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Sustainability: The adoption of green economy and sustainable accounting principles by South African listed companies and lessons learnt

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A B S T R A C T

The globe is facing challenges such as wars, poverty, injustice, environmental degradation, inequality, and climate change. These challenges have unsettled man in his habitation on the globe thereby prompting the United Nations to engage all nations to unite in addressing these global challenges. The interaction of the United Nations with the global community led to the understanding that eradicating poverty must be coupled with strategies that promote economic growth whilst addressing a myriad of social needs as well as climate change and environmental issues. Amongst the strategies to tackle the global challenges indicated above are sustainable accounting and the green economy. As members of the global community, South African listed companies also have a role to play in combating sustainability challenges. This paper contributes to the literature on sustainability, particularly on the adoption of the green economy and sustainable accounting by listed companies in the South African context as well as lessons learned in the process.

Introduction

The earth is facing a myriad of challenges among them climate change, environmental degradation, poverty, wars, injustice, and inequality. These challenges have been on the rise during the past few decades. Many governments world over have made efforts to craft strategies as well as implementing them in tackling the challenges. International cooperation has also complemented these efforts by supporting the national governments in implementing their strategies. Notwithstanding all efforts, still there are growing concerns pertaining to economic and environmental developments in a number of countries (United Nations, 2022). Global scientists have indicated that these challenges have been escalated by prolonged current extended global energy, food, and financial crises as well as the transgression of numerous planetary and ecological controls by society (United Nations, 2022).

It is believed that the natural causes of these challenges on their own do not account for the substantial levels currently being experienced, however these have been compounded by the man-made causes (Gale, 2018). The realisation that human beings are accelerating some of these challenges prompted the United Nations to host an 'Earth Summit', United Nations Conference on Environment and Development (UNCED), focusing on the environment and development, in 1992 in Rio de Janeiro. The world could not just turn a blind eye to these challenges hence the United Nations hosted several other conferences as an initiative to engage the nations on sustainability issues (Gale, 2018). According to Keddie (2021), achieving sustainability is a responsibility for all members of the global community including individuals, companies and governments.

The all-embracing aim of the global community as from the 1992 UNCED conference was sustainable development which required different governments to craft their respective sustainable development national strategies that would incorporate policy actions defined in the Rio Declaration (United Nations, 2022). The term sustainable development was defined by the 1987 Bruntland

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Commission Report as "development that meets the needs of the present without compromising the ability of future generations to meet their own needs" (UNESCO, 2021). For this to be attained, there should be harmonisation of the three sustainable development interconnected and fundamental components critical for the welfare of individuals and communities namely; social inclusion, economic growth, and environmental protection (United Nations, 2020). This therefore requires global collaborative effort to build a sustainable future for the future generations as well as the planet earth.

It was in 2015 that the global community adopted the 17 SDGs to create a connection between the ecological and economic systems as well as strengthening the need for switching to more sustainable means of production and consumption (Söderholm, 2020). Furthermore, one of the outcomes of collaborative effort to seek ways to combat global sustainable challenges was an introduction of the 'green economy' concept meant to effectuate global cooperation and support for sustainable development (United Nations, 2022). The concept has gained notable global attention in recent years as a tool to combat financial crisis. Looking at industrial players and sustainability, Dzomonda and Fatoki (2020) argued that business activities for listed companies such as transport, heating of offices and mining contribute towards environmental pollution intensively. Hence this chapter sought to identify the sustainable accounting principles employed by South African listed companies as they adopt the green economy.

Theoretical and Conceptual Review

The concept of green economy

The green economy concept was first coined by some environmental economists in 1989 in a maiden report entitled 'Blueprint for a Green Economy' for the United Kingdom government (United Nations n.d.). The term was just used on the title of the report and was not referred to anywhere in the report, however the authors of the report later released continuations from the first report named "Blueprint 2: Greening the world economy and Blueprint 3: Measuring Sustainable Development", in 1991 and 1994 respectively. The theme of the initial report was that economics support the environmental policy, but the sequels that followed thereafter took this theme further to the global economic challenges such as climate change, environmental degradation, as well as loss of resources in the developing nations (United Nations, n.d.).

The green economy concept was resuscitated in 2008 during discussions on how policy could respond to the global challenges with the United Nations Environment Programme (UNEP) advocating 'green stimulus packages' as well as identifying particular areas of kick-starting the green economy (AtKisson, 2012). This was followed by the launching of green economy initiative by UNEP in the same year which provided support for those investing in green sectors of the economy and for greening those sectors that are environmentally unfriendly (United Nations, 2019). In 2009 a report titled "Global Green New Deal (GGND)" which put forward various policy actions meant to trigger economic recovery as well as improving global economic sustainability was written by one of the original authors of the Blueprint for a green economy after being assigned by the UNEP. According to United Nations Environment Management Group (UNEMG) (2011), the GGND required governments to significantly fund green sectors focusing specifically on economic recovery, eradicating poverty, and reducing carbon emissions as well as environmental degradation. In 2010 the green economy concept was also acknowledged by the UNEP Global Ministerial Environment Forum as being able to remarkably combat the global challenges and bring about economic development with several benefits to the global community (Atkisson, 2012).

Some of the international impetus to the green economy according to Nhamo and Pophiwa (2014) include: "the Vienna Convention for the Protection of the Ozone Layer; Montreal Protocol on Substances that Deplete the Ozone Layer; the UNFCCC, Kyoto Protocol; GHG Protocol; the ISO 14064; Copenhagen Accord; Green Stimulus Packages; the UNEP Green Economy Initiative; Cancun Agreements; and UN International Year of Sustainable Development and the COP17/CMP7 decisions".

Literature has indicated the lack of a universally agreed definition of green economy, consequently a number of definitions do exist. Agarwal (2020) defined green economy as "an economy that aims at reducing environmental risks and ecological scarcities, and one that aims for sustainable development without degrading the environment". However the UNEP provided a working definition which has been adopted by numerous governments and non-governmental organisations (Global Green Growth Institute, 2014). The UNEP (2011) defined green economy as "one that results in improved human well-being and social equity, while significantly reducing environmental risks and ecological scarcities. It is low carbon, resource efficient, and socially inclusive". According to United Nations (2022), this definition has been adduced in various recent reports among them the UNEMG and the Organisation for Economic Co-operation and Development (OECD). Consequently this paper adopts the UNEP (2011) working definition of green economy.

Following are the five principles on which the green economy is grounded: "The Wellbeing Principle; The Justice Principle; The Planetary Boundaries Principle; The Efficiency and Sufficiency Principle; and The Good Governance Principle", (Green Economy Coalition, 2020).

The wellbeing principle

The principle specifies that the green economy is people-oriented as it entitles everyone to generate and enjoy wealth. The wealth created in the green economy consists of human, social, physical and natural capitals. In this context the green economy gives priority to investment and access to the sustainable natural environment, knowledge, infrastructure, and education required for the prospering of all. This principle is anchored on collective action for social goods whilst it is rooted on individual choices.

The justice principle

This principle highlights the inclusivity and non-discriminatory nature of the green economy as it advances intra- and inter-generations equity as well as providing enough space for wildlife as well as wilderness.

The planetary boundaries principle

According to this principle, the green economy safeguards and restores nature as it invests in preserving, growing and rehabilitating biodiversity, soil, water, air, and natural ecosystems.

The efficiency and sufficiency principle

The green economy is crafted to uphold sustainable production and consumption as it situates prices, incentives and financial aid with fact-based costs to the community through implementation of systems where the polluter is made to pay and those who comply with the green economy requirements are rewarded.

The good governance principle

This principal highlights that the green economy is directed by institutions that are unified, accountable, as well as resilient with the ability to effectively and efficiently make decisions pertaining to local economies and management of natural systems. Good governance entails maintaining solid standards, procedures, as well as compliance systems.

According to the UNEP (2022), the green economy concept does not take the place of sustainable development, instead it generates a new centre of attention on the economy, employment and skills, capital, investment, infrastructure, and favourable social and environmental outcomes. A report by the UNEP and United Nations Conference on Trade and Development (UNCTAD) highlighted how green economy really matters to least developed countries; they are well placed to move towards the green economy presuming their reduced carbon profile and abundant natural capital assets (Global Green Growth Institute, 2014). Furthermore, Global Green Growth Institute (2014) identified energy access, sustainable urbanisation, forestry, waste, ecotourism, and agriculture as crucial sectors for greening economies.

Sustainable accounting principles

Practitioners and academics have used various terms such as environmental accounting, environmental reporting, social and environmental accounting, corporate social responsibility reporting, social accounting and non-financial reporting to refer to sustainable accounting (Ozili, 2021). However, sustainable accounting was defined by Keddie (2021) as "the practice of measuring, analyzing and reporting a company's social and environmental impact". Thomson (2007) also defined the concept as accounting that combines social, environmental, and economic dimensions of a firm's business activities. From these two definitions, sustainability accounting can be summed up as the branch of accounting that advances issues of the environment, social, and governance through disclosure of non-financial information about firms (Ozili, 2021). In the past firms would only disclose financial performance, but the growing demand for sustainable development introduced the need to also report on environmental, social and governance issues by firms.

Sustainability accounting embraces the different information needs by various stakeholders. For instance, while employees might be interested in information on a firm's wage inequality, communities might need to know the extent of pollution caused by a firm in their environment, and investors would be interested in the firm's financial performance as well as the environmental, social and governance issues (Keddie, 2021). From a survey, Borgstein (2017) listed some elements that make up the definition of sustainability reporting in weighted sequence of significance. Following are the elements: "communication of performance in sustainability; disclosure of sustainability to internal and external stakeholders; disclosure of sustainability to the external stakeholders; communication of progress in sustainability; disclosure of sustainability to internal stakeholders; measurement of performance against targets; acceptance of accountability; measurement of performance; communication of perception of sustainability; communication of the performance in sustainability in an appropriate unit of measurement; and measuring in an appropriate unit of measurement". According to Keddie (2021), it has been proven that those firms that uphold environmental, social and governance issues tend to have better financial performance and thereby attract investors more.

However, there is a challenge with measuring a firm's sustainability. The challenge stems from the fact that it is the firm that provides much of the information for stakeholders to gauge its sustainability and this information is not always audited unlike the financial statements that are vigorously audited. The fact that environmental, social and governance (ESG) disclosures are voluntary makes it very difficult to accurately gauge a firm's sustainability performance. Firms have a leeway to only disclose what they want and because of this position, some firms might say one thing and do another since there are no legal consequences for non-disclosure or impressive, unsubstantiated claims (Keddie, 2021). Ultimately it is difficult to reliably compare sustainability accounting information unlike financial information for firms.

According to Ozili (2021), sustainability accounting is set to achieve three objectives which are to: prepare accounts with respect to a firm's interactivity with the community and the environment; report financial and non-financial information pertaining to a firm's performance with regards to the community and the natural environment; and broaden traditional financial accounting to incorporate extensive monetized information about environmental, social and economic impacts which informs organisational decisions. According to Schaltegger and Burritt, (2010), some of the sustainability accounting tools that were developed for firms to achieve the sustainability objectives include corporate sustainability reporting (CSR), reporting on people, planet and profit (Triple-P), and the Global Reporting Initiative (GRI).

CSR is a mechanism that generates data and weighs progress as well as contribution by firms towards global sustainable development objectives. The reporting mechanism helps firms to weigh their achievement in all facets of sustainable development, the set goals, as well as supporting the move towards an all-inclusive green economy that is resource efficient and has low carbon (UN Environment Programme, 2022).

The concept of people-planet-profit (Triple-P) is also known as 'triple bottom line'. According to Lariviere and Smit (2022), the concept triple bottom line was first put forward by John Elkington in 1994. Elkington described the triple bottom line as a sustainability framework that assesses the social, environment and economic impact of a firm. This concept would introduce a new way of reporting where firms would extend their focus from only profits to incorporate people's lives and the well-being of the planet (Elkington, 2018). In his explanation, Elkington indicated that the bottom line relates to the profit/loss that is recorded on the bottom line of the profit and loss financial statement and triple bottom line points to two more bottom lines, social and natural environmental issues, which had to be thought out by managers. Therefore the three Ps, people, planet, and profits, represent societal, environmental and economic impact respectively (Kraaijenbrink, 2019).

The GRI Standard was instituted in 2000 aiming to standardise sustainability reporting for firms world over. It enables comparability of environmental and social reporting to financial reporting through developing reporting guidelines similar to those employed in business financial reporting (Ozili, 2021). The standard has been revised several times and, in the process, clearing most technical challenges and continually improving it (van der Lingen, 2020). Furthermore, the standard is innately in harmony with other reporting tools like the Greenhouse Gas Protocol and the ISO standards with the ensuing synergy promoting content accuracy and trustworthiness. The GRI is one of the most popular ways to report ESG information because in addition to financial information, this reporting approach covers various firm business operations hence address sustainability issues (Ozili, 2021). In doing so, it caters for multi-stakeholders in addition to the shareholders.

Besides the sustainability accounting tools discussed above, there are five principles that have been identified for reporting best practices and these are: integrating organizational values with sustainability report; an engagement plan; stakeholder diversity; outlawing discretionary disclosures; and keeping the report active till the next edition (van der Lingen, 2020). These principles are grounded on many years of research and discourse on good corporate social responsibility reporting practices enabling firms to remain sustainable as well as leveraging business for sustainable development.

Integrating organisational values with sustainability report

When sustainability reporting is properly done the generated perspectives can bring about new sustainability performance indicators and strategies to be incorporated into an already existing business model. Firms must integrate sustainability accounting and reporting into their working model as well as their business agenda.

An engagement plan

The plan carries the company vision, the criteria for stakeholder communication efforts as well as indicating the techniques to be employed to interact with the identified stakeholders. A well formulated engagement plan is necessary for comprehensible expectations, heightened trust, and stakeholder accountability as it builds core strength.

Stakeholder diversity

This is about including all expertise required to have the abundance of perspective that goes along with a broad spectrum of voices. The diversity can greatly improve a report to an impressive one. Inclusivity of stakeholders can receive the essential commitment required from firm employees to genuinely lift the level of responsibility and environmental care.

Outlawing discretionary disclosures

Once some bias is perceived in a sustainability report, it can destroy reputation and trust that took a number of years to build. It is important to note that the damage caused by discretionary disclosure covering other sustainability criteria at the expense of another criteria cannot be recompensed with provision of more information for other sustainability criteria. Notable biases include glaring omissions of reporting on ESG offenders along a firm's supply chain and failure to disclose a firm's economic value.

Keeping the report active until the release of the next edition

After completing the report, the firm should hold strategic meetings and conduct narrative activities to continue the discussion portrayed in the report. Continuing the discussion warrants the implementation of sustainability initiatives while providing direction for a future improved sustainability report.

Sustainable accounting has been advanced as a possible panacea to sustainability challenges among other sustainability practices, but its success remains to be seen since currently there are no legal implications if a company does not comply in the South African context.

Progress made by South African listed companies on green economy

The South African government has embraced the green economy concept and committed to participate towards the sustainability development. Consequently, the government created a conducive environment to allow the stakeholders that aimed at actively participating in sustainability processes to be able do so. This is evidenced by the signing of the Green Economy Accord on 17 November 2011 at South Africa's National Parliament in Cape Town as well as enacting other legislative instruments that advanced the concept (Mowzer, 2011; Nhamo & Pophiwa, 2014). According to Mowzer (2011), the accord was one of the most comprehensive agreements made globally and it formed a partnership to create thousands of jobs. The new jobs would be in various economic sectors including generation of energy, farming activities, environmental management, ecotourism, and manufacturing of products that minimise carbon emissions. Furthermore, as a part of the accord stakeholders made commitments towards attaining a greener economy in the country with parties pledging to cooperate in creating employment that improves lives of the poor. As stakeholders of the green economy accord, South African companies made specific commitments (Mowzer, 2011). They pledged to increase investment towards projects on existing production amenities that promote environmental performance as well as developing standard for energy efficiency and energy management plans. According to Nhamo and Pophiwa (2014), industry made the following green economy interventions: "The CDP and CDP Water; King III (Integrated Reporting); and Climate Change Criteria on Johannesburg Stock Exchange Social Responsibility Index (JSE SRI)".

The JSE listed companies in South Africa are varied and can be categorised into the following sectors: banking and assurance; forest and paper; mining and energy; industrial; and retailing and aviation. The JSE listed companies in these different sectors have made progress in sustainable accounting and green economy to varying extents. This paper focused on some examples of progress that has been made by the banking sector as well as the mining and energy sector.

The Banking Sector

The banking sector is a crucial sector of the economy because it provides funding to different business projects. It has to uphold sustainability principles in deciding which projects to fund or not to fund. Hence it becomes worth exploring to determine the progress made by the sector towards adopting sustainable accounting principles and the green economy. In the banking sector, Denhere (2022) outlined some progress made by the top 5 South African banking sustainability activities. The top five banks at the time the data was collected were Standard bank, Firstrand, ABSA, Nedbank, and Investec.

Standard bank group has participated in minimising environmental impacts. The bank has invested in greening its offices and branches throughout Africa and achieved a reduction in energy consumption by 21.7% in 2017. Standard bank also contributed in green solutions in asset finance where it engaged with its clients in the commercial agriculture, retail and small businesses.

The Firstrand Ltd among other things, took initiatives to manage its operations' environmental footprints. The group also conducted projects on renewable energy and energy-efficient in all its buildings. In 2017 the group also recorded a 23% increase in screening its lending transactions for environmental sustainability and risks.

ABSA Group Ltd contributed towards sustainability through managing carbon footprints, water, effluent and materials. The bank used paper from Forest Stewardship Council certified suppliers as well as campaigning for replacing plastic use with biodegradable material in its large offices. Regarding energy, ABSA uses the International Energy Agency and DEFRA guidance as well as applying the Greenhouse Gas Protocol to determine its energy consumption. With regards to water, the group is involved in controlling the invasive water alien species so as to promote the survival of indigenous water flora and fauna.

Nedbank: got involved in partnerships with communities and other organisations to collaborate in various sustainability programmes. The bank also employed sustainable products and services such as utility-scale renewable energy finance, the green savings bond and green buildings as well as a social environmental systems assessment tool.

The Investec Ltd contributed towards sustainability through financing and supporting those businesses that are involved in renewable energy. The group is also involved in the conservation of the environment for example through funding numerous biodiversity projects. Furthermore, Investec creates awareness and advance positive sustainable behaviour amongst communities.

Mining and energy sector

It is argued that the mining and energy sector have a lot of negative impacts on the environment (Haddaway, Cooke, Lesser, et al., 2019; Nhamo & Pophiwa, 2014; Montmasson-Clair, 2015). It is therefore crucial to explore the progress made by companies in this sector in adopting the green economy and sustainable reporting. Focus was put on the top five JSE listed mining companies as on 7th

January 2022. The top five mining companies listed on the JSE are: Anglo American Platinum Ltd; Kumba Iron Ore Ltd; Sibanye Stillwater Limited; Sasol Ltd; and Gold Fields Ltd. AngloGold Ashanti (Value today, 2022).

Anglo American Platinum Ltd: As indicated in the Anglo American (2019) integrated report, the company has developed a sustainable mining plan fundamental to their FutureSmart Mining approach meant to address most challenging ESG issues. The company intends to be a trusted corporate leader that aims to change relationship existing between the wider community and the mining industry by ensuring accountability to society, advocating for broader goals of the society, and advancing value chains that are ethical as well as supportive of human rights. Anglo American Ltd also promote thriving communities. Their vision regarding this is to create collective prosperity for their local communities enhanced by provision of excellent education and training to achieve SDGs targets for health. Above all, the company envisions maintaining a healthy environment through operating carbon-neutral mines. Carbon neutral mines promote biodiversity and conservation.

Kumba Iron Ore Ltd: Kumba Iron Ore Ltd is a subsidiary of Anglo American Platinum Ltd therefore the Kumba Iron Ore Ltd. (2019) integrated report indicated that the company sustainability strategy and practices are the same for the holding company.

Sibanye Stillwater Limited: The company has an environmental management team that executes the company's environmental initiatives under the guidance of globally recognised sustainability principles such as "ISO 14001:2015, the ICMM, the World Gold Council's RGMP and the United Nations Sustainable Development Goals". In the 2019 carbon disclosure project (CDP) submission, the company was awarded an 'A' rating for its climate change action. The company also employs the Science Based Targets Initiative (SBTi) to control emissions (Sibanye Stillwater Limited Integrated report 2019).

Sasol Ltd: Sasol understands the impact of their business on all aspects of sustainability and chose to commit to focus on four SDGs in their operations. They base their operations on a sustainability statement which says, "Advancing chemical and energy solutions that contribute to a thriving planet, society and enterprise." The four goals are: "Resilience in a lower-carbon future; Safe and enduring operations; Minimise their environmental footprint; and Growing shared value", (Sasol, integrated report, 2019).

Gold Fields Ltd: Gold Fields is committed to leadership in sustainable gold mining and aims to address the impact of the rapidly changing climate on their business, communities in which they operate as well as its employees. The company has an energy and carbon management strategy that steers energy efficiency initiatives as well as the use of low-carbon energy. The strategic initiatives include: "changing of fuel to low-carbon energy sources; assessment and installation of renewable energy options; re-negotiation of energy contracts with suppliers; investing in energy efficiency initiatives; and alignment of the company's guidelines and certifying operations to the ISO 50001 energy management system". The company has started including renewable energy in its energy supply mix. Furthermore the company has also finalised its Group water stewardship strategy with the following objectives: "becoming a water efficient operator, (reduce demand for freshwater from the catchment areas); to apply a proactive and risk-based approach to water management; and to work with stakeholders in the catchment areas around their mines in order to identify and realise collaborative water actions", (Gold Fields Climate Change Report, 2019).

Progress made by South African listed companies on sustainable accounting principles

It was observed that the response to a call for environmental sustainability undertaking regarding compliance and reporting by listed companies is slow and consequently some companies indulge in fraudulent activities as well as greenwashing to get away with environmental commitment (Dzomonda & Fatoki, 2020). Against this backdrop, it was noted that a few companies remain highly environmentally sustainable in comparison with those that are not committed to environmental sustainability (Kiron, Unruh, Kruschwitz, Reeves, Rubel & Felde, 2017). This lack of commitment is worrisome because the International Energy Agency (IEA) report (International Energy Agency (IEA), 2015) indicated the following statistics about sustainability between 2008 and 2013: "companies in manufacturing, construction, and energy emitted about 66.72% of total global carbon emissions whilst South Africa was top on the list of greenhouse emitters since close to 95% of its electricity is generated from coal".

Globally corporates have increased their attention to sustainable development issues (Jizi, 2017; Kitsikopoulos, Schwaibold & Taylor, 2018). In South Africa sustainability accounting was ushered in through the first King report issued in 1994 with three other King reports issued subsequently in 2002, 2009 and 2017 also advancing sustainability (IoDSA, 2009). These reports are not legislative hence non-legally binding but are merely principles and recommendations focusing on sustainability, leadership, and corporate citizenship. Out of the four King reports, King III is the one that advances the country's growth in integrated reporting whilst King IV has the capability of advancing the quality of integrated reporting (Borgstein, 2017). According to Borgstein, (2017) most of the JSE listed companies are in compliance with the King reports as 53% of them are listed on the SRI Index while 69.6% report on sustainability issues to both internal and external stakeholders (Borgstein, 2017). However, despite the initial drive on sustainability through King reports, and JSE initiatives, it was observed that a number of company targets lacked aspiration, were transient, and operational instead of being strategical (CDP, 2016a; Kitsikopoulus et al., 2018). There was also no progression in terms of reporting on risk and environmental impact (Kitsikopoulos et al., 2018; CDP, 2016a). Furthermore, of concern is that no substantial environmental degradation reduction has been recorded.

According to the Johannesburg Stock Exchange (2022), the JSE which lists companies in South Africa acknowledges the significance of incorporating the extended outlook into financial markets to lessen socio-economic and physical risks and to build towards increased financial stability and a low carbon economy. Consequently the stock exchange undertook to: guide markets on the significance of integrating ESG into investment considerations; avail services and tools for facilitating responsible investing redirecting capital flows towards increased sustainable development; facilitate engagement and advocacy with regards to sustainability; and explicitly consider sustainability throughout their value chain in the country's economy.

Being at the centre of the South African economy, the JSE provides service to both investors and issuers and consequently advocates for the importance of sustainability and ensures compliance to this through various ways such as regulation, issuer and investor engagement, and responsible investment (JSE, 2019). With regards to regulation the JSE has set a strong enabling framework in which listed companies should commit to the triple bottom line principles guided by the King Code on Corporate Governance on an apply or explain basis since 2002. According to JSE (2019), including the King into the listing requirements made the Johannesburg Stock Exchange the first exchange market world over to give a directive to listed companies to adopt integrated reporting or explain.

Regarding the issuer and investor engagement, the JSE established that the investment sector struggles with blending ESG issues into company valuation and analysis in order to provide a bigger picture of a company's capability to realise and preserve long-term value creation. To promote environmental sustainability in the investment sector, the JSE has taken the following initiatives; being an active participant in the global sustainability debate through the United Nations Principles for Responsible Investment as well as the Sustainable Stock Exchanges initiative; running an annual Socially Responsible Investing showcase and ESG investor briefing; and the introduction of topical seminars on sustainability issues guided by experts.

Under responsible investment initiative, the JSE in 2015 partnered with Financial Times Stock Exchange Russell in advancing its work on fostering ESG reporting by listed companies. This would succeed the earlier Socially Responsible Investment (SRI) Index, the JSE's bellwether sustainability product, that was started in 2004 (Kitsikopoulos et al., 2018). The initiative would expand the SRI Index and corporate achievements while promoting investors opportunities to blend ESG into investments. Furthermore, the JSE established a financial system that reflects sustainability of companies. The FTSE/JSE Responsible Investment Index replaced the SRI Index in December 2015. The Index is regularly reviewed against a set of ESG concerns and shows companies that have been actively participating in sustainability operations as well as having satisfied the FTSE and the JSE reporting requirements (JSE, 2022). For example, the authors took a look at the latest list of top 30 ESG performing JSE listed companies from different industries on the FTSE/JSE RII as of 5 January and 28 June 2021 JSE (2022). The list is reviewed regularly. Comparing these two lists, the first top six companies were the same on both lists. However from the seventh company on both lists, there were some changes in the order with some companies coming on the top and other companies that were top in January shifting positions. These changes in the lists is evidence that some companies exit while others get on board depending on their capability and commitment to meet the ESG ratings. For instance companies that made it into the top 30 as at 5 January 2021 and 28 June 2021 came from the following industries shown on Table 1.

Table 1: Top 30 listed on FTSE/JSE for January and June 2021

Industrial Sector	Top 30 as at 5 January 2021	Top 30 as at 28 June 2021
Banking/Finance	7	6
Mining	9	9
Pharmaceuticals	1	1
Consumer Industry	6	6
Paper & Packages	2	2
Telecommunications Services	2	1
Healthcare	1	1
Insurance	1	3
Energy	1	1
Total	30	30

Source: *Authors compilation (adopted from JSE, 2022)*

Table 1 shows that 1 company that was on the top 30 list in the Banking/Finance sector in January was dropped in June of the same year. The number of mining companies in the top 30 list remained the same in both January and June. The same applied for the companies in the Pharmaceuticals, Consumer Industry, Paper & Packages, Healthcare, and Energy. Some changes also occurred in the Telecommunications, and Insurance. These statistics show that there is some inconsistency in terms of the level of involvement in sustainability processes by companies, with some companies slackening and some improving. The general observation made was that the response to a call for environmental sustainability undertaking regarding compliance and reporting by listed companies is slow.

There are different expectations when it comes to sustainability reporting details. As stated in the JSE (2010, Section 13), companies belonging to the resources category are obliged to report on sustainability issues in more detail as compared to the financials category. This difference is a reflection of how much the activities of these companies impact on the environment. For access to sustainability reports by external stakeholders, most companies have moved their sustainability reports to the internet as pdf documents (Borgstein, 2017). This development allows external stakeholders to interrelate and interrogate the reported information.

On another note, literature indicates that progress by South African listed companies on sustainable accounting principles is being hampered by internal company issues. Brown, de Jong, and Levy (2009) together with Lozano (2013) indicated that resource and time limitations as well as reporting fatigue negatively affect reporting and management of company environmental issues. According to Kitsikopoulos et al. (2018), these company internal issues remain unresolved. This is a drawback in terms of all the efforts and initiatives made by different stakeholders to implement sustainability accounting.

Lessons learnt on the adoption of green economy and sustainable accounting principles in South Africa

There is need for legislation to drive sustainability

In addition to the government having policies that support the green economy and sustainable accounting, South Africa was the first nation in 2010 world over to make integrated reporting mandatory for all JSE listed companies (Roberts, 2017). Once sustainability processes become mandatory, companies are left with no option except to commit to the sustainability causes. As much as the mandatory integrated reporting significantly increased quality and quantity of sustainability information in the integrated reports, there are also negative developments regarding the contents of the reports. For example, it was observed that the reports were repetitive and had considerable components of rhetoric directed to stakeholders (ACCA, 2015). This rhetoric might not necessarily be an indication of real change in company behaviour and attitude but is just meant to portray a good standing of a company. Enactment of legislation might yield more results and promote progress in terms of attaining sustainability in the nation.

It is difficult to provide assurance for the integrated report

The potential for the integrated reporting to be assured remains an outstanding issue not only in South Africa but globally as well (ACCA, 2015). This is because there are no standards in place that lay down procedures for the process of assurance. However in the absence of standards and procedures to guide assurance of sustainability reporting, the International Integrated Reporting Committee (IIRC) came about with an integrated reporting framework. This framework aims to explain how a company can create value over time to financial capital providers. The framework does not expressly need formal assurance of the integrated report but instead requires that the report should just state that "the company's vigorous internal control and reporting systems, stakeholder engagement, internal audit and independent external assurance enhance the reliability of the integrated report" (International Framework (IR), 2021). Furthermore, the IIRC framework guides companies and assurance providers in assessing an integrated report as it provides reporting criteria. Therefore, unlike financial reporting, providing assurance for sustainability reporting by external auditors still remains a challenge. With financial reporting, the auditing process is clear and procedural because it is guided by clear standards and guidelines that are universal for all companies. This implies that as long as there are no clear-cut standards and procedures to guide assurance by external independent auditors, reliability of sustainability reports remains questionable.

Measuring a company's sustainability is a challenge because it is the company that determines what to report

The lack of standards to ensure uniformity in sustainability reporting leads to some companies cheating as they report on ESG issues. Dzomonda and Fatoki (2020) indicated that some companies indulge in fraudulent activities as they prepare their integrated reports. Some also indulge in greenwashing, a way of marketing their company giving the impression that their company is environmentally friendly. According to Keddie (2021), companies have the leeway to disclose what they want, consequently they might say one thing and do another because there are no legal consequences for non-disclosure or impressive, unsubstantiated claims. Furthermore, there is a challenge with measuring a firm's sustainability which stems from the fact that it is the firm that provides much of the information for stakeholders to gauge its sustainability and this information is not subjected to a robust audit unlike the financial statements. For as long as it is the company determining what to report about itself with regards to ESG issues it remains a challenge to accurately gauge a firm's sustainability performance. Ultimately it is difficult to reliably compare sustainability accounting information unlike financial information for firms.

There is a direct relationships between sustainability compliance and company performance

In the past there used to be a group of scholars who argued that in developing countries, sustainability commitment does not affect financial performance of a firm (Riillo, 2017). However, this was disputed by empirical research by Dzomonda and Fatoki (2020) who found out that there is a significant positive relationship between carbon emission reduction and earnings per share as well as share price (Dzomonda & Fatoki, 2020). Furthermore, the same research study has also found out that there is a positive relationship between sustainability compliance and earnings per share as well as share price. The empirical evidence to these findings is a source of motivation to adopt sustainability reporting. Therefore, companies need to adopt sustainability processes if they wish to improve their performance.

Company internal challenges slow down progress on sustainable accounting

Literature has indicated that internal company issues slow down the progress on sustainable accounting principles. The company internal issues according to Levy, Brown and de Jong, (2010) and Lozano (2013), include resource and time limitations as well as reporting fatigue. These are negatively affecting reporting and management of company environmental issues. According to Kitsikopoulos et al. (2018), these company internal issues remain unresolved, and this is a drawback in terms of all the efforts and initiatives made by different stakeholders to implement sustainability accounting. This suggests the need for additional funding to address the issue of resources, and continuous awareness of the importance of sustainability reporting to address the burnout issue.

Conclusion

Sustainability has become a contemporary issue to an extent that it has attracted a lot of the global community attention. The global community could not afford to ignore the challenges that resulted from sustainability issues. The challenges include poverty, wars, injustice, environmental degradation, inequality, and climate change. These challenges have made life very difficult for the global inhabitants thereby prompting the United Nations to engage all nations to unite in addressing these global challenges. The United Nations engagement of the global community led to the crafting of the Sustainable Development Goals which would be used as a blueprint to achieve a more sustainable future for humankind on earth. Furthermore, the interaction of the United Nations with the global community led to the understanding that eradicating poverty must be coupled with strategies that promote economic growth whilst addressing a myriad of social needs as well as climate change and environmental issues. Amongst the suggested strategies to promote economic growth as well as addressing the social needs were the green economy and sustainable accounting. These strategies had to be adopted by the listed companies because their activities have a great impact on the environment and consequently has a bearing on the lives of the community members in which these companies are operating. Different governments had to commit themselves to address sustainability issues in their nations.

The government of South Africa committed itself to the sustainability issues by providing the conducive landscape in terms of policy and regulations. The JSE also played a part in mandating its listed companies to adopt integrated reporting and provided different initiatives to advance that position. Most of the listed companies adopted the integrated reporting but the quality of reporting remains subjective because of lack of explicit standards and regulations that guide sustainability reporting. The companies remain with a choice to report what they want and there are no legally binding penalties for impressive reporting. As much as the JSE listed companies have adopted the sustainability reporting, the pace remains slow due to some company internal challenges. The adoption of sustainability accounting and green economy by JSE listed companies has brought to the fore the following lessons: the need for legislation to drive sustainability; the difficulty of providing assurance for the integrated report; the challenge of measuring a company's sustainability since it is the company that determines what to report; and company internal challenges slowing down progress on sustainable accounting.

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