

Voluntary and Mandatory Company Sustainability Reporting: A Comparison of Approaches

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Abstract

This paper investigates the adoption of an Enterprise Architecture (EA) for improving the effectiveness of sustainability reporting through facilitating business-IT alignment and the incorporation of sustainability management and reporting into the strategy of a company. The paper highlights significant differences between voluntary and mandatory reporting of companies in South Africa with regards to integrating sustainability practices into their organization. In particular, the approach these companies take with regards to the use of EA for the support of strategic sustainability thinking is investigated. A survey of 28 South African companies was conducted to determine the integration of sustainability and environmental information and reporting into a company's EA. The results reveal an imbalance in the reporting focus. Economic reporting is still the most dominant type of reporting compared with environmental and social reporting, whilst companies reporting voluntarily seem to be more progressed in terms of integrating environmental information into their EA.

1. Introduction

Companies play a key role in sustainable development since their daily operations have a direct impact on the environment and society. Sustainable development is defined as *developments that gratify the needs of the current generation without jeopardising future generations' ability to satisfy their own needs* [1]. In order to monitor and communicate the sustainability measures a widely used instrument, the sustainability report is used. The Global Reporting Initiative (GRI) states that a sustainability report *"helps organizations to set goals, measure performance and manage change in order to make their operations more sustainable"* [2]. The sustainability report should include positive and negative information on the company's impact regarding economic, environmental and social matters. An increasing number of companies worldwide are reporting on their sustainability performance. According to the KPMG [3] report, 95% of the top 250 companies of the Fortune Global 500 list are publishing sustainability reports.

Although several companies are voluntarily reporting on sustainability, there is an increasing trend of mandatory reporting. Governments worldwide are increasingly obligating their companies to publish sustainability reports and this is supported by the corporate world [4]. The 2013 CEO Study on Sustainability of the United Nations Global Compact indicates that companies would welcome the intervention of governments to align sustainability on national as well as international levels. In South Africa, this is the present situation since companies listed on the Johannesburg Stock Exchange (JSE) are legally obligated to report on their sustainability performance and *"..the main drivers of sustainability reporting are corporate governance requirement, the Johannesburg Stock Exchange ... and the Socially Responsible Investment Index (SRI Index)"* [5]. As a result, South Africa is referred to as having a leading role in sustainability reporting in Africa.

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In order for companies to achieve their environmental sustainability objectives effectively, sustainable thinking needs to be established and companies must align these objectives with their organizational objectives [7, 10]. Sustainability reporting should “*fit into a broader process for setting organizational strategy, implementing action plans, and assessing outcomes*” [11]. The IRAS report [12] shows that whilst the number of organizations doing sustainability reporting is increasing, and several specialised software tools for sustainability reporting are available, they are not widely used by companies or are not used to their full potential. Some companies still rely on simple office software, whilst other companies which are using more advanced software and systems often do not align these with the main tools and processes of the company [7]. In order to overcome these misalignment problems, it is important to connect sustainability to the different levels of an organization (strategic, operational and technological), in order to follow a serious sustainability approach [10]. This can be achieved by the adoption of Enterprise Architecture (EA) in an organization which supports decision making and facilitates IT-business alignment [13, 14].

Several studies have addressed problems and solutions for sustainability reporting [15, 16]. However, research related to the differences in approaches between mandatorily and voluntarily reporting organizations is limited. This paper addresses this gap and investigates organizations in South Africa who are either reporting voluntary or mandatory. In addition the use of EA to support sustainability reporting is explored. The paper is structured as follows. Section 2 explores the differences between voluntary and mandatory reporting. The third section discusses the relevance of EA in connection to a company’s sustainability management. In Section 4, the research methodology followed in this study is explained. The analysis of the results is presented in Section 5 and conclusions and recommendations are finally presented (Section 6).

2. Voluntary and mandatory sustainability reporting

Voluntary reporting implies that organizations source and publish data on their sustainability performance of their own accord. Supporters of the voluntary reporting approach argue that mandatory reporting is too inflexible and complex due to the variety of standards and that one size does not fit all companies (Table 1). Voluntary reporting is found to be more flexible; however organisations often have insufficient resources available and do not adhere to the required reporting standards. Other disadvantages of mandatory reporting cited are the high administration costs and the lack of innovation and creativity [17].

	Advantages	Disadvantages
Voluntary Reporting	Flexibility Proximity Compliance Collective interest of industry	Insufficient resources Under-enforcement Conflicts of interest Inadequate sanctions
Mandatory Reporting	Standardization and comparability Transparency and credibility to stakeholders Changing the corporate culture Legal certainty Cost savings	High admin costs Lack of innovation and creativity One size does not fit all Inflexibility Complexity

Table 1: Advantages and disadvantages of voluntary and mandatory sustainability reporting.

The mandatory reporting concept provides regulations on the sustainability reporting process itself as well as on the transparency and comparability of the reports. Supporters of mandatory reporting are, amongst others, non-governmental organizations (NGOs), which doubt that all companies report correctly when applying a voluntary reporting concept. This argument is supported by incidents of green washing such as the controversy Nestlé was involved in with its candy bar “KitKat” and the problematic topic of palm oil use [18]. On the other hand mandatory reporting has several advantages such as increased credibility to stakeholders, standardization and comparability.

The arguments are mainly based on the results of the research study carried out with the collaboration of the United Nations Environment Programme (UNEP), GRI, KPMG and other organizations [5].

One popular and globally accepted voluntary reporting standard is the GRI guideline [2]. In Sweden, state-owned companies are required to report on sustainability according to the GRI [19]. In South Africa, companies listed at the JSE are required to report using the King III Act, which also suggests using the GRI guideline. The GRI guideline is based on a multi-stakeholder process, meaning that the standard is reviewed in collaboration with different stakeholders (such as the reporting companies, the employees, NGOs and investors). One of the advantages of the GRI is that it is applicable to different kinds and sizes of organizations [2]. Due to the guideline’s nature as a voluntary framework, it can invalidate the disadvantages of mandatory reporting and the line between both reporting forms can become blurred.

An UNCTAD review found that 87 % of 75 companies surveyed made some sustainability disclosure and concluded that South Africa has a leading role in sustainability reporting [5]. This leading role in reporting could be attributed to the standards and laws which were adopted in South Africa, as the importance of responsibility and transparency increased (Table 2). As a result the *“measurement and reporting on specifically social transformation issues (for example, black economic empowerment and employment equity) has become entrenched in legislation”* [5].

Mandatory Standards	Voluntary Standards
1998: Employment Equity Act	1994: King Report on Corporate Governance
1999: The Public Finance Management Act (PFMA)	2002: State-Owned Enterprise Shareholder Compacts
2003: Municipal Finance Management Act	2003: Industry Specific Black Economic Empowerment Charters
2003: National Black Economic Empowerment Act	2004: Johannesburg Stock Exchange (JSE) Socially Responsible Investment Index (SRI Index)
2008: Companies Act	2007: Carbon Disclosure Project: Participation SA
2009: The Consumer Protection Bill	

Table 2: Mandatory and voluntary standards of South Africa

One of these standards is the King Report on Corporate Governance (the King Report). The aim of the King Report is to promote *“...the highest standards of corporate governance in South Africa”* [20]. Through the King Report, reporting principles were determined and the accordance to the GRI guideline proposed [17]. In 2004 the JSE Socially Responsible Investment (SRI) index was established with the aim *“... to measure leading JSE-listed companies against a series of reasonable social, environmental and governance metrics”* [12]. Even though the King Report is non-legislative, it gets enforced through the JSE listing requirement and establishes the mandatory character for JSE-listed companies; the act alone therefore represents a voluntary standard. Thus, through the King Report, listed companies are required to report and through the SRI index, encouraged to make the reports public [5]. The third version of the King Code of Governance for South Africa (King III) addresses new issues such as IT Governance, Business rescue and Fundamental transactions [20]. JSE-listed companies need to follow the “apply or explain” approach, which means companies have to state whether the principles of King III are applied or they have to explain why not. The Institute of Directors Southern Africa [21] states that *“the ‘apply or explain’ regime shows an appreciation for the fact that it is often not a case of whether to comply or not, but rather to consider how the principles and recommendations can be applied”*. Sustainability reporting aims at integrating all areas of performance on the three topic areas; this can be achieved by integrating sustainability into the EA of a company.

3. Integration of sustainability through Enterprise Architecture

Enterprise Architecture (EA) is used to manage the day-to-day business of companies and their future development. According to The Open Group EA can be defined as “... *a coherent whole of principles, methods, and models that are used in the design and realisation of an enterprise’s structure, business processes, information systems, and infrastructure*” [22]. The definition anticipates the complexity of EA. Because of the fast development of IT within the world’s rapid technological advancement and an increase of complexity due to larger applications, software architecture was introduced. However, along with this progress, the alignment of business and IT arose as a problem. As a solution, companies needed to align the “... human, organizational, informational, and technological aspects of systems” [23]. Business strategy and IT must be aligned to facilitate the most effective use of technology and tools available [10, 24]. This alignment can be achieved through the implementation of an EA [13, 24]. To support the application of EA, frameworks such as the Open Group Architecture Framework (TOGAF) were developed [22]. According to TOGAF, an EA contains the following four components:

- **Business Architecture:** business strategy, governance and key business processes;
- **Data Architecture:** structure of an organization’s logical and physical data assets;
- **Applications Architecture:** blueprint for the individual application systems, their interactions, and their relationships to the core business processes of the organization; and
- **Technology Architecture:** logical software and hardware capabilities that are required to support the deployment of business, data, and application services.

Internal drivers for the establishment of an EA are the aforementioned support for the strategic alignment and the linkage of business and IT. Moreover, external drivers can be derived from the requirement “... *to have a thorough insight into their structure and operations*” due to legislation [25]. Sustainability reporting is one example of what gets demanded by stakeholders, such as governments (external driver), and gives companies the opportunity to gain a competitive advantage and to improve organisational performance (internal driver).

However, even though more companies are reporting on sustainability, the approach is not embedded into all organizational processes and information generation can be difficult. Often there is also a missing alignment on a strategic level and/or at a technological level [26]. Studies have also revealed a lack of alignment of IT and the company’s strategy [14, 24]. As a result sustainability reporting is often a silo application, being a “... *self-contained and isolated application ... , which only provide[s] functionality to a specific business process*” [23]. To follow a consistent sustainability approach, sustainability aspects need to be integrated at all levels of the company (strategic, operational and technological). This alignment can be achieved by the adoption of the framework proposed by Scholtz et al. [26] which aims at the integration of sustainability into the EA. At a strategic level sustainability needs to be included in the goals and strategy of the company [10]. These goals need to be transferred onto the operational level and integrated into the company’s processes. The data architecture generates the information needed for the sustainability reporting. The strategic and operational levels are supported through technology, which provides the technological solutions, for example collecting the data in order to create a report [26]. The integration of sustainability into the EA ensures that sustainability matters are considered on all levels of the business and enables companies to follow a more serious sustainability approach.

4. Research questions and methodology

The research study investigates the sustainability reporting process and the use of EA for supporting this process. A survey of 28 companies in South Africa was undertaken in order to perform a comparison of approaches to EA and sustainability reporting between mandatory

reporting organizations (JSE-listed) and organizations which report voluntarily (non-listed). The research instrument used was an on-line questionnaire. The primary research question of this paper is: “*What are the differences between voluntary and mandatory reporting companies in South Africa regarding sustainability reporting in general and the integration of environmental information into the enterprise architecture?*”. The following secondary research questions are therefore addressed in this study and were included in the questionnaire:

- 1) Do voluntary and mandatory reporting companies have a different focus regarding the reporting of economic, environmental and social matters?
- 2) What are the differences regarding the software used by companies for sustainability reporting?
- 3) Are companies integrating environmental information into the EA?
- 4) Are companies including the improvement of environmental concerns to their EA?

5. Analysis of results

5.1. Participant profile

The JSE-listed companies which participated are referred to as mandatorily reporting organizations due to the binding listing requirements of the JSE. The 28 participating companies consist of 17 listed (out of the 444 currently JSE listed companies) and 11 non-listed (voluntary reporting) companies. The companies are classified according to three types of industry: service, banking and finance, and manufacturing (Table 3). The companies ranged in size from companies with between 101 to 500 employees and companies with over 500 employees at the time of the survey.

Company	Industry	Listing Status	Number of Companies (n)
Q, V, Z	Banking and Finance	Listed	3
F, M, N, O, W, AA	Manufacturing	Listed	6
G, K, L, P, T, U, Y, AB	Service	Listed	8
Total Listed			17
I, S, X	Banking and Finance	Non-listed	3
A, H	Manufacturing	Non-listed	2
B, C, D, E, J, R	Service	Non-listed	6
Total Non-listed			11

Table 3: Profile of the participating companies (n = 28).

5.2. Analysis of Survey Results

The results showed that in practice participating organizations are not as balanced as they should be regarding the three areas of sustainability (Figure 1). The results showed that economic reporting was the most dominant in both sets of companies, listed (94%) and not listed (82%). Social reporting is the second most popular reporting field with 82% of the listed and 73% of the non-listed companies agreeing that they reported on social issues. This supports the focus on social reporting aspects noted in South Africa [27]. Of the listed companies 65% agree that they perform environmental reporting. As expected, this reporting field is less popular amongst the non-listed companies, where less than half (36%) agreed that they practice environmental reporting. The mandatory reporting organizations surveyed thus have a higher focus on environmental reporting than voluntary reporting companies. This can be due to the demands of shareholders and investors who want all potential risks due to issues such as climate change to be taken into account [7]. Another reason could be due to the higher number of participants from the manufacturing industry, in which environmental aspects are of more importance due to the severe impact on the environment compared to other sectors.

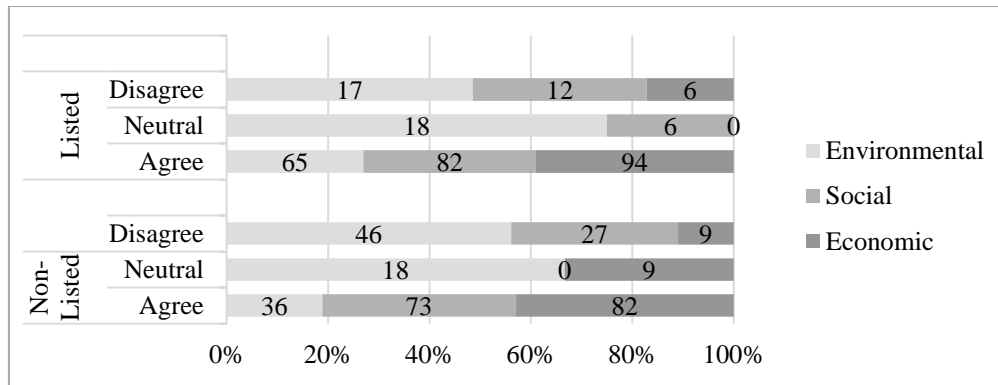


Figure 1: Focus regarding the triple bottom line of sustainability reporting (n = 28).

The results related to the guidelines used by participating organizations (Figure 2) highlight that the GRI is more commonly used by listed companies (47%) as compared with non-listed organizations (18%). In non-listed organizations the implementation of ISO 14001 and Environmental Management Systems (EMS) are the two most popular used guidelines with 45% and 36% respectively. However, listed companies are using the ISO 14001 standard (53%) and EMS (30%) as well. The results show that MS Excel is the most commonly used software tool for environmental reporting in non-listed companies (Figure 3) Even though the most popular tool amongst listed companies is internal information systems (65%), MS Excel is still commonly used (53%) as well as web-based reporting tools (53%). This result confirms previous studies [7; 31] reporting that companies are still not making sufficient use of available technology and are using spreadsheets to create sustainability reports.

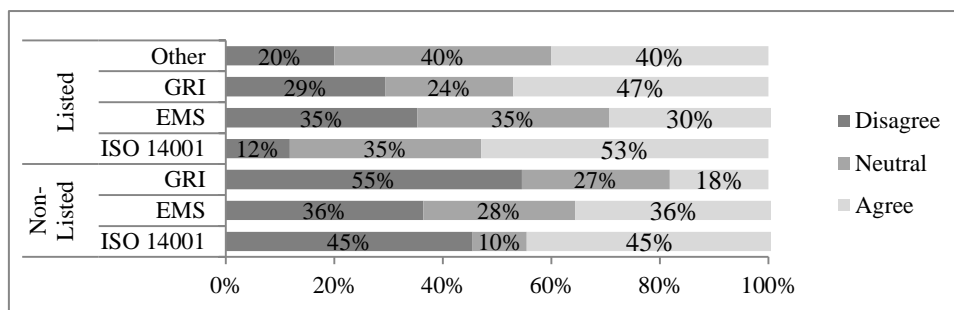


Figure 2: Guidelines and methods used for sustainability reporting (n = 28).

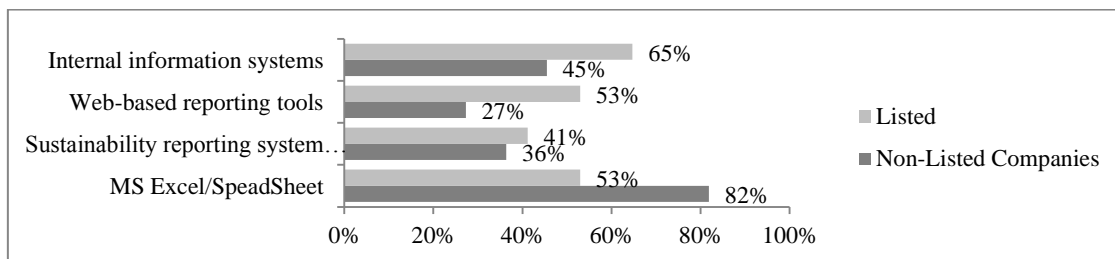


Figure 3: Tools used to manage and monitor sustainability reporting (n = 28).

According to findings of a market review by KPMG [15], the use of solutions such as MS Excel are mainly used in the early stages of sustainability reporting. However, with this application being limited “in the field of maintainability and integrity of the data when organizations change and extend their sustainability reporting” [15], companies move on to using sustainability reporting software. The survey results therefore suggest that the non-listed companies are at the early phase

of sustainability reporting. Even though non-listed companies seem to be lacking behind in terms of environmental reporting, the results indicate that they are more advanced in integrating the environmental information into their EA, since almost two-thirds (63%) of the non-listed companies are integrating the environmental data into their EA (Table 2). However, only 24% of listed companies agreed that they integrate their environmental information into the EA. The majority of non-listed companies (72%) view the improvement of environmental concerns as a goal of EA, and only 24% of listed companies agree. This could indicate that environmental concerns play a minor role in the future development of the EA of listed companies or it could be because these companies see EA and environmental concerns as separate issues that are not related.

	Non-Listed Companies	Listed Companies
Disagree	10%	47%
Neutral	27%	29%
Agree	63%	24%
Total	100%	100%

Table 2: Enterprise architecture with environmental information (n = 28).

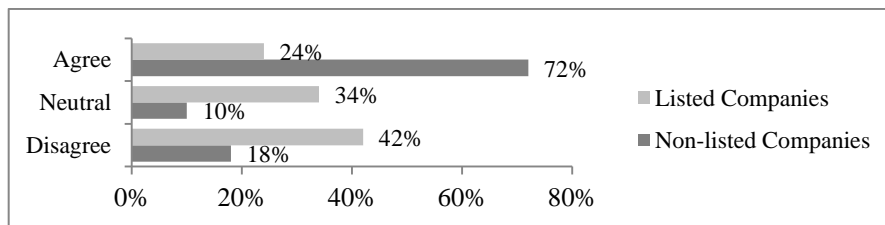


Figure 3: Improvement of environmental concerns as a goal of EA (n = 28).

6. Conclusions and Recommendations

The analysis of the survey results revealed that mandatory reporting companies seem to be more advanced in terms of sustainability reporting in general. However, the integration of environmental information into the EA appears to further developed than in companies that follow a voluntary reporting approach. A higher percentage of listed companies than unlisted companies stated that they report on all three sustainability aspects. With regards to the tools the companies are using to manage and monitor sustainability, most companies are still relying on MS Excel, web-based reporting tools and internal information systems. One limitation of the study was that the reasons for why non-listed companies had a low percentage of environmental reporting but an advanced integration of environmental information into the EA could not be determined. This could be a useful area for future research. Although the number of companies surveyed was relatively small, the paper still provides a valuable contribution in terms of a deeper understanding of the status of South African companies with regards to environmental reporting and EA and a deeper insight into the drivers of voluntary and mandatory reporting companies are provided.

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