

Michael Bamidele Fakoya (South Africa)

Economic growth, sustainability and sustainable development: challenges facing the BRICS economic nation of South Africa

Abstract

The growth in economic activities within the BRICS nations in the last few years has been little short of phenomenal. For these nations, the growth in their economies has brought them to the center stage of world economy. Despite wishing to encourage this growth in economic activities, this paper cautions that, within this vibrancy and economic emancipation, there is a real danger that the growth may well end up doing more harm than good in terms of sustainability and sustainable development. This paper works from the premises that (a) these economies typically adopt a set of conventional business approach to achieve their primary desire for economic growth and development; and (b) the use of conventional business approach are in fundamental conflict with sustainability and sustainable development practices. If these are true, then economic growth within the BRICS nations will be contributing to environmental degradation, which may erode the present euphoria of economic development thereby threatening the fundamental principles of sustainability and sustainable development in the long term. The paper seeks to provide a review of current sustainability and sustainable development agenda in South Africa that supports improvement to current conventional business approach through the lens of its King III Code on Sustainability Reporting initiatives. The paper concludes with a call for a more explicit standard of sustainability reporting that enables comparison within and between companies, and which integrates economic growth goals with sustainability and sustainable development practices.

Keywords: BRICS, sustainability, sustainable development, economic growth, conventional business approach, South Africa, King III, sustainability report.

JEL Classification: M40, O44.

Introduction

Just a few years ago, the mention of the acronym BRICS would have been inconceivable to researchers. Beyond the mention of emerging economies in scholarly literatures, the coming together of these emerging economies as a significant economic block that cut across continents was hitherto unimaginable. Accordingly, the change in world economy groupings such as BRICS in the last few years has been little short of phenomenal. As such, it would be easy to get swept along on a tide of enthusiasm that economic growth in this group appears to be of interest in world economic growth and emancipation.

Few years ago, many pundits have bemoaned the lack of shift in world economic growth from the west to developing nations. Now, this has changed but there are few aspects of this economic growth in which environmental and sustainability development concern is not explicitly recognized as important. The question is: should these emerging economies be bothered about environmental and sustainability issues or should they focus attention on reaping the reward of economic growth now and deal with its sustainability consequences later? The answer is laden with uncertainty. The main focus of this paper is to offer a cautionary note lest, in the euphoria of economic vibrancy and emancipation, issues surrounding sustainability and sustainable development are overlooked. Although, there has

been increasing research on the subject of the BRICS economic group, a critical appraisal of potential challenges to sustainable development issues vis-à-vis resource usage for economic development needs to be resolved before the group can claim unqualified success (May, 2008; Vijayakumar et al., 2010; and Ninga & Tucker, 2011).

The concern in this paper is that the bulk of economic development research within the BRICS economies, in relation to South Africa, is not strictly about sustainability and sustainable development but it is rather driven by an interest in the extent to which environmental issues are, and can be, reflected in conventional business practices (Armijo, 2007; Tamazian et al., 2009; Pao, 2010). Whilst economic growth and sustainable development issues may well be at extreme opposite positions, they are critically important to the success of this economic group. This means that it is reasonable to assume that all economic growth research that takes sustainability issues into account is motivated by a concern for the environment and, therefore, with a desire to improve the condition of our natural environment or in the least, to reduce the rate of damage caused to it. But it is uncertain that such an outcome will result if environmental concern is accorded importance to the well-established conventional business practices in this group. In essence, there is no evidence to suggest that current conventional business practices may well have been misplaced. This is because the efficacy of conventional business practices to preserve the natural environment through efficient resource usage is unreliable. As

such, if the bulk of research about the economic growth in this group is focused on conventional business practices and the application of sustainable development practices, only then will businesses be successful if it adopts sustainability posture and the conventional business practices claim to be in support for a safe natural environment and its enhancement. But, if conventional business practices in this group continue to encourage desecration of the natural environment, then it is necessary to conclude that current conventional business practices in the BRICS group and in South Africa could perhaps end up doing more harm than good to the environment. This is the thesis that this paper seeks to explore.

The paper is organized as follows. The first section discusses a brief outline of conventional business practices in relation to economic growth as well as in the context of sustainability and sustainable development. The second section provides a review of economic growth literature in an attempt to support the argument that illustrates the extent to which sustainability and sustainable development support conventional business practices. The final section involves an empirical study in South Africa's Johannesburg Stock Exchange (JSE) in relation to the King III Code on Sustainability Reporting. This is intended to act as an illustration of the dangers of assuming that conventional business approaches such as sustainability reporting can deliver sustainability and sustainable development. Although the links between listed companies' level of sustainability reporting compliance, conventional business practices and sustainable development is a complex issue, the paper attempts to explain this set of relationships and implications later in the study. The paper assumes that it would be ill-advised to state that sustainability issues were safe in the hands of companies.

1. Linking conventional business approach to economic growth with sustainability

Economic growth is often associated with increased business activities within the various economic sectors in an economy (De Clercq et al., 2010). These business activities are guided by underlying business conventions. Apparently, the objective of conventional business approach is to increase the return attributable to its shareholders. While it is the responsibility of managers of these organizations to increase the required return to its owners, their actions are shaped within prevailing economic circumstances and government regulations that include conventional business practices as well as sustainable development goals.

Conventional business practices negate global sustainable development agenda in terms of the pursuit of different goals. Although, an organization might claim to operate within the sustainability agenda

merely by following government regulations relating to environmental practice, yet such an organization might still be contributing negatively to the environmental equation by promoting business strategies that might eventually endanger both the shareholders and the society. Since sustainability issues have become increasingly significant for societal survival, and given that the government and society, as stakeholders, take an increasing interest in the risks and opportunities posed by the activities of conventional business practices, it has therefore become inevitable that organizations, especially within the rising BRICS economies, focus more on the implications of their individual actions.

For the concept of sustainability to be achieved by organizations within the BRICS economies, it has to be fully integrated into their operations and processes. Such sustainability and sustainable development issues that require integration include climate change, resource usage, supply chain, demographic change, waste and outsourcing, because most of these activities affect cross-border business interests. Similarly, it is important that government environmental regulations within these economic bloc is designed to be fair and proportionate, one that stimulates sustainability initiatives rather than stifle innovation.

There is a strong link between business strategy, economic growth, and sustainable development, and organizations are required to align their strategy and expansion with the sustainability of their operations, processes and products. In South Africa, while more and more organizations are realizing the importance of managing social and environmental impacts and responsibilities as a result of regulations and having to include sustainability issues on their strategic agenda, developing an all-embracing sustainability approach that cuts across the entire departments in the organization, is a sure way to limit negative environmental impact.

1.1. Improving conventional business approach through sustainable development practices for increased economic growth. The use of natural resources to advance human development and economic growth has been on the increase for decades, but at a growing environmental cost. The question is: will the world be able to sustain these economic growths indefinitely without running into resource constraints or despoiling the environment beyond repair? (Panayotou, 2003). This means that as extraction and utilization of resources continues unabated to satisfy the objective of profitability and economic growth through rapid industrialization, both resource depletion and waste generation accelerate. The failure to halt the depletion of these natural resources is referred to as "tragedy of commons" because these resources represent common goods

(Garrity, 2012). For this reason, it has become imperative to reverse this trend. Hence, the challenge to organizations is to find innovative approaches to do so by turning this responsibility into opportunity. Organizations need to widen their horizons as they search for opportunities to respond to both societal and environmental demands while attempting to fulfil their economic responsibility to their shareholders (Richardson, 2011). In responding to societal demands, organizations need to become innovative by focusing on the fundamental purpose of improving their products through sustainable production.

Essentially, a successful organization will both create shareholders value and conduct its operations in an environmentally responsible way. In effect, the objective of an organization that seeks to conduct its business in a sustainable way has to do more than just generating short-term shareholders value (Porter & Krame, 2011). The long-term objective should be to design an effective approach that ensures the survival of the organization such as reduction in unsustainable practices by maintaining a safe environment in which to do business. This is necessary because trust in organizations to fulfil their sustainability obligations is at its lowest ebb. Hence, it is high time for organizations within the BRICS economic bloc to demonstrate not only that they understand and share societal concerns, but that they are actually doing something about it.

Organizations need to show proof that they are tackling their negative environmental impact by pointing to specific sustainability activities as evidence that they are environmentally responsible as part of the sustainable development strategy, even if it is demanding. By engaging in such activities, an organization stands to gain increased profitability and significant environmental benefits to the society, as well as recognition for being an environmentally responsible organization. Consequently, dealing with such environmental issues makes good business sense. Invariably, organizations need to accept that part of their business bargain is the endeavour to engage in finding solutions to societal environmental challenges rather than dismissing such as responsibility of the society.

Making sustainability profitable by organizations implies making necessary changes to achieve sustainable business which provides an opportunity to create value for the organization. This means the ability of the organization to manage its sustainability issues and at the same time offering profitable benefits both in the short and long term. In the short-term, organizations can focus on revenue drives and reduction in operational costs; while in the long term the drive will be to reduce its environmental and regulatory risks throughout its operations and processes.

2. Method

This paper reviews the annual integrated reports of selected listed companies on the JSE to analyze the effect of the King III Sustainability Reporting initiative on companies' environmental sustainability performance while pursuing their economic growth agendas. While this study acknowledges the importance of all aspects of sustainability reporting, which encompasses social, economic, and environmental impacts of companies, this paper limited its review only to environmentally-related impact. The paper reviews current environmentally-related sustainability drives among South African companies that have brought improvements to current conventional business approach by complying with the King III code on sustainability reporting. The review covers about 25 companies that are listed on the JSE and the analyses are contained in Table 1 below. The review covered various South African businesses which include extractive, manufacturing, merchandising, and service sectors.

3. The King III code on sustainability reporting

In South Africa, efforts were made to encourage organizations to report on their sustainability practice as stipulated by the King III code on sustainability reporting. A brief reflection of the King III code on sustainability reporting is discussed below. The King III code on sustainability reporting in South Africa is a requirement by the Johannesburg Stock Exchange (JSE) for listed companies to respond to a combination of societal trends and the concerns of an unsettled international investor community (IOD, 2009). This sustainability reporting is part of a wider corporate governance code, a mechanism instituted as a response to growing concern over the security of investments in South Africa. Also, sustainability reporting has become a useful mechanism for communicating with local stakeholders who challenge businesses on matters pertaining to corporate social responsibility and other environmental issues (Ingenhoff & Sommer, 2011).

Annual sustainability reporting to stakeholders is meant to ensure that organizations are able to reasonably reduce societal conflict while demonstrating that policies, procedures, and environmental management systems are in place to help manage organizational and societal challenges (IOD, 2009; Pacheco et al., 2010). However, the sustainability reporting code does not address the application of its principles; this in turn means that individual organization will have to determine the approach that best suits its size and complexity. In fulfilling the requirements of the sustainability reporting initiative, some organizations have developed innovation which enables them to mainstream their corporate social responsibility schemes to achieve sustainable development.

Considering that the requirements of the King III code on sustainability reporting is a positive step to actualize the sustainable development agenda in South Africa, the effect of this required exercise on the society and the environment in relation to economic growth rather than on compliance is the focus of this study. The question here is whether those organizations are improving on integrating their conventional business approach by adopting sustainability practices to achieve economic growth. Consequently, the study made use of empirical evidence from secondary sources that have performed surveys on JSE listed organizations' compliance with the requirements of the sustainability reporting initiative. In addition, the study made use of this secondary report while trying to find a corresponding balance between the increased number of organizations complying with this requirement and the level of integration of sustainable development practices into conventional business approaches to achieve the economic growth witnessed in South Africa being a member of the BRICS economic group.

3.1. The effect of sustainability reporting in South Africa versus improvement to conventional business approaches. The numbers of South African organizations complying with the requirements of the King III code on sustainability reporting have increased considerably. But is this trend indicative of a corresponding improvement to aligning sustainable development practices into the conventional business approaches while promoting economic growth at the same time? The King III sustainability reporting initiative was meant to improve on the environmental and social performance of organizations in South Africa. But this initiative is stumbling. The first problem with this initiative is the lack of standardised approach to reporting on sustainability issues by these organizations. This lack of standard reporting system have led many of these organizations to devise their own approach to generate sustainability report to comply with legislation but not necessarily because they have any motivation to do so. Deriving from the lack of standard

is the misconception by the initiators that the preparation of a sustainability report will invariably result in improvements to environmental and social responsibilities of these organizations.

Although, many organizations in South Africa prepare annual sustainability reports, in contrast, there is no direct correlation between these reports and improvements to sustainable practices. Organizations continue to do business as usual, using tested conventional business approaches to meet increasing demands of clients internationally. Despite incentives to encourage and promote sustainability disclosure and reporting, the lack of skills of necessary knowledge and understanding of sustainability issues to be captured in the reports remains a great threat to achieve the objective of its design. In essence, organizations are unsure whether an investment in sustainability practices will translate into economic benefit for them. Hence, many of these organizations have resorted to sponsorship of community events and donations to social activities as a measure of being socially responsible. One useful step in promoting sustainability practices among these organizations is the identification of possible economic benefits associated with its implementation. Such economic benefits will include cost savings through cleaner production systems and less carbon emissions which affect both the society and the organization as well. Improved environmental performance and organizational profitability depend on the responsible use of scarce resources available by the organization such as water, energy, and input materials, as well as the ability to determine unsustainable and wasteful-producing business practices. As such, organizations are compelled to adopt sustainable practices into the conventional business approaches while driving economic growth, sustainable development, and profitability at the same time. Table 1 below presents a summary of the effects of the King III sustainability reporting on companies' sustainability performance in South Africa in the 2012 financial year.

Table 1. Effect of the King III sustainability reporting/global reporting on South African companies for 2012

Companies	Identified sustainability issue	Action taken	Effect on sustainability and sustainable development practices
3M	Volatile air emissions; high waste generation; high energy consumption; and high carbon emissions	Reduce volatile air emissions (voc) 15% indexed to net sales from 2010 base year; reduce waste 10% indexed to net sales from 2010 base year; improve energy efficiency (energy use) 25% indexed to net sales from 2005 base year; reduce greenhouse gas (GHG) emissions 5% indexed to net sales from 2006 base year; develop water conservation plans for 3M sites located in water stressed or hyper stressed areas as defined by the mean annual relative water stress index maintained by the World Business Council for Sustainable Development (WBCSD)	As at 2012, the company achieved 12% VOC reduction indexed to net sales from 2010 base year; 9.0% waste reduction indexed to net sales from 2010 base year; 29% reduction of energy use indexed to net sales from 2005 base year; 55% reduction of ghg emissions indexed to net sales from 2006 base year; Water Conservation Plans have been developed for all sites identified as being in water stressed/hyper stressed areas in 2012

Table 1 (cont.). Effect of the King III sustainability reporting/global reporting on South African companies for 2012

Companies	Identified sustainability issue	Action taken	Effect on sustainability and sustainable development practices
Illovo Sugar	Risks associated with air emissions, effluent and waste not being in compliance with changing environmental legislation. Legal sanction and reputational damage due to non-compliance with regulations and licences; high energy and electricity consumption; risk of continuity of water supply due to increased water demand, land expansions and manufacturing capacity; potential climate change impacts on future water security	Implementation of treatment measures for effluent and solid waste use of renewable biomass as primary energy source reduces overall carbon footprint, improves reputation and contributes towards climate change mitigation. compliance with local environmental laws; improvement of co-generation capacity and efficiencies from renewable fuel sources, allowing for power self-sufficiency, reducing the consumption of primary energy; strategy for more effective water management and measurement to reduce water use; irrigation systems investment	Improved irrigation efficiency and scheduling; export of excess power to the national grid
Sappi Southern Africa	Carbon mitigating effect; fossil fuel emissions	Reducing transportation generated emission through the replacement of travelling for meetings with video and teleconferencing, as well as through its SMART vehicle fleet	The percentage of renewable energy increased in 2012 due to Saiccor Mill decreasing its usage of fossil fuel by increasing the black liquor solids content and improved washing efficiencies. Ngodwana Mill also increased its chemical recovery furnace steam production by increasing the black liquor solids concentration and by burning more bark in the pulverised coal-fired boiler
Aspen	High risk of air contamination with raw materials particles and exposure of people to harmful substance	Installed sophisticated air-handling systems at all its manufacturing sites to filter, scrub and purify the air prior to atmospheric emission	As a result, the levels of harmful air emissions are negligible and therefore not material to Aspen's business
SAB Ltd	The risk posed by water scarcity and carbon footprint	Use of water efficiently by setting a target of reducing water use per hectolitre of lager by 25% between 2008 and 2015; aim to halve the fossil fuel emissions by 2020 from on-site energy use per hectolitre of lager compared with 2008, possibly aiming to use alternative and renewable sources of energy which produce fewer emissions than fossil fuels	In 2012, its global procurement business, Trinity, joined the Carbon Disclosure Project Supply Chain programme; SAB uses what it tagged the '5Rs' (i.e., Protect, Reduce, Reuse, Recycle and Redistribute) to manage water upstream, downstream and within its operations; its average water consumption per hectolitre of lager produced fell to 4.0 hl/hl, 5% less than 2011
Rainbow Chicken	Natural resource depletion; air pollution and odours from processing plants and mills; poultry disease outbreaks on farms; waste disposal; fires; ground and surface water pollution; hazardous chemical, diesel and gas spillage; energy consumption, fuel consumption; water shortages and water quality	An environmental policy providing the framework for setting and reviewing environmental objectives and targets; environmental management programmes and key performance indicators that are monitored regularly; effective bio-security and security procedures at all operations; supply agreements with registered waste companies for the safe disposal of diseased birds and contaminated or hazardous waste; fire breaks maintained on all farming operations; bund walls around all diesel tanks; chemical storerooms allowing for segregation of hazardous chemicals; electronic fuel filling and monitoring systems, computerised vehicle routing system to route deliveries in the most efficient manner and technologically advanced tracking system to monitor the adherence to the most efficient planned route; regular water quality assessments and proactive management to ensure sufficient and reliable water supply; effective training programmes; effective health and safety procedures	Up to 15% of recycled water from the three major primary processing plants is used as grey water for cleaning and the balance is discharged to municipal effluent plants for further recycling. Recycled water is only used once the Biological Oxygen Demand (BOD) and Chemical Oxygen Demand (COD) levels are reduced to acceptable standards; with implementation of a more efficient carton design, the group has saved a further 41 tons of carton board (equivalent to 42 tons CO ₂ e) throughout the supply chain; power factor correction modules directly reduce electricity consumption by 8% to 20% and indirectly reduce maintenance on motors, lights and other electrical equipment; the fully controllable LED lighting system ensures that the correct lux levels are maintained throughout poultry houses, saving 900 MWh per year in the 22 houses that were retrofitted with LED lighting systems
Sasol	Safety; transport incidence; GHG emission intensity	Plans effective safety improvements; efficient and effective management of transportation related risk; pursuing a number of energy efficiency projects to deliver a further reduction in annual GHG emissions	Achieved an RCR (recorded case rate) per 200 000 hours worked; achieved 30% reduction over 5 years based on the 2009 actual transport indicator; total carbon dioxide emissions reduced by 12 million tons between 2004 and 2012 in its South African operations

Table 1 (cont.). Effect of the King III sustainability reporting/global reporting on South African companies for 2012

Companies	Identified sustainability issue	Action taken	Effect on sustainability and sustainable development practices
Spar	Quantifying and setting reduction targets for fuel and energy usage; improving recycling initiatives to further reduce waste; providing leadership to SPAR retailers in regard to environmental issues, with the major focus being placed in the areas of energy consumption and waste management; and the group is conscious of the negative impact of food packaging on the environment and will work closely with its suppliers in an attempt to reduce the impact of packaging on the environment; and reduce carbon emissions	Both the Eastern Cape and the Western Cape distribution centers make use of a 5% ratio of bio-diesel. The Western Cape distribution center used 65 187 litres of bio-diesel and the Eastern Cape distribution centre 4 500 litres; all the distribution centers have in place a variety of energy saving measures, ranging from efficient low energy fittings and bulbs to timers on all electrical equipment; water saving initiatives have been implemented in two of the distribution centres. These initiatives are aimed at introducing a truck wash recycling system	Effect not provided
Absa Bank	Carbon footprint; indirect environmental impact through lending	A target of a 12,5% reduction in absolute carbon emissions by 2013 against 2010 as the base year and to offset the remainder; reduce environmental footprint in buildings; ensure energy efficiency gains lead to a decrease in energy costs; and ensure that optimization measures reduce maintenance costs when implemented	Significant improvement in Carbon Disclosure Project during 2012, indicating our continued maturity in carbon management; carbon footprint dropped 22% in 2012 compared with the 2010 baseline year (almost double our 2013 target). Our intensity measured against total employees decreased 10.6% to 10.1 tonnes CO ₂ per employee from 11.3 in 2010
DAWN	Carbon footprint; energy; waste, water including groundwater	Reduction in carbon footprint; water usage; and energy consumption	Electricity consumption increased by 1 913 496 kWh from 55 689 004 kWh to 57 602 500 kWh; natural gas usage decreased by 323 234 m ³ from 4 624 475 m ³ to 4 301 241 m ³ ; petrol consumption decreased by 388 156 litres from 1 626 285 litres to 1 238 129 litres; diesel consumption decreased by 521 998 litres from 3 960 495 litres to 3 438 497 litres; total water usage decreased by 59 345 kilolitres from 210 934 kilolitres to 151 589 kilolitres; while groundwater extracted by volume increased by 4 066 kilolitres from 1 100 kilolitres to 5 166 kilolitres; and waste volume disposed increased by 1 391 kilolitres from 6 624 kilolitres to 8 015 kilolitres.
African Rainbow Minerals	High water and energy consumption; inadequate environmental data collection	Efficient management of resources including water and energy; improving our environmental data collection, monitoring and reporting systems	Electricity consumption on a 100% basis increased 4% to 2 658 megawatt hours (MWh) (F2011: 2 550 MWh); Water withdrawal on a 100% basis increased 19% to 18.0 million m ³ in F2012 (F2011: 15.1 million m ³); focus was on improving data collection, specifically regarding energy which has enhanced our carbon footprint monitoring and reporting
Procter & Gamble	High energy consumption, carbon emission, waste disposal, and water consumption	Reduce energy, waste, carbon emissions and water by 20%	Not identified
Woolworths Holdings Ltd	High water usage, energy consumption, and waste generation	Minimize water consumption on farms by installing water measuring systems in stores to help reduce water consumption	Achieved 27% energy reduction based on company's benchmark; reduce water consumption from 732 742 kilolitres to 650 752 kilolitres
Royal Bafokeng Platinum	High carbon emissions, energy consumption	Reduce electricity consumption and related carbon emission by 5% in 2012	Carbon emission increased by 8% from 312 106 tonnes to 337 709 tonnes between 2011 and 2012; while energy consumption related emissions increased by from 1 093 890 tonnes to 1 096 989 tonnes
South African Airways	Waste, water, carbon emission, energy	Efficient flight operations, energy efficiency reduction of 1.5% per year with a target year of 2020 and water efficiency, improving recycling with no specific target had been set. Reduction in carbon emission of 50% by 2050	No detail about specific achievement
BHP Billiton	GHG emissions; waste reduction; land rehabilitation	Aggregate group target of 6% reduction in greenhouse gas (GHG) emissions per unit of production; aggregate group target of a 13% reduction in carbon-based energy per unit of production; aggregate group target of a 10% improvement in the ratio of water recycled/reused to high-quality water consumed; aggregate group target of a 10% improvement in the land rehabilitation index	A 16% reduction in GHG energy intensity compared with the FY2006 base year; a 15% reduction in energy intensity compared with the FY2006 base year; a 1% decline on the land rehabilitation index compared with the FY2007 base year

Table 1 (cont.). Effect of the King III sustainability reporting/global reporting on South African companies for 2012

Companies	Identified sustainability issue	Action taken	Effect on sustainability and sustainable development practices
PetroSA	Identified seven general environmental incident but not measured based on King III sustainability reporting; and encountered 15 incidents	Not defined	Not applicable
Murray and Roberts	Resource efficiency and carbon footprint; emissions, releases and waste management	Determine material environmental issues through a combination of benchmarking and internal engagement with operating entities; define an appropriate governance structure for environmental risk and reporting, aligned to health and safety; conduct environmental status reviews at selected operations to capture and report on the most material environmental risks; develop a consistent environmental risk management framework and process; develop an environmental data reporting standard to ensure consistent and complete reporting of environmental data across the businesses; build capacity on environmental data reporting across the operating entities	Environmental status reviews conducted at 16 sites; energy usage in MWh increased to 1 717 120 MWh in 2012 against 1 319 329 MWh in 2011; carbon footprint increased to 565 034 tonnes in 2012 against 515 506 tonnes in 2011; ISO 14001 implementation (percentage coverage) 40% in 2012 and ±30% in 2011
Mediclinic	The main categories of environmental impacts being managed are the utilization of resources and waste management, which include electricity, water, gases, paper, healthcare risk waste, hazardous waste and normal waste. These have a direct effect on the carbon emissions of the group. Excessive use and inefficient installations were highlighted; physical risks include access to facilities and interruptions in service resulting from risks of water shortage, electricity load shedding or incidents of extreme weather conditions; regulatory risks include operational costs of running of facilities could be affected by risks relating primarily to energy supply, with 83% of our carbon emissions from electricity purchased	Purchasing of advanced measuring and monitoring equipment to verify energy savings; a carbon emission reduction target in respect of scope 2 emissions of 3.09% was set for the electricity consumption of Mediclinic Southern Africa's 52 hospitals for the reporting period. This reduction target is in line with the carbon emission reduction target of 34% by 2020 agreed on by South African government after COP15 at Copenhagen; Environmental awareness entrenched in all business activities; Compiling Waste Management Plans at hospitals; Use of the Group's CURA risk management software to capture environmental aspect registers to be implemented at 39 hospitals during year ahead	An energy saving of 1.18% tCO ₂ e against the set reduction target of 3.09% for the electricity consumption of the group's 52 hospitals was achieved year-on-year; the reduction of normal waste is achieved through recycling and waste separation programmes, which include optimal use of paper and printers, and staff awareness training in compliance with ISO 14001:2004; participated in the Carbon Disclosure Project 2011; implementation of a Sustainable Compliance Culture Course at an additional 12 hospitals to enhance the preventions and minimising of impacts. At the end of the next financial year, 24 hospitals will have completed the course; fifty-one ISO 14001-trained hospitals with a generic aspect register with baseline including healthcare risk waste, water, electricity, paper, hazardous waste, gases and climate change; waste recycling programmes in progress at all ISO-trained hospitals; implementation of ISO 14001 hazardous waste management/minimisation processes at all hospitals; various energy and resource saving projects to counter excessive use and inefficient installations to be implemented; new user-friendly CURA aspect register in progress
Unilever	Reducing the use of water by consumers; reducing our packaging footprint; sustainable sourcing of our agricultural raw materials	To reduce the GHG impact of the laundry process the company are concentrating liquids and compacting powders with the aim of reducing GHG per wash by 15% by the end of 2012. We are also encouraging consumers to wash at lower temperatures and use the correct dosage with the aim of impacting 70% of machine washes by 2020	Effects not highlighted in the report
Clicks	High energy consumption; carbon emissions; and high waste generation	No clear targets were set	The focus on distribution network optimization has resulted in a reduction in the kilometres travelled by 17% for Clicks and 5% for United Pharmaceutical Distributors (UPD). A total of 1 493 tons of waste material has been recycled through the distribution centers and head office; a reduction of 4.3% on carbon emissions or 116 020 tons in 2012 against 120 048 tons in 2011
PPC	Challenging and changing environmental framework; energy (electricity, coal, diesel); the cement industry requires significant thermal and electrical energy; carbon footprint due to the chemistry and energy requirements of the cement manufacturing process, significant quantities of carbon dioxide (CO ₂) are generated; water management; cleaner production	The price, quality, sustainable supply and optimal use of both energy types as key to successful operation; the potential implementation of a carbon tax will have financial implications for the cement and lime industry; efficient and responsible use of scarce water resources; drive cleaner production opportunities in our cement, lime and aggregate businesses	Mature environmental management systems at all sites. All its cement operations in South Africa are ISO 14001 certified; PPC is replacing old technology at its Riebeeck plant in the Western Cape with modern energy-efficient and environmentally compliant equipment. The environmental impact assessment process has been completed with a positive record of decision issued by the provincial Department of Environmental Affairs and Development Planning in September 2012.

Table 1 (cont.). Effect of the King III sustainability reporting/global reporting on South African companies for 2012

Companies	Identified sustainability issue	Action taken	Effect on sustainability and sustainable development practices
PPC			Its Grassridge project was granted preferred-bidder status in round two of the renewable energy procurement programme. This is PPC's private wind farm, a project where 60MW will be generated into the renewable energy programme of the DoE and 21MW will be generated for the private use of PPC; continued focus on energy management and implementation of a wide spectrum of energy efficient projects; water-use optimisation projects implemented at each site; substituting fossil fuel and natural resources with products from other industries, for example fly ash from the power sector
EOH	Issues with waste management; energy and greenhouse gas emissions	Avoidance, minimization, management and disposal of general and hazardous waste from EOH operations; improve energy efficiency. Promote renewable energy usage	All hazardous IT waste is responsibly disposed of or recycled. Paper waste is recycled. Processes are still required to sort, monitor and recycle general waste; develop an energy data collection and monitoring system
Tongaat Hulet	Unsafe working environment and inadequate safety awareness leading to injury; excessive use of water in production; increase in hazardous waste	Instilling a safety-focused culture; striving to improve water and resource use efficiency	Reduction in general and scrap metal waste by 6 286 tons and 1 233 tons respectively
Eskom	High carbon footprint from coal powered plants, gaseous and sulphur emissions, and water pollution	Design of more technologically efficient coal power plants at Medupi and Kusile	Lessons learnt from past environmental legal contraventions were shared with employees and contractors, contributing to a decrease in the number of environmental contraventions, from 21 for the six months to September 2011 to 12 for the six months to September 2012

Source: Data were obtained from individual companies' Integrated Annual Reports for 2012 through their websites.

Discussion and conclusion

The fundamental conflict between the use of conventional business approach with sustainability and sustainable development practices can be bridged. This conflict has been exacerbated in South Africa by its inclusion among the BRICS economic bloc. While there were economic benefits in terms of growth and business emancipation, unsustainable conventional business practices have given rise to environmental degradation. The Southern African Institute of Directors (IOD) has taken a significant step to align these two conflicting approaches to ensure improvements to the environment through the King III Sustainability Reporting initiative whereby companies report on their sustainability and environmental impact to their stakeholders on an annual basis. Positive progress have

been made by JSE listed companies to comply with the requirements of King III on sustainability reporting, however, the reports are yet to translate into the culture of sustainability practice envisaged by the initiators of the King III Sustainability reporting agenda. The paper suggests that, while the King III sustainability reporting by companies helps them to satisfy legal requirements, attempts should be made to translate identified sustainability issues to improve business approaches and environmental practices. Further research is encouraged into individual companies to ascertain the level of the effect of such sustainability reporting practices at improving and aligning conventional business approaches with sustainability practices in the light of economic growth and emancipation of the BRICS economic agenda.

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