	0.487	0.074	0.113	0.082	0.250	1.000		
EXC	-0.141	-0.210	-0.040	0.055	-0.104	-0.220	-0.504	0.170	0.176	-0.012	1.000	
SRP	0.142	0.108	0.180	0.157	0.209	0.124	0.018	0.155	0.149	0.180	-0.010	1.000

Table 2 Descriptive Statistics for Nigeria

Variables	ROA	ROE	EPS	SGT	NPM	INF	GDP	ESG	STF	TAX	EXC	SRP
Mean	5.696	15.492	4.047	8.069	12.310	12.254	4.241	22.161	60.961	23.597	25.199	82.226
Median	4.665	14.950	2.065	2.610	10.495	11.750	3.500	46.430	59.595	38.510	19.730	15.550
Max	29.780	13.840	87.160	12.910	86.310	18.900	16.500	34.141	38.510	37.900	47.000	15.000
Min	43.200	33.720	18.670	34.520	70.730	7.900	7.200	1.000	71.812	80.500	14.670	0.200
Std.Dev	9.658	32.814	18.732	18.238	18.331	3.214	3.240	49.194	35.831	81.879	99.369	24.990

Correlation Matrix

	ROA	ROE	EPS	SGT	NPM	INF	GDP	ESG	STF	TAX	EXC	SRP
ROA	1.000											
ROE	0.751	1.000										
EPS	0.376	0.471	1.000									
SGT	0.044	0.036	0.033	1.000								
NPM	0.598	0.392	0.267	0.091	1.000							
INF	-0.069	-0.021	-0.055	-0.041	-0.163	1.000						
GDP	0.194	0.116	0.118	0.031	0.181	-0.535	1.000					
ESG	-0.052	0.061	0.023	0.059	0.276	0.144	-0.181	1.000				
STF	-0.073	-0.077	-0.117	-0.065	-0.155	0.015	-0.083	0.058	1.000			
TAX	-0.057	-0.048	0.037	0.049	-0.015	-0.053	0.047	0.033	0.220	1.000		
EXC	-0.083	-0.093	-0.044	0.003	-0.158	0.627	-0.776	0.252	0.074	-0.060	1.000	
SRP	0.351	0.442	0.444	0.057	0.046	0.028	0.164	0.041	-0.099	-0.046	0.074	1.000

Furthermore, using the GMM approach is an appropriate technique that can treat all the independent variables as endogenous such that they are correlated with the error term. da Silva et al. (2017) argue that the use of standard fixed effects estimators is biased in the presence of a lagged dependent variable as a regressor, and that the technique also possibly accounts for the endogeneity of some of the dependent variables. In the last step of this estimation, the validity of the lagged variables as instruments is estimated using the Sargan test of over-identifying restrictions, which tests the overall validity of the instruments, as well as the second-order serial correlation test, which hypothesises that the error term is not serially correlated. Hence, the empirical model is specified as follows:

$$Cor_{it} = \alpha_i + \beta_1 Cor_{it-1} + \beta_2 x'_{it} + v_i + u_i + \varepsilon_{it} \tag{1}$$

Where Cor_{it} denotes the corporate sustainability and financial performance variables including the returns on assets, returns on equity and earnings per share respectively; Cor_{it-1} is the lagged dependent variable; x'_{it} is a vector of explanatory variables; v_i stands for the firm-specific effect; u_i are the year-specific effects; α_i and β_i are the intercept and the vector of parameter; and ε_{it} is the error term. In this study, the issue of measurement error and omitted variable bias amongst the variables are addressed, which lead to employing different specifications for robustness and comparison's sake.

6.   EMPIRICAL RESULTS

Tables 3 and 4 below present the results of the estimations from the panel OLS and GMM techniques for both South Africa and Nigeria respectively. Moreover, each column represents the returns on assets (ROA), returns on equity (ROE) and earnings per share (EPS) as dependent variables, respectively. The results indicate that the lagged coefficient of the dependent variables is positive and significant in both countries, implying that the past sustainability performance of the firms has an impact on their current profit. The results also show that the coefficient of economic growth (GDP) is positive and significant in both countries, but the effect is more significant in South Africa. This finding implies that a rise in GDP has a major impact on the profitability and sustainability of firms in these economies. The study also implies that a growth in GDP allows banks to raise lending rates with a minimal risk of default, hence enhancing bank profitability. The outcome is consistent with the evidence of Flamini et al. (2009), Dietrich et al. (2011), Trujillo-Ponce (2013) and Egbunike et al. (2018) but contradicts the findings of Issah et al. (2017), Hassan et al. (2019) and Thompson (2021). The estimated coefficient of sales growth (SGT) is significant and positive in the two economies. The finding implies that increased sales growth provides additional investment opportunities for firms, thus increasing their profitability and sustainability. The results conform to the findings of Pattioni et al. (2014) and Cheong et al. (2021). Conversely, the estimated coefficient of staff cost (STF) is negative in the two countries, but significant only in Nigeria. This finding indicates that increases in staff costs have an impact on capital productivity, undermining company sustainability and profitability, particularly in Nigeria. The result is similar to the findings of Issah et al. (2017) for the UK economy. The coefficient of corporate tax (TAX) is significant and negative for firms in South Africa, but insignificant for Nigeria. This result points out that corporate tax is one of the core determinants of corporate sustainability and financial performance in these countries, and that when corporate tax rates rise, a company's profit decreases over time. Furthermore, the results show that the exchange rate (EXC) is negatively significant in Nigeria, while an insignificant finding is reported in South Africa. This finding shows that persistent depreciation of the Nigerian currency relative to other currencies negatively affects the profitability and sustainability of firms in the country. The result is consistent with the findings of Ibrahim et al. (2003) for the Malaysian economy. The coefficient of net profit margin (NPM) is positive and significant for both economies, implying that an increase in the net profit margin of the two markets will enhance corporate profitability and sustainability performance. The coefficient of inflation (INF) is positive and significant in Nigeria, but an insignificant negative finding is reported in South Africa. The positive significance of inflation means that when the rate of inflation rises, the profits of the firms grow because they have fully anticipated the rise and have adjusted their costs accordingly. The result is consistent with the findings of Demirgüç-Kunt et al. (2000), Albertazzi et al. (2009) and Hassan et al. (2019). The coefficient of environmental and social commitment of the firm (ESG) is

positive in both countries, but significant only in the South African economy. The result implies that the dedication of the firms in South Africa towards improving their corporate social responsibility has contributed immensely to their profitability and sustainability. The estimated coefficient of share price (SRP) is significant and positive in both economies, but the effect is more prominent in the case of South Africa. Finally, the validity of the instrument variables is examined by conducting the Sargan test and the second-order serial correlation test. The results indicate that the null hypothesis for the models is rejected, suggesting that the results are consistent and appropriate.

Overall, the results indicate that the impact of macro-economic variables and firm-specific factors on corporate financial and sustainability performance is more noticeable and significant in South Africa than in Nigeria. The findings of the paper indicate that the use of the ordinary least square (OLS) technique validates the results of the GMM specification as being consistent. There is evidence that the results of both techniques are similar, particularly in terms of significance and signs, but the coefficients of the GMM results are greater than the OLS results.

6.1   Study Implications

It is imperative to periodically assess the level of preparedness of countries toward the achievement of the Sustainable Development Goals (SDGs). One of the main purposes of the SDGs is the coordination of policies across different domains. Since the achievement of this goal relies solely on collective efforts from both the private and public sectors at the national level of every country, this study investigated the bi-directional impact of the private sector on the public sector to achieve this said goal. By implication, for SDGs to be achieved, all hands must be on deck. Both public and private sectors of all countries must work together because a healthy economy helps its companies to survive and to be sustainable. This is bi-directional because good performance from the corporate sector of a nation in turn improves the economy.

Therefore, for SDGs to be achieved, government must not slack on their part by ensuring a good working environment for companies to survive and to be sustainable. The results from this research revealed that SDGs achievement is a joint responsibility of all nations. For instance, GDP is positive and significant under the two countries. This implies that economic indicator companies-specific variables are important determinants of economic, social and environmental performance. However, while ESG is insignificant but positive under the Nigerian scenario, it is positive and significant under the South African context. The result implies that the dedication of the firms in South Africa towards improving their corporate social responsibility has contributed immensely to their profitability and sustainability.

Table 3 Panel OLS and GMM estimation results for South Africa

Variables	1		2		3	
	OLS	GMM	OLS	GMM	OLS	GMM
Dep. ROA$_{t-1}$		0.405**				
		(0.021)				
Dep.ROE$_{t-1}$				0.181***		
				(0.000)		
Dep.ESP$_{t-1}$						0.098***
						(0.013)
SGT	0.130**	0.558***	0.113***	0.705*	0.118**	0.501**
	(0.022)	(0.000)	(0.019)	(0.082)	(0.040)	(0.023)
NPM	0.433**	0.768***	0.078*	0.372***	0.049**	0.254***
	(0.059)	(0.016)	(0.103)	(0.010)	(0.021)	(0.000)
INF	-0.041	-0.391	-0.074	-0.457	-0.077	-0.659
	(0.125)	(0.148)	(0.219)	(0.115)	(0.404)	(0.224)
GDP	0.114**	0.996***	0.135*	0.914***	-0.227	0.657
	(0.028)	(0.000)	(0.081)	(0.000)	(0.473)	(0.036)
ESG	0.138**	0.210***	0.240***	0.271***	0.164 *	0.732**
	(0.042)	(0.005)	(0.010)	(0.000)	(0.082)	(0.021)
STF	-0.306	-0.408	-0.199	-0.265	-0.666	-1.242
	(0.124)	(0.147)	(0.247)	(0.182)	(0.117)	(0.183)
TAX	-0.257	-0.269	-0.029	-0.054	-0.483	-0.630
	(0.385)	(0.434)	(0.135)	(0.406)	(0.157)	(0.121)
EXC	-0.229	-0.839	-0.934	-1.029	-0.493	-0.538
	(0.116)	(0.140)	(0.156)	(0.188)	(0.287)	(0.132)
SRP	0.573	0.794	0.292	0.475	0.124	0.258
	(0.052)	(0.040)	(0.002)	(0.000)	(0.032)	(0.000)
R^2	0.745		0.805		0.930	
AR(2) test		0.346		0.538		0.259
Sargan test		18.757		11.557		20.060

Note: ***, ** and * indicate significance at 1%, 5% and 10% respectively.

Table 4. Panel OLS and GMM Estimation Results for Nigeria

Variables	1		2		3	
	OLS	GMM	OLS	GMM	OLS	GMM
$Dep.ROA_{t-1}$		0.125***				
		(0.004)				
$Dep.ROE_{t-1}$				0.429***		
				(0.000)		
$Dep.ESP_{t-1}$						0.105*
						(0.079)
SGT	0.130*	0.145**	0.215***	0.340***	0.422*	0.537***
	(0.098)	(0.013)	(0.013)	(0.002)	(0.069)	(0.008)
NPM	0.508**	0.573***	0.182	0.247***	0.254**	0.983***
	(0.036)	(0.018)	(0.014)	(0.000)	(0.030)	(0.010)
INF	0.010*	0.082**	0.220*	0.330***	0.516**	0.530***
	(0.084)	(0.059)	(0.105)	(0.003)	(0.024)	(0.009)
GDP	0.260***	0.853***	0.173***	0.261***	0.193**	0.336***
	(0.002)	(0.019)	(0.004)	(0.000)	(0.046)	(0.001)
ESG	0.101	0.633	0.535	0.528	0.487	1.087
	(0.357)	(0.119)	(0.369)	(0.114)	(0.201)	(0.148)
STF	-0.014**	-0.841***	-0.489**	-0.164***	-0.519*	-0.825***
	(0.039)	(0.016)	(0.024)	(0.005)	(0.080)	(0.003)
TAX	-0.178	-0.201	-0.242	-0.124	-0.574	-0.946
	(0.140)	(0.488)	(0.119)	(0.395)	(0.194)	(0.299)
EXC	-0.253*	-0.794**	-0.198**	-0.284**	-0.434***	-0.459***
	(0.085)	(0.056)	(0.048)	(0.020)	(0.000)	(0.000)
SRP	0.147**	0.390***	0.194*	0.485**	0.759*	0.806**
	(0.054)	(0.002)	(0.075)	(0.037)	(0.098)	(0.048)
R^2	0.584		0.947		0.605	
AR(2) test		0.508		0.248		0.184
Sargan test		17.401		16.553		24.949
Note: ***, ** and * indicate significance at 1%, 5% and 10% respectively						

Note: ***, ** and * indicate significance at 1%, 5% and 10% respectively

In Nigeria, the current situation of insecurity and corruption have a negative impact on the economic, social and environmental performance of those companies. Additionally, the results from STF and TAX are also varying, and the variation may be attributed to different conditions of the operationalisation of those companies from different countries. By implication, these are costs which could have a negative impact on companies' profitability in the short-run but enhance company value in the long-run.

Another reason that the achievement of this goal must be a joint effort is because its negative impact may be a global issue which may not spare a single country. It may also be a continental issue. For instance, the global warming effect and its impact may be general when it comes. Therefore, it must be a joint responsibility amongst all nations. At a country level, governments through their policies and laws, such as the green revolution that was neglected by the Nigerian government, corporate bodies and individuals through their implementation by preserving and restoring all activities in the planet such as a reduction of gas flaring, carbon emissions, poverty and eradicating corruption, as well as improvements in good governance, etc. must take the necessary steps. This can also be done by management at the firm level through transparency and accountability by making environmental and social provisions against negative impacts. In addition to the above, for this goal to be achieved, there must be apt reaction from all countries to re-strategize and align all activities towards its implementation. At a company level, there must be a total integration and implementation of sustainability principles into companies' daily operations. The implication of the results from the analysis and the finding implies that a rise in GDP has a major impact on the profitability and sustainability of firms in these economies. The estimated coefficient of SGT is significant and positive in the two economies. The finding implies that increased sales growth provides additional investment, financing and dividend opportunities for firms, increasing their profitability and value sustainability. Conversely, the STF is negative in the two countries, but significant only in Nigeria. This finding indicates that increases in staff costs have an impact on capital productivity, undermining company sustainability and profitability in the short-run, but which later turns to maximising company value in the long-run. Its significance from the Nigerian scenario means that staff cost is a very important determinant of sustainability performance, which should be regularly reviewed so that its negative impact will not lead to an outright failure of the company. The coefficient of corporate tax (TAX) is significant and negative for firms in South Africa, but insignificant for Nigeria. This result points out that corporate tax is one of the core determinants of corporate sustainability and financial performance in these countries, and that when corporate tax rates rise, a company's profit decreases over time. By implication, tax is a source of revenue generation for the government, and it will turn out to be a double loss if government fails to use it to create social amenities for sustainable growth. Furthermore, the results show that the exchange rate (EXC) is negatively significant in Nigeria, while an insignificant finding is reported in South Africa. This finding shows that the persistent depreciation of the Nigerian currency

relative to other currencies negatively affects the profitability and sustainability of firms in the country. By implication, this may lead to social and labour unrest in society because once their salaries cannot buy them food and savings, citizens will clamour for salary increases.

The NPM is positive and significant for both economies, implying that an increase in the net profit margin of the two markets will enhance corporate profitability and sustainability performance. The positive significance of inflation means that when the rate of inflation rises, the profits of the firms grow because they have fully anticipated the rise and have adjusted their costs accordingly in the Nigerian context; while in South Africa, the impact of inflation is still within control compared to the per capita income of an individual.

7. SUMMARY OF FINDINGS

Findings revealed a strong relationship between corporate sustainability performance and company performance and economic indicators and company performance. This was substantiated by the results from GDP, share price, sales growth and net profit margin, which revealed positive and significant results for both countries. However, other variables revealed a mixed result. For instance, while staff costs, exchange rate and inflation are negatively significant in the Nigerian context, they revealed negative and insignificant results under the South Africa context. Whilst Environmental and Social performance is positive and significant in South Africa, it is also positive but insignificant in Nigeria. Lastly, while corporate tax revealed a negative but significant result for South Africa, it was negative and insignificant in the Nigerian context.

8. CONCLUSION

The study empirically examined the impact of economic indicators, corporate sustainability performance and company performance in both South Africa and Nigeria, being the leading economies in Africa. This study covered part of important essential SDGs on economic, social, environmental variables, company-specific variables, data monitoring and accountability across countries and sectors. The study also increases one's understanding of sustainability practices in the world literature by linking the performance of companies to economic performance and to SDG achievement. It clears doubt on whether sustainability practices improve corporate performance and leads to sustainable economic performance. Overall, the results indicated that the impact of macro-economic variables and firm-specific factors on corporate financial and sustainability performance is more noticeable and significant in South Africa than in Nigeria. The findings of the paper indicate that the use of the ordinary least square (OLS) technique validates the results of the GMM specification as being consistent. There is evidence that the results of both techniques are similar, particularly in terms of significance and signs, but the coefficients of the GMM results are greater than the OLS

results. Regarding the readiness of the two countries under review towards the achievement of SDGs by 2030, Nigeria seems to not be getting it right at all compared to South Africa. If South Africa is proactive, the tendency that the country can meet the goal is over 30%, but the probability that Nigeria will meet this goal is less than 5% because of Nigeria's current situation. This forecast is substantiated by the 2020 SDG Global Ranking, which ranks South Africa 8th and Nigeria 43rd in Africa and globally, 110th and 160th respectively (SDG Global Ranking, 2020).

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