

Progress in sustainability reporting - a South African food production sector perspective

JC Manickum

 orcid.org/0000-0002-4001-9123

Mini-dissertation accepted in partial fulfilment of the requirements for the degree [Master of Commerce in Accountancy](#) at the North-West University

Supervisor: Dr LJ Mamaile

Graduation: June 2021
Student number: 33493782

DECLARATION

I declare that:

“Progress in sustainability reporting – a South African food production sector perspective”

is original research conducted by the author. All authors whose ideas were utilised in the study have been duly acknowledged. I further declare that this mini-dissertation has not previously been submitted by me for a degree at any other university.



J Manickum

December 2020

Vanderbijlpark

LETTER FROM THE LANGUAGE EDITOR



Jomone Müller

Language Practitioner
SATI No. 1002831
BA Hons (Language practice)

www.jmuller.co.za
Tel: +27 84 406 0029
jomone@jmuller.co.za

DECLARATION OF LANGUAGE EDITING

2December 2020

To whom it may concern

This is to confirm that I, the undersigned, have language edited the completed research of J Manickum for the Master of Commerce in Accountancy titled: Progress in sustainability reporting – a South African food production sector perspective.

No changes were permanently affected and were left to the discretion of the author. The responsibility of implementing the recommended language changes rests with the author of the thesis.

Yours truly

A handwritten signature in cursive script that reads "J Müller".

Jomone Müller

COMMENTS

This mini-dissertation is submitted in the form of a research article. As such the editorial style utilised are those specified by the Taylor and Francis manuscript guide. The reference style used is the American Psychological Association, Seventh edition (APA-7) in line with the requirements of the journal.

ACKNOWLEDGEMENTS

The year 2020 has been an undeniably challenging one. Completing the feat of a mini-dissertation in the midst of it all would have been unlikely had it not been for the support of the remarkable people in my life.

- Firstly, I would like to thank Prof. ThysSwanepoel who encouraged me to pursue this master's degree. Your encouragement, unfailing wit and respected guidance have proven to be of exceptional value to me.
- Prof. DanieSchutte, your exceptional lecture and guidance on the research process will always be something that I can turn to in my professional career.
- Dr. Jacob Mamaile, thank you so much for your feedback and support during the preparation of my dissertation submission. I truly appreciate the many hours and late nights that you spent reviewing my work.
- Dr. Mamaile passed away in early 2021. His passing is a severe loss for the academic community. I am truly thankful for his guidance and support as both a great supervisor and colleague.
- To all my loved ones, thank you for giving me the space, love and support that I needed to complete this task.

J Manickum

Vanderbijlpark

2020

TABLE OF CONTENTS

DECLARATION	I
LETTER FROM THE LANGUAGE EDITOR	II
COMMENTS	III
ACKNOWLEDGEMENTS	IV
TABLE OF CONTENTS.....	V
LIST OF TABLES	VIII
LIST OF FIGURES.....	IX
CHAPTER 1: INTRODUCTION AND BACKGROUND TO THE STUDY	1
1.1 INTRODUCTION	1
1.1.1 Background	1
1.1.2 Underlying theories.....	2
1.1.3 Literature study.....	3
1.2 Problem statement	5
1.3 Objectives	5
1.4 Research methodology	5
1.5 Overview of chapters	7
REFERENCES.....	9
CHAPTER 2: RESEARCH ARTICLE.....	13
PROGRESS IN SUSTAINABILITY REPORTING – A SOUTH AFRICAN FOOD PRODUCTION SECTOR PERSPECTIVE.....	13
2.1 Introduction	13
2.1.1 Background to corporate reporting in the world and South Africa	13
2.1.2 Underlying theories.....	15
2.1.3 Literature study and research question	16

2.2	Objectives	18
2.3	Methodology	18
2.3.1	Sample	18
2.3.2	Evaluation framework development	20
2.3.2.1	Governance.....	22
2.3.2.2	Environmental impact	23
2.3.2.3	Social impact	23
2.3.3	Report layout	24
2.3.4	Evaluation framework rating scale	24
2.3.4.1	ESG disclosures scale:.....	24
2.3.4.2	Report layout scale	25
2.4	Results	25
2.4.1	Report layout	27
2.4.2	Governance disclosures	28
2.4.3	Environmental impact disclosures.....	29
2.4.4	Social impact disclosures	30
2.5	Discussion	31
2.6	Limitations	32
2.7	Conclusion.....	32
Appendix 1: Evaluation framework for level of ESG disclosures		33
Appendix 2: Keywords searched		35
REFERENCES.....		37
CHAPTER 3: CONCLUSION AND RECOMMENDATIONS		42
3.1	Summary	42

3.2	Limitations	42
3.3	Recommendations.....	43
3.4	Conclusion.....	43

LIST OF TABLES

Table 1: Documents referenced for drafting of evaluation framework	21
Table 2: Evaluation framework for level of ESG disclosures	33
Table 3: Keywords searched	35

LIST OF FIGURES

Figure 1: Average ESG disclosure rating (Author's own analysis)	26
Figure 2: Average disclosure rating per category (Author's own analysis)	27
Figure 3: Average report layout rating (Author's own analysis)	28
Figure 5: Average environmental disclosure rating (Author's own analysis)	30
Figure 6: Average social disclosure rating (Author's own analysis)	31

CHAPTER 1: INTRODUCTION AND BACKGROUND TO THE STUDY

1.1 INTRODUCTION

1.1.1 Background

Around 1760, the First Industrial Revolution created marked changes in society: improvements in technology allowed for larger sects of the non-agricultural population to have access to larger amounts of food. This also gave rise to a growth in the middle class, a wider distribution of wealth and larger cities (Duignan, 2019). Unfortunately, these same improvements in technology also brought with it new environmental and social ills: rising pollution and misuse of employees (Duignan, 2019).

Approximately a hundred years later a new beast rose from the First Industrial Revolution: corporations (Halloran, 2018), legal entities that possess no emotions and cannot comprehend the consequences of their actions (Harari, 2011). Profit maximisation from taking advantage of technological advancements was the name of the game for the longest time and with it came the use of cheap synthetic materials, whose impact on the environment were unknown at the time (Thompson, 2018). The agriculture industry, in particular, brought with it the depletion of topsoil, contamination of groundwater, air pollution, new threats to human health and the spread of new pathogens (Brodt *et al.*, 2011). According to the National Planning Commission, cited by Greyling *et al.* (2015), South Africa has been getting drier due to higher temperatures as well as non-optimal rain patterns. Due to this climate, 63% of available water is being used to irrigate agriculture (Bonthuys, 2018). South African farmers and farm workers, in particular, face a unique set of challenges including high crime rates, lack of subsidies and support for emerging farmers (World Wildlife Fund South Africa [WWF-SA], 2010). Climate change has far reaching impacts on the agriculture industry, and this will affect food supplies; however, sustainable practises will help mitigate the risk of this occurring (Johnston, 2019).

According to Oxford (2020), sustainability means “the ability to continue or be continued for a long time”. In another definition, the word is described as “avoidance of the depletion of natural resources to maintain an ecological balance” (Lexico, 2020). However, the most popular definition of sustainable development is “meeting the needs of the present without compromising the ability of future generations to meet their own needs” (Brundtland, 1987,

p16). Given this description, the need for sustainable practices by businesses (and individuals) cannot be understated. Consequently, given the significant role that corporations currently play in society, the need for reporting on sustainability can therefore also not be undervalued. Thankfully as social norms shift and change; the reporting sphere has been changing to match it. Various “non-financial reporting” standards have emerged over the years; the Global Reporting Initiative (GRI) being the most popular (Sustainable Stock Exchanges Initiative [SSE], 2020). Another popular method of reporting on sustainability issues is the International Integrated Reporting Framework (<IR> Framework) (SSE, 2020).

In South Africa, integrated reporting is strongly encouraged. In a guidance letter issued by the Johannesburg Stock Exchange (JSE) (2019) integrated reporting was to be applied on an apply or explain basis for financial years beginning on or after 1 March 2010. The currently JSE-endorsed <IR> Framework requires businesses to consider six defined “capitals” as inputs and outputs to their operations and how each of these capitals’ values are impacted over time (The International Integrated Reporting Committee [IIRC], 2013). The six capitals are: financial, manufactured, intellectual, human, social and relationship and natural. Given the argument that the human, social and natural capitals were previously “neglected” areas when it comes to corporate reporting and the more recently introduced elements of reporting; these are the elements of integrated reporting whose efficacy have not necessarily yet been established. In literature, these elements are widely referred to as “ESG” for environmental, social and governance issues.

1.1.2 Underlying theories

Corporations have a far-reaching impact on the world. Due to their size and stature, the actions of few corporations have a large social and environmental impact and can therefore easily be held accountable for their actions by “an increasingly activist civil society” (Serafeim, 2014, p.2). The purpose of businesses’ public reporting is to provide information to the various stakeholders of these large corporations, presumably in an attempt to influence their decision making.

Societal norms have shifted and changed to focus on issues of sustainability, however, widely accepted societal norms would not necessarily explain company management’s decisions to implement sustainability reporting. Apart from the 2010 requirement brought on

by the JSE for listed companies to report on sustainability matters, there were certainly other factors that encouraged companies to start reporting on sustainability. According to Correia (2019), management needs to consider all stakeholders when making their strategic decisions and by doing this, they ensure the long-term profitability of the company. Corroborating this statement from Correia are the following three theories: agency, stewardship and stakeholder theories (Rodriguez-Fernandez, 2016). According to Freeman (2010), stakeholders are groups who play a vital role in the success of a business organisation. The stakeholder theory articulates that if a company does not consider its stakeholders it will ultimately fail (Smartsheet, 2020).

Since companies are not living beings capable of making decisions, the agency theory and stewardship theory help to describe the actions of a company i.e. the decisions and behaviour of its management (Payne & Petrenko, 2019). Management and the owners of a company (shareholders) are engaged in an agent-principle relationship and agency theory recognises that managers could not realistically watch over other's capital with the same level of care as their own (Payne & Petrenko, 2019). In slight contrast, is the stewardship theory that suggests that management would rather choose "do a good job" on behalf of shareholders (Payne & Petrenko, 2019). The statement made by Correia (2019) suggests that management need to act in a manner which holds the view of stakeholder theory. The JSE requirement for listed entities to apply integrated reporting and thus good sustainability practises in the organisation, would blur the public view of whether companies are indeed acting in line with stakeholder theory; or whether agency theory applies. In other words, companies apply good sustainability practises due to the fact that they are required to by a regulatory obligation.

1.1.3 Literature study

Given that sustainability reporting is a requirement for JSE-listed companies and that sustainable practices presumably lead to long-term profitability; it would be interesting to note whether reporting on issues of sustainability have an impact on these companies' profitability. A Google Scholar search for the topic of "the impact of sustainability reporting on business profitability" yields 128 000 articles in total; 17 200 of which are post-2019. This is a further indication of the topical nature of this subject. In a study performed in 2013 whereby the author reviewed a decade worth of existing literature on this topic, the

conclusion was that the results of studies are often inconsistent (Aggarwal, 2013). A South African-based study found some evidence that companies that disclose sustainability reports may experience better economic performance in comparison to companies that do not, however, their statistical analysis could not confirm a definitive positive relationship between sustainability reporting and economic performance (Buys *et al.*, 2011). Given the vast body of research attempting to find a correlation between profitability and sustainability reporting and the inconclusive nature of this research, one can conclude that more practical research could be obtained from qualitatively analysing sustainability reports.

In an article by Jill Aquila in the July 2018 edition of The CPA Journal, the author delves into the state of sustainability reporting at the time; a notable problem mentioned by the author is the “lack of standardisation”. “Performance indicators across ESG topic areas do not distil down into one standardised unit of measure” as is the case with the use of currencies when it comes to reporting on financial performance (D’Aquila, 2018). D’Aquila (2018) further described another issue is that the frameworks and standards on sustainability reporting have been designed for different audiences and are thus “competing”. Up until 2010, when the <IR Framework> became a mandate, South African-listed companies could use any sustainability reporting framework.

Various academic articles appear on the topic of integrated reporting and the adequacy and sufficiency of its implementation in South Africa. A study by Marrone and Olivia (2019) analysed the level of alignment of South African integrated reports with the <IR> Framework. Another study assessed the impact of the transition from sustainability reporting to integrated reporting in eight South African Listed companies (Clayton *et al.*, 2015).

The agriculture industry, which is referred to as the “food-producing sector” on the JSE, has a more notable impact on ESG and therefore more to consider from a sustainability perspective. The JSE sustainability reporting index (SRI) rates food-producing companies as “high impact companies” (JSE, 2004). It appears as though there is limited specific research on sustainability reporting on this sector, in particular. It is important to consider this sector in terms of their sustainability reporting disclosures, not only because their sustainable practices impact the country’s food security (Johnston, 2019), but also because consumers and investors who invest based on the sustainability practices of companies would be interested in “high impact” companies.

1.2 Problem statement

The JSE tacitly mandated the use of integrated reporting for JSE-listed companies from financial years beginning in March 2010 and going forward, this presumably should have led to an increase in the level of ESG information reported by entities over the period starting in January 2010 and ending in December 2019. As mentioned in the literature study, a vast body of research exists on the extent to which the non-financial reporting requirements have been implemented. These studies generally cover all industries on the main board of the JSE. Given that the food producing sector has a higher impact from an ESG perspective, specific focus on such company's sustainability practises and reporting thereon is imperative.

Based on the aforementioned problem statement, the following research question can be formulated: Has there been progress in the ESG reporting of food production companies listed on the JSE over time?

1.3 Objectives

The primary objective of this study is to examine the progress in sustainability reporting in the South African food production sector.

In order to achieve this objective, the following secondary objective must be met:

1. To rank the level of ESG disclosures of food producing companies listed on the JSE for financial years ending in 2010 to financial years ending in 2019.

1.4 Research methodology

The objective of this study was to examine the progress in sustainability reporting in the South African food production sector over time. The ESG disclosures were ranked based on the views of the researcher and therefore this suggests a relativist approach. Furthermore, one would need to interpret the result of any observed changes based on subjective views.

According to Burrell and Morgan (1979), social scientists need to determine whether the reality that is being investigated is external and constant regardless of the individual (i.e. realism or positivism) or whether the reality is a result of the interpretation of the individual

(i.e. relativism or interpretivism). According to NurseKillam (2015), when one investigates a scenario from the perspective of a realist: “only one truth exists” and that this truth can be investigated using objective measurements, therefore the results that you obtain from your study can then be generalised to other populations. Whereas a relativist approach considers that multiple realities exist and that “truth evolves and changes” based on different contexts. The results of studies based on a relativist approach can therefore not be generalised unless it is in a similar context.

According to Hallebone and Priest (cited by Dudofskiy, 2018), epistemology, in business research, concerns the nature and sources of knowledge and is the “researcher’s view of what constitutes acceptable knowledge”. Studies based on interpretivism cannot be generalised due to the specific nature of the circumstances of each study (Nel, 2018). An interpretivist approach to research is more qualitative in nature (ReviseSociology, 2015). Dudofskiy (2018) highlights the following other epistemologies: realism and positivism suggest that observable phenomena provide facts and pragmatism proposes that both observable phenomena and subjective meanings can generate acceptable knowledge depending on the research question that is posed. Research designs vary depending on whether the researcher is attempting to rationalise noted observations (inductive research) or validate a theory (deductive research) (Bhattacharjee, 2012).

Given that this study is subjective in nature, an interpretivist research philosophy was employed and thus a qualitative approach was applied. The design of the study was inductive as the study aims to provide a rationale for the observations noted in changes in the levels of ESG disclosures over time before and after the onset of mandated sustainability reporting.

The agriculture sector of the JSE was analysed in this paper. Within this sector there are large, main-board listed, companies and smaller, AltX listed, companies. According to the JSE (2020), the AltX is a market for small- to medium-sized companies. In order to maintain some consistency in the size of the company being analysed, the companies listed on the main board (and not the newer AltX) were analysed. Amankwah-Amoah and Syllias (2019) determined that an SME’s pursuit of sustainability initiatives could minimise their lifespan due to the resource constraints experienced by such companies. Furthermore, the annual reports of the two AltX-listed food production companies were briefly reviewed and no ESG

reporting was noted, confirming the view of the aforementioned authors. Therefore, for the purposes of the study, it was deemed appropriate to only include main-board JSE listed agricultural (food producer) companies in the sample.

A similar study was performed in 2016 in a research paper titled “Patterns of Sustainability Reporting in South Asia”. In this study, content analysis was performed on 99 sustainability reports for the 2014 financial year to identify “well developed” and “underdeveloped” using the GRI as a benchmark (Mahmood *et al.*, 2016). A similar approach was applied in this paper whereby specialised content analysis was performed on the main-board JSE listed food production sector entities listed on the JSE. The publicly available annual and/or integrated reports of the companies were used to evaluate their ESG disclosures over the period 2010 to 2019 (the evaluation period). It is to be noted that the names of the companies remain anonymous when presenting the results.

A study performed by Anria Van Zyl (2017) aimed to determine whether the adoption of integrated reporting led to an improvement in the quality of the sustainability information disclosed by these companies. Van Zyl (2017) developed a unique evaluation matrix due to the fact that there was no exact definition of integrated reporting. Similarly, in this study, a unique model was developed to evaluate the level of disclosure during the analysis period bearing in mind that integrated reporting was mandated for financial years beginning on or after 1 March 2010, therefore, one cannot use this standard over the entire evaluation period as one would not be comparing like for like. Based on the evaluation framework, an ESG disclosure score would be derived for each company during the analysis period.

A literature review was conducted on the external environment of the companies for the same period to identify possible causes for any changes in levels of disclosure noted throughout the period. This review entailed a Google search for possible changes in legislature which may impact the level or nature of reporting in any particular year of the analysis period.

1.5 Overview of chapters

The study comprises three chapters as described below.

Chapter 1: Introduction and background to the study

The first chapter provides an introduction to the study. The background of sustainability reporting and its importance in relation to the agricultural sector are discussed in an attempt to illustrate the importance of the study. Based on the aforementioned, this section also includes a problem statement and research objectives. The research methodology is discussed briefly.

Chapter 2: Progress in sustainability reporting – a South African food production sector perspective

This chapter entails a research article including an introduction and the full detail of the methodology employed to determine the level of ESG disclosures of the agriculture companies listed on the JSE during the analysis period. The findings of the study are also discussed in this section.

Chapter 3: Conclusion and recommendations

Based on the research article, this chapter highlights the final conclusions drawn based on the findings of the study. Limitations of the study are elaborated upon in an attempt to suggest areas for further research.

REFERENCES

- Aggarwal, J. (2013). Sustainability Reporting and Its Impact On Corporate Financial Performance: A Literature Review. *Indian Journal of Commerce & Management Studies*, 4(3), 51-59.
- Amankwah-Amoah, J., & Syllias, J. (2019). Can adopting ambitious environmental sustainability initiatives lead to business failures? *Business Strategy and the Environment*, 29(1),240-249.
- Bhattacharjee, A. (2012). Social Science Research: Principles, Methods and Practises. *Textbooks Collection 3*. Retrieved March 19, 2020, from http://scholarcommons.usf.edu/oa_textbooks/3
- Bonthuys, J. (2018, July). Irrigation Water Use. *The Water Wheel*, July-Aug. http://www.wrc.org.za/wp-content/uploads/mdocs/WW%20July_Aug%202018%20IRRIGATION%20WATER%20USE.pdf
- Brodth, S., Six, J., Feenstra, G., Ingels, C. & Campbell, D. (2011). Sustainable Agriculture. *Nature Education Knowledge*, 3(10):1. Retrieved March 27, 2020, from <https://www.nature.com/scitable/knowledge/library/sustainable-agriculture-23562787/>
- Brundtland, G.H. (1987). *Report of the World Commission on Environment and Development: Our Common Future*. United Nations, Sustainable Development. <https://sustainabledevelopment.un.org/content/documents/5987our-common-future.pdf>
- Burrell, G., & Morgan, G. (1979). *Social Paradigms and Organisational Analysis: Elements of the Sociology of Corporate Life*. Routledge.
- Buys, P., Oberholzer, M., & Andrikopolous, P. (2011). An Investigation of the Economic Performance of Sustainability Reporting Companies Versus Non-Reporting Companies: A South African Perspective. *Journal of Social Sciences*,29(2),151-158. <https://doi.org/10.1080/09718923.2011.11892965>
- Correia, C. (2019). *Financial Management*. 9th ed. Juta and Company (Pty) Ltd.
- Clayton, A.F., Rogerson, J.M., & Rampedi. I., (2015). Integrate reporting vs. Sustainability reporting for corporate responsibility in South Africa. In Szymanska, D & Sroda-Murawska, S. (Eds), *Bulletin of Geography. Socio-economic series, No.29*, 7-17. <http://dx.doi.org/10.1515/bog-2015-0021>

- D' Aquila, J.M. (2018). The Current State of Sustainability Reporting. *The CPA Journal*, July 2018, 44-50.
- Dudofskiy, J. (2018). *Epistemology*. Business Research Methodology. Retrieved March 19, 2020, from <https://research-methodology.net/research-philosophy/epistemology/>
- Duignan, B. (2019). *Industrial Revolution*. Britannica. Retrieved February 10, 2020, from <https://www.britannica.com/event/Industrial-Revolution>
- Freeman, E. (2010). *Strategic Management: A Stakeholder Approach*. Cambridge University Press.
- Greyling, C., Vink, N., & Mabaya, E. (2015). South Africa's Agricultural Sector Twenty Years after Democracy (1994 to 2013). *Professional Agricultural Workers Journal*. 3(1), 1-14.
- Halloran, T. (2018, November, 18). A brief history of corporate form and why it matters. *Fordham Journal of corporate & Financial law*.
<https://news.law.fordham.edu/jcfl/2018/11/18/a-brief-history-of-the-corporate-form-and-why-it-matters/>
- Harari, Y.N. (2011). *Sapiens- A brief history of humankind*. Vintage Books.
- The International Integrated Reporting Committee. (2013). *The International <IR> Framework*. <https://integratedreporting.org/wp-content/uploads/2015/03/13-12-08-THE-INTERNATIONAL-IR-FRAMEWORK-2-1.pdf>
- The Johannesburg Stock Exchange. (2004). *JSE SRI Index: Background and Selection Criteria*. Retrieved April 20, 2020, from <https://www.jse.co.za/content/JSEIndexSelectionCriteriaItems/2004-Background%20and%20criteria%20.pdf>
- The Johannesburg Stock Exchange. (2019, April 8). *JSE Listings Requirements*.
<https://www.jse.co.za/sites/default/files/media/documents/2019-04/JSE%20Listings%20Requirements.pdf>
- The Johannesburg Stock Exchange. (2020). *Why list on AltX?* Retrieved April 13, 2020, from <https://web.jse.co.za/raise-capital/equities-market/altx>
- Lexico. (2020). *UK Dictionary*. Lexico. Retrieved February 29, 2020, from <https://www.lexico.com/definition/sustainability>
- Mahmood, Z., Kouser, R., Ali, W., & Iqbal, Z. (2016). Patterns of Sustainability Reporting in South Asia. *Pakistan Journal of Social Sciences*, 36(2), 917-933.

- Marrone, A., & Olivia, L. (2019). The level of integrated reporting alignment with the IIRC Framework: Evidence from South Africa. *International journal of business and management*, 15(1), 99 – 108. <https://doi.org/10.5539/ijbm.v15n1p99>
- Nel, H. (2018, 17 September). *The Nature and Elements of Research Paradigms: Interpretivism*. Skills Universe. Retrieved March 19, 2020, from <https://www.skills-universe.com/2018/09/17/the-nature-and-elements-of-research-paradigms-interpretivism/>
- NurseKillam. (2015, 25 September). *Ontology, Epistemology, Methodology and Methods in Research Simplified!* [Video]. YouTube. <https://www.youtube.com/watch?v=hCOsY5rkRs8&t=1s>
- Oxford University Press. (2020). *Oxford Advanced Learner's Dictionary*. <https://www.oxfordlearnersdictionaries.com/definition/english/sustainability>
- Payne, G.T., & Petrenko, V. (2019). Agency Theory in Business and Management Research. *Oxford Research Encyclopedias*. <https://doi.org/10.1093/acrefore/9780190224851.013.5>
- ReviseSociology. (2015). *Positivism and Interpretivism in Social Research*. Retrieved March 19, 2020, from <https://revisesociology.com/2015/05/18/positivism-interpretivism-sociology/>
- Rodrigues- Fernandez, M. (2016). Social Responsibility and Financial Performance: The Role of Good Corporate Governance. *BRQ Business Research Quarterly*, 19(2), 137-151. <https://doi.org/10.1016/j.brq.2015.08.001>
- Serafeim, G. (2014). *The Role of the Corporation in Society: An Alternative View and Opportunities for Future Research*. Harvard Business School Working Paper 14-110. Harvard Business School. https://www.hbs.edu/faculty/Publication%20Files/14-110_e7a7f1b3-be0d-4992-93cc-7a4834daebf1.pdf
- SmartSheet. (2020). *What is Stakeholder Theory and how does it Impact and Organisation?* Retrieved March 1, 2020, from <https://www.smartsheet.com/what-stakeholder-theory-and-how-does-it-impact-organization>.
- Sustainable Stock Exchanges Initiative. (2020). *ESG Disclosure Guidance Database*. Retrieved October 12, 2020, from <https://sseinitiative.org/esg-guidance-database/>
- Thompson, L. (2018, November, 18). A Second Industrial Revolution: The benefit of a sustainability report. *Fordham Journal of Corporate & Financial law*. <https://news.law.fordham.edu/jcfl/2018/11/18/a-brief-history-of-the-corporate-form-and-why-it-matters/>

Van Zyl, A. (2013). Sustainability and integrated reporting in the South African corporate sector. *Journal of sustainability management*, 1(1), 19-42.

World Wildlife Fund South Africa. (2010). *Agriculture: facts and trends*.
http://awsassets.wwf.org.za/downloads/facts_brochure_mockup_04_b.pdf

CHAPTER 2: RESEARCH ARTICLE

PROGRESS IN SUSTAINABILITY REPORTING – A SOUTH AFRICAN FOOD PRODUCTION SECTOR PERSPECTIVE

Abstract

The first three industrial revolutions created improvements to the way humans live their lives but is followed by a stark realisation of the need to implement these technological improvements sustainably. The agricultural industry, in particular, created a host of new environmental and social problems. Corporate reporting is fundamental to the concept of accountability. The study sought to examine the level of ESG disclosures of JSE-listed food producer sector companies over the last decade as higher levels of non-financial reporting was required by the JSE after March 2010. An evaluation framework was developed and a qualitative content analysis was employed to rank the level of ESG reporting over a 10-year period from 2010 to 2019 (both years included). The results found that great progress was made from the start to the end of the decade, however, the reason for the progress is likely due to changes in JSE reporting requirements, thus supporting agency theory and advocating for such requirements in other jurisdictions. The paper is, however, based purely on evaluation of publicly available annual reports and further research could be conducted to determine this sector's real approach towards sustainable ESG practices and whether this is truly what is reflected in the reporting.

Keywords:

Agricultural sector, ESG reporting, food production sector, integrated reporting, Johannesburg Stock Exchange-listed companies, sustainability reporting

2.1 Introduction

2.1.1 Background to corporate reporting in the world and South Africa

Around 1760, the First Industrial Revolution created marked changes in society; improvements in technology allowed for larger sects of the non-agricultural population to have access to larger amounts of food. This also gave rise to a growth in the middle class,

a wider distribution of wealth and larger cities (Duignan, 2019). Unfortunately, these same improvements in technology also brought with it new environmental and social ills: rising pollution and misuse of employees (Duignan, 2019).

Approximately a hundred years later a new beast rose from the First Industrial Revolution: corporations (Halloran, 2018), legal entities that possess no emotions and cannot comprehend the consequences of their actions (Harari, 2011). Profit maximisation from taking advantage of technological advancements was the name of the game for the longest time and with it came the use of fossil fuels, whose impact on the environment were unknown at the time (Thompson, 2018). The agriculture and food production industries, in particular, brought with it the depletion of topsoil, contamination of groundwater, biodiversity loss, air pollution, new threats to human health and the spread of new pathogens (Brodt *et al.*, 2011). Furthermore, according to the National Planning Commission, cited by Jan Greyling *et al* (2015), South Africa has been getting drier due to higher temperatures as well as non-optimal rain patterns. Due to this climate, 63% of available water is being used to irrigate agriculture (Bonthuys, 2018). South African farmers and farm workers, in particular, face a unique set of challenges including high crime rates, lack of subsidies and support for emerging farmers (World Wildlife Fund South Africa [WWF-SA], 2010). Climate change has far reaching impacts on the agriculture industry, and this will affect food supplies; however, sustainable practises will help mitigate the risk of this occurring (Johnston, 2019).

Target 12.6 of the United Nation's (UN) Sustainable Development Goals (SDGs) is to encourage companies (especial large, multi-nationals) to adopt sustainable practises and to integrate this information into their reporting cycle (Sustainable Stock Exchanges Initiative [SSE], 2019). According to Oxford (2020), sustainability means "the ability to continue or be continued for a long time". In another definition the word is described as "avoidance of the depletion of natural resources to maintain an ecological balance" (Lexico, 2020). However, the most popular definition of sustainable development is "meeting the needs of the present without compromising the ability of future generations to meet their own needs" (Brundtland, 1987, p. 16). Given this description, the need for sustainable practices by businesses (and individuals) cannot be understated. Reporting is an integral aspect of accountability (Perez, 2018). Consequently, given the significant role that corporations currently play in society (Serafeim, 2014), the need for reporting on sustainability can therefore also not be undervalued. Thankfully as social norms shift and change; the reporting sphere has been

changing to match it. Various “non-financial reporting” standards have emerged over the years; the Global Reporting Initiative (GRI) being the most popular (SSE, 2020). Another popular method of reporting on sustainability issues is the International Integrated Reporting Framework (<IR> Framework) (SSE, 2020).

South Africa has been innovative in the field of good governance and the reporting thereon with the King Code being the first internationally recognised comprehensive publication that embraced the concept of an inclusive approach to corporate governance (Institute of Directors South Africa [IoDSA], 2020). In South Africa, integrated reporting is strongly encouraged; in a guidance letter issued by the Johannesburg Stock Exchange (JSE) (JSE, 2018) integrated reporting was to be applied on an apply or explain basis for financial years beginning on or after 1 March 2010. The King Code, driven by the JSE reporting requirements, has been encouraging South-African JSE-listed companies to commit to sustainability reporting principles since 2002 (JSE, 2013a). The currently JSE-endorsed <IR> Framework requires businesses to consider six defined “capitals” as inputs and outputs to their operations; and how each of these capitals’ values are impacted over time (The International Integrated Reporting Committee [IIRC], 2013). The six capitals are: financial, manufactured, intellectual, human, social and relationship, and natural (IIRC, 2013). Given the argument that the human, social and natural capitals were previously “neglected” areas when it comes to corporate reporting and the more recently introduced elements of reporting; these are the elements of integrated reporting whose efficacy have not necessarily yet been established. In literature, these elements are widely referred to as “ESG” for environmental, social and governance issues and also “triple-bottom line reporting” (Association of International Certified Professional Accountants [AICPA], 2018).

2.1.2 Underlying theories

Corporations have a far-reaching impact on the world. Due to their size and stature, the actions of few corporations have a large social and environmental impact and can therefore easily be held accountable for their actions by “an increasingly activist civil society” (Serafeim, 2014, p. 2). The purpose of businesses’ public reporting is to provide information to the various stakeholders of these large corporations, in an attempt to provide transparent information for their decision-making purposes (The Association of Chartered Certified

Accountants [ACCA], 2018). Since the dawn of the First Industrial Revolution societal values have shifted to include issues of sustainability (Hoffman, 2018), however, widely accepted societal norms do not necessarily explain company management's decisions to implement sustainability reporting. Apart from the 2010 requirement brought on by the JSE for listed companies to employ integrated reporting, there were certainly other factors that encouraged companies to start reporting on sustainability. According to Correia (2019), management needs to consider all stakeholders when making their strategic decisions and by doing this, they ensure the long-term profitability of the company. Corroborating this statement from Correia. are the following three theories: agency, stewardship and stakeholder theories (Rodriguez-Fernandez, 2016). According to Freeman (2010), stakeholders are groups who play a vital role in the success of a business organisation. The stakeholder theory articulates that if a company does not consider its stakeholders it will ultimately fail (Smartsheet, 2020).

Since companies are not living beings capable of making decisions, the agency theory and stewardship theory help to describe the actions of a company i.e. the decisions and behaviour of its management (Payne & Petrenko, 2019). Management and the owners of a company (shareholders) are engaged in an agent-principle relationship and agency theory recognises that managers could not realistically watch over other's capital with the same level of care as their own (Payne & Petrenko, 2019). In slight contrast, is the stewardship theory that suggests that management would rather choose "do a good job" on behalf of stakeholders (Payne & Petrenko, 2019). The statement made by Correia (2019) suggests that management need to act in a manner which holds the view of stakeholder theory. The JSE requirement for listed entities to apply integrated reporting and thus good sustainability practises in the organisation, would blur the public view of whether companies are indeed acting in line with stakeholder theory; or whether agency theory applies. In other words, companies apply good sustainability practises due to the fact that they are required to by a regulatory obligation.

2.1.3 Literature study and research question

In literature, a vast body of research exists that attempts to find a correlation between profitability and sustainability reporting, overall this research has proved to be inconclusive

in nature (Aggarwal, 2013), therefore more practical research could be conducted from qualitatively analysing ESG sustainability reporting.

A common problem that has stood out in ESG reporting research, is the lack of a consistent framework or scorecard against which to measure the efficacy of ESG disclosures. In an article by Jill D'Aquila in the July 2018 edition of The CPA Journal, the author delves into the state of sustainability reporting at the time; a notable problem mentioned by the author is the "lack of standardisation". D'Aquila (2018) further described another issue in that the frameworks and standards on sustainability reporting have been designed for different audiences and are thus "competing" (2018, p. 47).

Various academic articles appear on the topic of integrated reporting and the adequacy and sufficiency of its implementation in South Africa. A study by Marrone and Olivia (2019) analysed the level of alignment of South African integrated reports with the <IR> Framework. Another study assessed the impact of the transition from sustainability reporting to integrated reporting in eight South African Listed companies (Clayton *et al.*, 2015).

The agriculture industry, which is referred to as the "food-producing sector" on the JSE, has a more notable impact on ESG and therefore more to consider from a sustainability perspective. The JSE sustainability reporting index (SRI) rates food-producing companies as "high impact companies" (JSE, 2004). It appears as though there is limited specific research on sustainability reporting on this sector, in particular. It is important to consider this sector in terms of their sustainability reporting disclosures, not only because their sustainable practices impact the country's food security (Johnston, 2019), but also because consumers and investors who invest based on the sustainability practices of companies would be interested in "high impact" companies.

Given that JSE-listed companies have had a tacit mandate to integrate reporting on sustainability issues since 2010, it is imperative that studies should exist on the influence of the reporting requirements to establish its efficacy. Furthermore, South Africa is a trailblazer for sustainability reporting (JSE, 2013b) and such studies in a South African context may also encourage other jurisdictions to implement similar requirements for sustainability reporting.

Studies exist on the extent to which the reporting requirements have been implemented. However, these studies appear to lack specific focus on the food production sector of the JSE. The focus of this article is to therefore answer the following question: Has there been progress in the ESG reporting of food production companies listed on the JSE changed over time?

2.2 Objectives

The primary objective of this paper is to examine the level of ESG disclosures of food-producing companies listed on the JSE over time in order to identify progress and possible determinants of progress. A secondary objective of this paper was to determine an appropriate evaluation framework to use to rank the level of ESG disclosures of such companies.

2.3 Methodology

In order to achieve this objective, a framework was developed and used to perform content analysis on ESG disclosures of food-producing companies listed on the JSE for financial years ending in 2010 to 2019. The ESG disclosures were ranked based on the views of the researcher and therefore this suggests a relativist approach. Furthermore, interpretation of the results of any observed changes are based on subjective views. Given that this paper is subjective in nature, an interpretivist research philosophy has been employed and thus a qualitative approach applied. The design of the study performed was inductive as the paper aimed to provide a rationale for the observations noted in changes in the levels of ESG disclosures over time after the onset of mandated integrated reporting.

Content analysis is defined as the analysis of the latent content of a body of communicated material through classification, tabulation and evaluation of its key themes in order to ascertain its meaning and probable effect (Merriam-Webster, 1940). According to Krippendorff (2018), this is one of the most important research techniques for the social sciences.

2.3.1 Sample

The JSE's food producer sector was investigated in this study. A total of 16 companies are listed under this sector of the JSE. Within this sector there are large, main-board listed,

companies and smaller, AltX listed, companies. According to the JSE (2020), the AltX is a market for small- to medium-sized companies. Purposive sampling is a nonprobability sampling method that aims to render a sample that can logically be assumed to be representative of a population (Lavrakas, 2008), this is the sampling methodology employed in this paper. In order to maintain some consistency in the size of the company being analysed, the companies listed on the main board (and not the newer AltX) were analysed. Amankwah-Amoah and Syllias (2019) determined that an SME's pursuit of sustainability initiatives could minimise their lifespan due to the resource constraints experienced by such companies. Furthermore, the annual reports of the two AltX-listed food production companies were briefly reviewed and no ESG reporting was noted, confirming the view of the aforementioned authors. Therefore, for the purposes of the study, it was deemed appropriate to only include main-board JSE listed agricultural (food producer) companies in the sample. Furthermore, companies were excluded if they delisted during the analysis period or only became listed after 2010, this was done to keep the calculation of average level of disclosure over the analysis period comparable. Therefore, the sample group consisted of eight companies; these were the companies listed on the main board of the JSE categorised under the food producer sector for the entire period from 2010 to 2019 (the evaluation period). This period was selected for evaluation given the fact that JSE main board companies were required to implement integrated reporting for financial years beginning on or after 1 March 2010 (JSE, 2018) and the aim of the paper is to identify any progress in reporting since this time.

Publicly available annual and/or integrated reports of the companies were used to evaluate their ESG disclosures over the evaluation period. The annual reports for the companies within the remaining sample group were largely obtained from the GRI sustainability disclosure database (GRI SDD). For those companies whose reports were not available on the GRI SDD, reports were obtained from "ShareDataOnline" or the individual company's website.

It is to be noted that only the "non-financial" sections of the reports were evaluated. Two rounds of evaluation were performed. Stage 1: initial high-level review of layout of each report as well as search for keywords with subsequent detailed reading around the keywords that were found. Stage 2: reading of the chairman and chief executive officer (CEO) reports

of each integrated or annual report to determine the final ratings based on the evaluation framework in Appendix 1.

2.3.2 Evaluation framework development

In the development of a framework, a literature review was performed. Previously developed frameworks were included as part of this review. It should be noted that various standards and guidelines are available for sustainability reporting. Three (3) major standards (which focus on reporting) are currently in existence: GRI, Sustainability accounting standards board (SASB) and the <IR> Framework (D' Aquila, 2018). Furthermore, the GRI is in progress with the development of a specific agricultural sustainability standard (Global Reporting Initiative [GRI], 2020) and the Sustainability Accounting Standards Board has a published agricultural products sustainability accounting standard (Sustainability Accounting Standards Board, 2015).

The frameworks and disclosure checklists reviewed as part of the literature review included detailed GRI requirements that were deemed unfit for the purpose of this paper since a number of companies within the sample did not make use of these guidelines for part of or the entire evaluation period.

A method similar to a study by Anria van Zyl (2013) was followed in this paper. In Van Zyl's study, the author made use of a self-designed "evaluation matrix" to examine the disclosures of 23 JSE-listed companies according to a Likert scale over a two-year period. The author then compared the level of reporting to determine if there was an improvement from one period to the next. A similar approach is used by this study to determine progress in the ESG reporting.

In order to draft the evaluation framework for determining the level of disclosure specific to food production companies, a number of standards and documents were referenced; refer to Table 1, which is the author's summary of documents reviewed for this paper.

Table 1: Documents referenced for drafting of evaluation framework

Acronym	Document name	
WWF	Agriculture: Facts & trends, South Africa	http://awsassets.wwf.org.za/downloads/facts_brochure_mockup_04_b.pdf
IR Framework	International Integrated Reporting Framework	https://integratedreporting.org/wp-content/uploads/2013/12/13-12-08-THE-INTERNATIONAL-IR-FRAMEWORK-2-1.pdf
GRI 300	GRI environmental standards	https://www.globalreporting.org/standards/gri-standards-download-center/?g=70185ca0-ffcb-4a9f-b719-928c1747582c
GRI 400	GRI social standards	https://www.globalreporting.org/standards/gri-standards-download-center/?g=70185ca0-ffcb-4a9f-b719-928c1747582c
GRI 101	Foundational GRI standard	https://www.globalreporting.org/standards/gri-standards-download-center/?g=70185ca0-ffcb-4a9f-b719-928c1747582c
SASB	Agricultural products Sustainability Accounting Standard	https://www.sasb.org/wp-content/uploads/2015/07/CN0101_Agricultural-Products_Standard.pdf
King III	King Report on Corporate Governance 2009	https://cdn.ymaws.com/www.iodsa.co.za/resource/collection/94445006-4F18-4335-B7FB-7F5A8B23FB3F/King_III_Code_for_Governance_Principles_.pdf

Source: Author's own Table 1

Although the principles and requirements of these documents are extensive, only the broad topic areas have been included as part of the evaluation framework used in this paper.

The framework stipulated in Appendix 1 was developed after the review of the above-mentioned documents and also with reference to a model developed by Nancy Landrum (2017). Landrum's model broadens the paradigm of corporate sustainability beyond the narrow "business case understanding" by bringing in elements of ecological science (Landrum, 2017). This sort of model seems to fall in line with the requirements of "integrated thinking" mandated by King IV and the <IR> framework. Categories included in the evaluation framework (Appendix 1) are report layout, governance disclosures, environmental impact disclosures and social impact disclosures. Each of these categories are discussed below.

2.3.2.1 Governance

Professor Mervyn King said "it is true that fish rot from the head" and therefore "companies need to set a standard at the top" (Barrier, 2003, p. 71). In other words, the importance of good corporate governance in large corporates such as those listed on the JSE is imperative as they set the tone for the sustainability of the company, including from an environmental and social perspective – not just financially and operationally. The King Code on corporate governance embodies the above sentiments and the King III was chosen as the basis of governance evaluation (refer to Appendix 1) given that the King IV only came into effect in 2017 (South African Institute of Chartered Accountants [SAICA], 2017; KPMG, 2016). King III was effective for a seven-year period from 1 March 2010 to 31 October 2017 (SAICA, 2017).

As per the King III requirements (IoDSA, 2009) a company's board of directors have various responsibilities, the first of which is to provide a foundation of ethical leadership and direct the company's strategy and operations based on this. This includes ensuring that a company is seen to be a responsible corporate citizen and consider the environmental and social impact of its operations. The board is also responsible for building and maintaining a corporate culture that is ethical.

Risk governance is another important aspect of the King III (IoDSA, 2009), where the board is responsible for developing a policy and plan for actively managing risks applicable to a

company. In the context of food production, such practices are imperative given the previous discussion on the need for sustainability in agriculture.

A higher level of integration and an appreciation for the fact that strategy, risk, performance and sustainability are inseparable (IoDSA, 2009) is an indication of higher levels of sustainability practices (and reporting thereon) for the purposes of the evaluation framework.

2.3.2.2 Environmental impact

The WWF-SA (2010) indicated that poorly managed intensive farming leaves a myriad of environmental and human health problems such as soil erosion, water pollution, exposure to toxins and climate change. Furthermore, reduction in food wastage would reduce the need for “intensive farming” as it would reduce the need for production. A large amount of wastage occurs during food storage, transportation and processing.

According to Hönke *et al.* (cited by Thorlakson *et al.*, 2018), South Africa has numerous environmental regulations, however, due to capacity constraints, they are rarely enforced. That said, mere mention of compliance with laws and regulations cannot be sufficient to effectively and sustainably manage the impact of food production companies on the environment.

Disclosure areas (included in the evaluation framework per Appendix 1) to determine the level of reporting on environmental impact of each company were determined by strong reference to the GRI 300 series, as well as the WWF facts and trends brochure referred to above.

Higher levels of sustainability practices and reporting thereon would be indicated by disclosure of strategy to manage adverse impacts to the environment as well as an appreciation of the interdependence of the food production sector with the environment.

2.3.2.3 Social impact

South Africa has a unique social setting where large groups of the population were previously disadvantaged across many facets of life: education, access to land, access to funds, to name a few (South African Government, 2018), Black Economic Empowerment and Land Reform are initiatives put in place in an attempt to level the playing field for those

previously disadvantaged. The food producer sector in South Africa is one that can greatly contribute to these initiatives. Farming in South Africa is considered to be one of the most dangerous professions in the world (WWF-SA, 2010), therefore, worker safety is an important issue.

Disclosure areas (included in the evaluation framework per Appendix 1) to determine the level of reporting on social impact of each company were determined by strong reference to GRI 400 series, as well as the WWF facts and trends brochure.

2.3.3 Report layout

As mentioned above, the level of integration of ESG reporting is the measure of progress in reporting as it is the “desired” outcome of both the <IR> Framework and the King III. In a paper by Robert Eccles and George Serafeim, the authors make use of case studies to demonstrate that separate financial and sustainability reports do not support the primary functions of corporate reporting, which is to provide information for transactional and evaluation purposes (Eccles & Serafeim, 2015). In order to determine whether or not integrated reporting is taking place and the level thereof, a separate scale was used similar to a study performed by Shelly Herbert (2018). This scale is utilised to determine the level of integration of ESG information with the financial information in the annual reporting of each company.

2.3.4 Evaluation framework rating scale

Each annual/integrated report was evaluated based on the framework referred to in Appendix 1. Summated rating scales, invented by Rensis Likert, are frequently used in the social sciences (McCutcheon, 1987), such a scale has been used for the purpose of this paper with ratings ranging from one (1) to four (4) as described below.

2.3.4.1 ESG disclosures scale:

Level 0 – No ESG reporting is noted.

Level 1 – The company reports on issues of sustainability as per a legal/externally enforced requirement.

Level 2 – Initial stages of sustainability reporting or “triple bottom line reporting”. The company reports on ESG issues beyond the legal requirement.

Level 3 – The company takes greater care in terms of sustainability reporting by taking part in and reporting on projects to restore environmental, social and governance issues.

Level 4 –Implies that the entity is integrating financial reporting with ESG reporting as required by the <IR> framework. Therefore, ESG information is “blended with strategic, operational and financial information throughout the integrated report” (Herbert, 2018, p. 88).

2.3.4.2 Report layout scale

Level 0 – No ESG reporting is noted.

Level 1– ESG reporting is contained in an external report to the annual/integrated report.

Level 2 – ESG report is included in a stand-alone section of the integrated/annual report.

Level 3 – ESG reporting is included throughout the annual/integrated report, however the information is not integrated with strategic, operational and financial information.

Level 4 –Implies that the entity is integrating financial reporting with ESG reporting as required by the IR framework. Therefore, ESG information is “blended with strategic, operational and financial information throughout the integrated report” (Herbert, 2018, p. 88).

2.4 Results

In total, 80 annual or integrated reports were evaluated. It is to be noted that only the “non-financial” sections of the reports were analysed. Two rounds of evaluation were performed. Stage 1: Initial high-level review of layout of each report as well as search for keywords with subsequent detailed reading around the keywords that were found.

Stage 2: Reading of the chairman and CEO reports of each annual or integrated report to determine the final ratings based on the evaluation framework in Appendix 1.

Overall, the level of ESG disclosures of companies, based on the evaluation framework provided in Appendix 1, has improved dramatically (from an average rating of 48% to an average rating of 69%) from 2010 to 2019, with marginal improvement in most years. It is

interesting to note that the most significant change in the level of disclosure occurs from 2010 to 2011, in line with the JSE mandate for companies to provide integrated reports. This also coincides with a report name change across 100% of the sample group, perhaps proving that the agency theory upholds stronger than stakeholder and stewardship theories. The strongest driver of the improvement in the level of reporting is the increase in environmental disclosures over the period (Figure 5). Refer to the discussion under the “environmental impact disclosures” heading below.

Figure 1 depicts the author’s own summary of the results of the overall ESG disclosure evaluation of the eight food production companies evaluated over the period 2010 to 2019. For each annual or integrated report evaluated, a rating out of four was allocated per line item of the evaluation framework in Appendix 1. Based on this, each annual/integrated report evaluated was given a score out of 80. This was converted to a percentage rating. Figure 1 reflects the average percentage rating of the sample group for each year of the evaluation period. Figure 2 presents the author’s own summary of the ESG disclosure evaluation split into categories. Refer to the discussion under the category headings below.

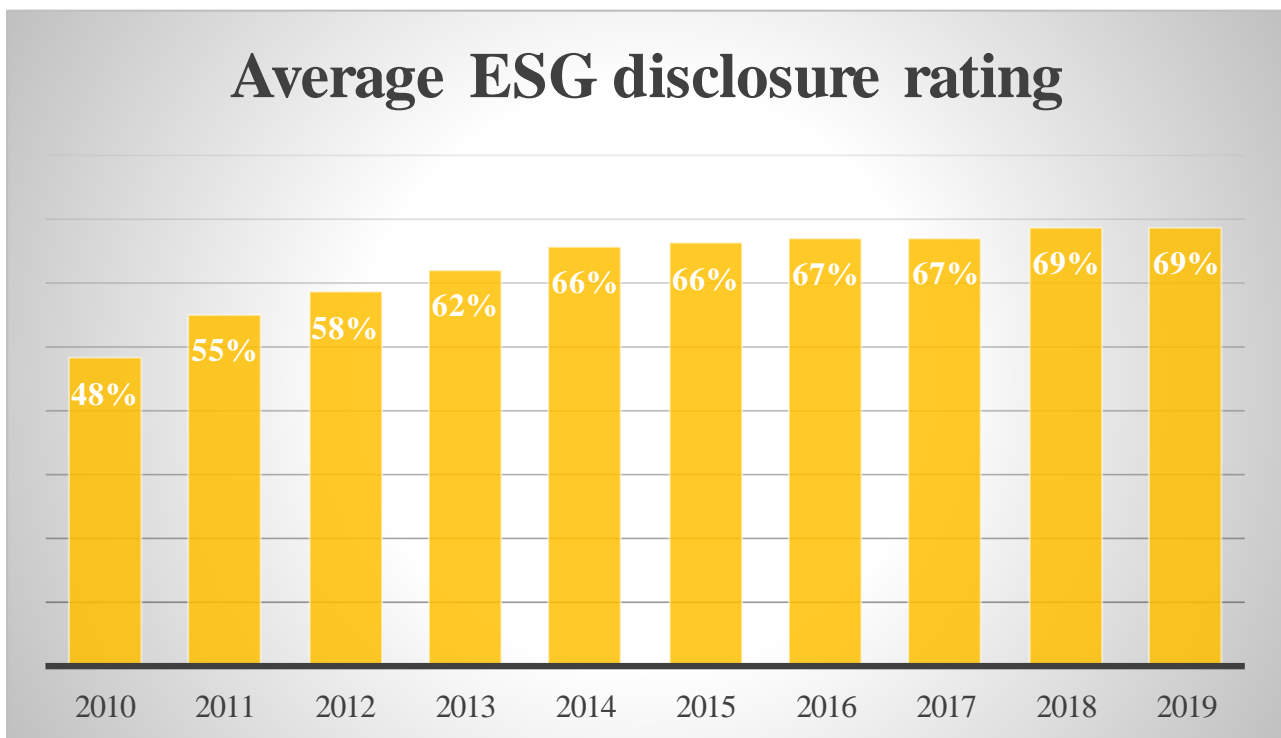


Figure 1: Average ESG disclosure rating (Author’s own analysis)

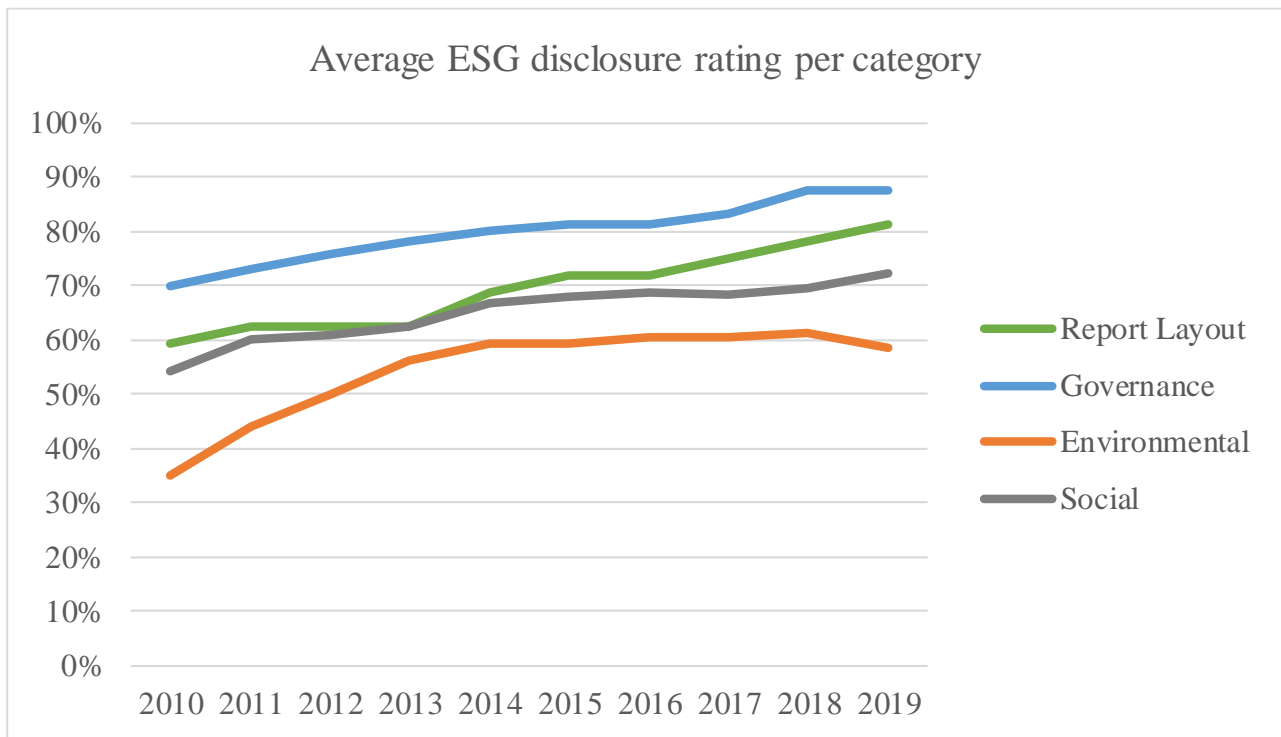


Figure 2: Average disclosure rating per category (Author's own analysis)

2.4.1 Report layout

Figure 3 represent the author’s own summary of the results of the evaluation of the sample group’s annual/integrated report layouts for the evaluation period. The percentages reflected indicate the average score out of four for the sample group in each year. Consistent with available literature and guidance materials (KPMG International, 2012; Ritchie, 2015), there is an initial period of adjustment where many companies on the JSE had to “find their feet” in the world of integrated reporting. This is reflected in the continuous movement/improvement with regard to the layout of the integrated report (Figure 3). Reporting is only truly integrated when risk, strategy, operations and finance are related and interrelated with the social, governance and environmental performance of a business. There is still some room for learning in this evolving field.

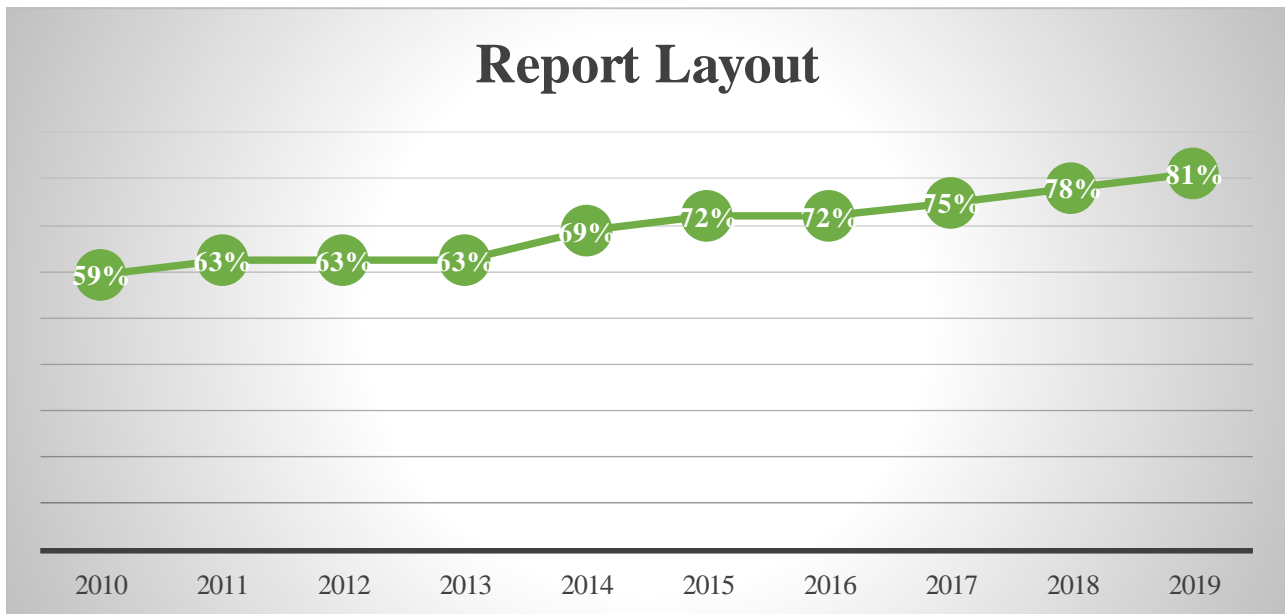


Figure 3: Average report layout rating (Author’s own analysis)

2.4.2 Governance disclosures

Figure 4 depicts the author’s own analysis of the results of the evaluation of governance disclosures of the sample group. Each integrated or annual report within the sample was allocated a score out of 12, which was converted to the percentages depicted in the figure. It is to be noted that a disclosure rating of >75% is indicative that most of the companies within the sample achieved a “4”-score according to the framework in Appendix 1. Disclosures on governance were mandated by the JSE since 2002 (SAICA, 2016), therefore, it is expected that JSE-listed companies are fairly mature in their governance practices and related disclosures. However, it is to be noted that risk management disclosures are not prominent nor well-integrated among all the companies within the sample, hence, the deviation from a full score.



Figure 4: Average governance disclosure rating (Author’s own analysis)

2.4.3 Environmental impact disclosures

Figure 5 depicts the author’s own analysis of the results of the evaluation of environmental disclosures of the sample group. Each integrated or annual report within the sample was allocated a score out of 32 which was converted to the percentages as seen in Figure 5. A steep improvement in the level of environmental disclosures is noted between 2010 and 2011 (Figure 4). This is largely attributed to more items on the framework being included in the reports across the sample group. The slight decline in the level of reporting from 2018 to 2019 is due to one of the companies within the sample group including all of their environmental reporting in an entirely separate sustainability report. This report was reviewed for completeness and the impact noted on the results, should the results have been included, the average environmental disclosure level in 2019 would be 71% and not 59% as per the figure. The results also indicate areas of concern with regard to environmental impact disclosures: the supplier evaluation and impact on biodiversity. These elements were only disclosed by a minority of the companies within the sample.

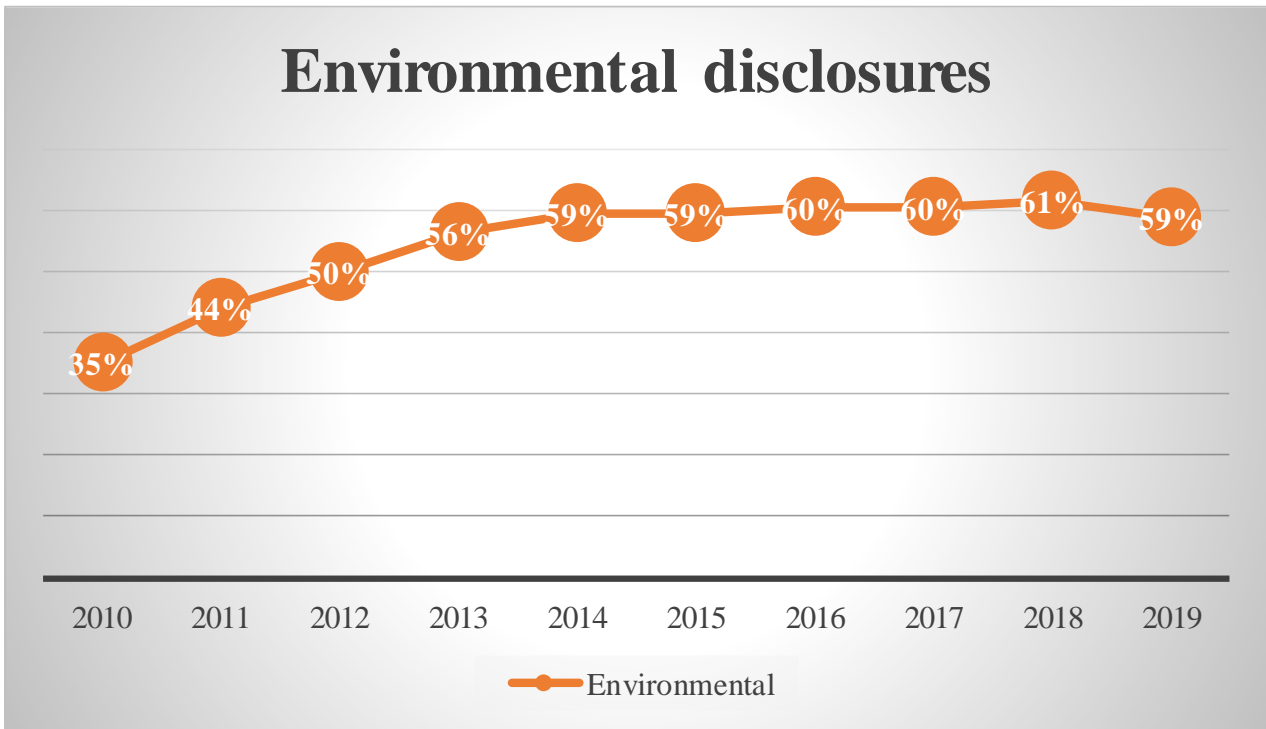


Figure 5: Average environmental disclosure rating (Author’s own analysis)

2.4.4 Social impact disclosures

Figure 6 outlines the author’s own analysis of the results of the evaluation of social impact disclosures of the sample group. Each integrated or annual report within the sample was allocated a rating out of 32, which was converted to the percentages depicted in Figure 6. Disclosures of a social nature improved incrementally over the analysis period. The overall impression obtained from review of the majority of the reports is that the primary focus is on BEE ratings as opposed to actual transformation, with only two companies within the sample who appear to have a real focus on transformation as opposed to the BEE rating. Similar to the environmental impact disclosures, the majority of the sample group failed to disclose any evaluations of the social practices of their suppliers.

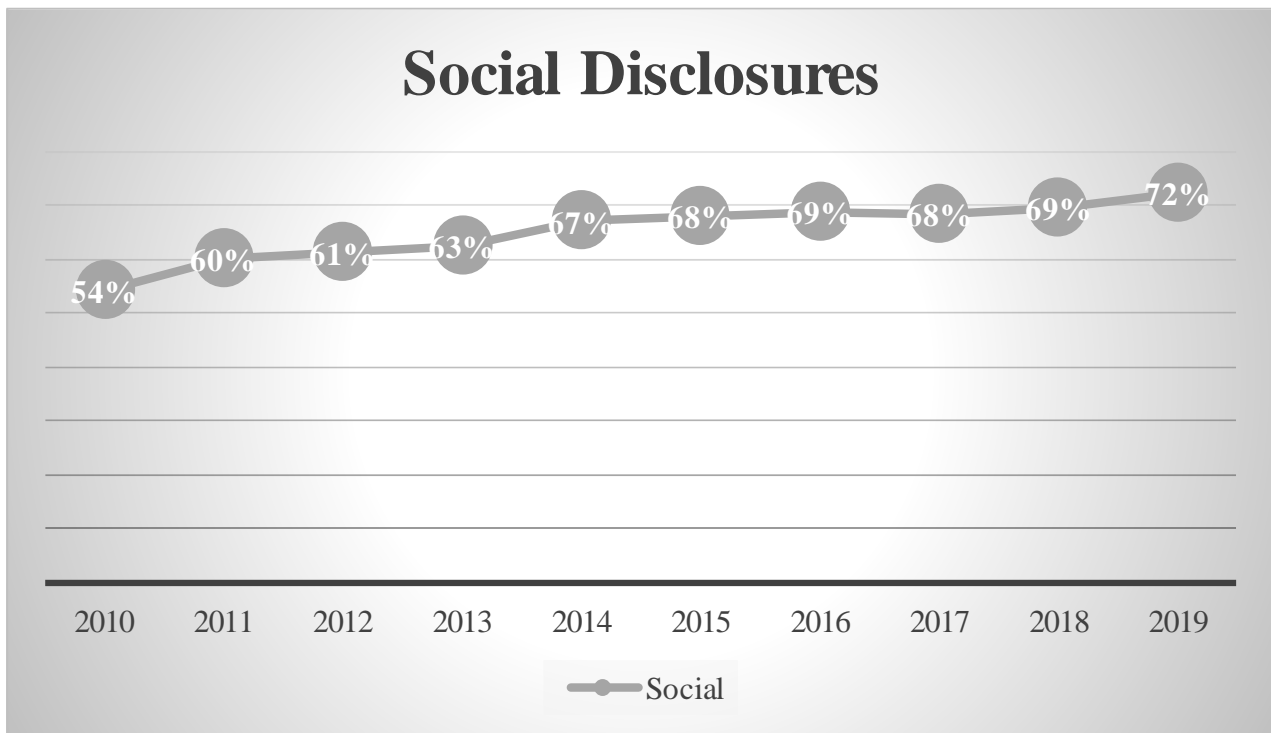


Figure 6: Average social disclosure rating (Author’s own analysis)

2.5 Discussion

The results of the content analysis indicate whether there has been progress in sustainability reporting in the main board JSE-listed food producer sector. The results can be summarised into the following main points.

Progress in reporting in the 10-year period from 2010 to 2019 is notable and is most likely to be attributed to change in JSE reporting requirements (requirement for integrated reporting). This suggests that agency theory (and not stakeholder or stewardship theories) prevails when it comes to corporate institutions and ESG issues.

In general, companies in this sector are still not reporting on their evaluations of supplier ESG practices nor their own biodiversity impact. Furthermore, the integration of ESG elements into strategy, risk and financial reporting was not noted across the full sample.

2.6 Limitations

There are a number of limitations to this study. Firstly, the sample group upon which the study is performed is limited in size and therefore the results can be highly influenced by one individual within the population.

Secondly, the evaluation framework drawn up was based strongly on GRI and WWF recommendations, since companies tend to rely heavily on specific guidelines, should a particular company within the sample group have not applied GRI guidance, performance would be poor.

Thirdly, and possibly the most important limitation, is that this study is based purely on the ESG *reporting* practices of the entities within the sample group. Therefore, it is highly likely that the actual ESG practices of these companies could differ from what is reported, positive sustainable ESG practices could be omitted from a company's reporting.

Future studies may include interviews with members of the companies to verify actual sustainable ESG practices and determine if this is translated into the ESG reporting.

2.7 Conclusion

The purpose of this study was to examine the level of ESG disclosures of food-producing companies listed on the JSE over time in order, and to determine possible causes of progress. The objective was achieved by development of an evaluation framework and subsequent application of this framework to perform content analysis on companies within the sample group.

The results of this study show great progress in the 10-year analysis period, largely driven by improvements in environmental reporting. The change in reporting over time indicates that the driving force behind the reporting is changes in JSE requirements, supporting the agency theory and previous studies, which reveal that companies report on ESG in support of a business case as opposed to a sustainable case (Landrum & Ohsowski, 2017). Furthermore, disclosures of company biodiversity impact as well as evaluation of supplier ESG practices are areas of disclosure which still have room for improvement in this sector.

As a consumer, it is comforting to note that ESG reporting (and thus good ESG practices) are improving in large, listed food production corporates. However, with the rise of the

curious consumer, it is in food production companies' best interests to have more transparency into the ESG practices of their supply chains.

Appendix 1: Evaluation framework for level of ESG disclosures

Table 2: Evaluation framework for level of ESG disclosures

	Rating				
	0	1	2	3	4
Report layout					
Governance disclosures					
Is there evidence of ethical leadership?					
Is there evidence of an ethical code of conduct?					
Is there evidence of risk management?					
Environmental impact disclosures					
Is the company complying with environmental laws and regulations?					
Does the company identify and describe their ecological impact?					
Does the company disclose their energy usage and management thereof?					
Does the company disclose their water usage and management thereof?					
Does the company disclose their emissions (including greenhouse gas emissions) and management thereof?					
Does the company disclose their biodiversity impact and management thereof?					
Does the company disclose their wastage and management thereof (including food wastage)?					

Is the company assessing the environmental practices and impacts of their suppliers?					
Social impact disclosures					
Does the company comply with labour laws and regulations?					
Does the company have a diversity and inclusion programme?					
Is there evidence of an assessment of the health and safety impact of products/services on customers?					
Is there evidence of the management of the health and safety of workers?					
Is the company aware of and managing their local community impact?					
Is the company disclosing their BBBEE status and management thereof?					
Is the company training their staff (especially those previously disadvantaged)?					
Is the company assessing the social impacts of their suppliers?					

Source: Author

ESG disclosures scale:

Level 0 – No ESG reporting is noted.

Level 1 – The company reports on issues of sustainability as per a legal/ externally enforced requirement.

Level 2 – Initial stages of sustainability reporting or “triple bottom line reporting”; the company reports on ESG issues beyond the legal requirement.

Level 3 – The company takes greater care in terms of sustainability reporting by taking part in and reporting on projects to restore environmental, social & governance issues.

Level 4 – Implies that the entity is integrating financial reporting with ESG reporting as required by the IR framework. Therefore, ESG information is “blended with strategic, operational and financial information throughout the integrated report” (Herbert, 2018, p. 88).

Report layoutsScale

Level 0 – No ESG reporting is noted.

Level 1 – ESG reporting is contained in an external report to the annual/integrated report.

Level 2 – ESG report is included in a stand-alone section of the integrated/annual report.

Level 3 – ESG reporting is included throughout the annual/integrated report, however, the information is not integrated with strategic, operational and financial information.

Level 4 –Implies that the entity is integrating financial reporting with ESG reporting as required by the IR framework. Therefore, ESG information is “blended with strategic, operational and financial information throughout the integrated report” (Herbert, 2018, p. 88).

Appendix 2: Keywords searched

Table 3: Keywords searched

	Keywords searched for
Governance disclosures	
Is there evidence of ethical leadership?	Ethics, ethical, responsible leadership
Is there evidence of an ethical code of conduct?	Code of conduct, ethical code
Is there evidence of risk management?	Risk
Environmental impact disclosures	
Is the company complying with environmental laws and regulations?	Laws, Act
Does the company identify and describe their ecological impact?	Ecological impact, ecology, natural environment
Does the company disclose their energy usage and management thereof?	Energy, electricity
Does the company disclose their water usage and management thereof?	Water

Does the company disclose their emissions (including greenhouse gas emissions) and management thereof?	Emissions, greenhouse gas, carbon emissions
Does the company disclose their biodiversity impact and management thereof?	Biodiversity, bio
Does the company disclose their wastage and management thereon (including food wastage)?	Waste, wastage, effluent
Is the company assessing the environmental practices and impacts of their suppliers?	Supplier
Social impact disclosures	
Does the company comply with labour laws and regulations?	Laws, Act
Does the company have a diversity and inclusion programme?	Diversity, inclusion
Is there evidence of an assessment of the health and safety impact of products/services on customers?	Health, safety, customers
Is there evidence of management of the health and safety of workers?	Health, safety, worker, employee health
Is the company aware of and managing their local community impact?	Community, CSI
Is the company disclosing their BBBEE status and management thereof?	BBBEE
Is the company training their staff (especially those previously disadvantaged)?	Training
Is the company assessing the social impacts of their suppliers?	Suppliers

Source: Author's own Table 2

REFERENCES

- The Association of Chartered Certified Accountants. (2018). *Tenets of Good Corporate Reporting*. Retrieved October, 12. 2020, from https://www.accaglobal.com/content/dam/ACCA_Global/professional-insights/Tenets-of-corporate-reporting/pi-tenets-good-corporate-reporting.pdf
- Aggarwal, J. (2013). Sustainability Reporting and Its Impact On Corporate Financial Performance: A Literature Review. *Indian Journal of Commerce & Management Studies*, 4(3), 51-59.
- Association of International Certified Professional Accountants. (2018). *Sustainability terms defined*. <https://www.aicpa.org/content/dam/aicpa/interestareas/businessindustryandgovernment/resources/sustainability/downloadabledocuments/sustainability-assurance-campaign-definitions.pdf>
- Amankwah-Amoah, J., & Syllias, J. (2019). Can adopting ambitious environmental sustainability initiatives lead to business failures? *Business Strategy and the Environment*, 29(1),240-249.
- Barrier, M. (2003). Mervyn King: Principles, not rules. *Internal Auditor*, 60(4), 68-73.
- Bonthuys, J. (2018, July). Irrigation Water Use. *The Water Wheel*, July-Aug. http://www.wrc.org.za/wp-content/uploads/mdocs/WW%20July_Aug%202018%20IRRIGATION%20WATER%20USE.pdf
- Brodth, S., Six, J., Feenstra, G., Ingels, C. & Campbell, D. (2011). Sustainable Agriculture. *Nature Education Knowledge*, 3(10):1. Retrieved March 27, 2020, from <https://www.nature.com/scitable/knowledge/library/sustainable-agriculture-23562787/>
- Brundtland, G.H. (1987). *Report of the World Commission on Environment and Development: Our Common Future*. United Nations, Sustainable Development. <https://sustainabledevelopment.un.org/content/documents/5987our-common-future.pdf>
- Correia, C. (2019). *Financial Management*. 9th ed. Juta and Company (Pty) Ltd.
- Clayton, A.F., Rogerson, J.M., & Rampedi. I., (2015). Integrate reporting vs. Sustainability reporting for corporate responsibility in South Africa. In Szymanska, D & Sroda-Murawska, S. (Eds), *Bulletin of Geography. Socio-economic series, No.29*, 7-17. <http://dx.doi.org/10.1515/bog-2015-0021>

- D' Aquila, J.M. (2018). The Current State of Sustainability Reporting. *The CPA Journal*, July 2018, 44-50.
- Duignan, B. (2019). *Industrial Revolution*. Britannica. Retrieved February 10, 2020, from <https://www.britannica.com/event/Industrial-Revolution>
- Eccles, R.G, & Serafeim, G. (2015). Corporate and Integrated Reporting: A Functional Perspective. In E. Lawler, S.Mohrman & J. O'Toole (Eds.), *Corporate Stewardship: Achieving Sustainable Effectiveness* (pp. 156-172). Routledge. <https://dx.doi.org/10.2139/ssrn.2388716>
- Freeman, E. (2010). *Strategic Management: A Stakeholder Approach*. Cambridge University Press.
- Greyling, C., Vink, N., & Mabaya, E. (2015). South Africa's Agricultural Sector Twenty Years after Democracy (1994 to 2013). *Professional Agricultural Workers Journal*. 3(1), 1-14.
- Global Reporting Initiative. (2020). *Creating a sustainability standard for agriculture and fishing*. Retrieved August 29, 2020, from <https://www.globalreporting.org/information/news-and-press-center/Pages/Creating-a-sustainability-standard-for-agriculture-and-fishing-.aspx>
- Halloran, T. (2018, November, 18). A brief history of corporate form and why it matters. *Fordham Journal of corporate & Financial law*. <https://news.law.fordham.edu/jcfl/2018/11/18/a-brief-history-of-the-corporate-form-and-why-it-matters/>
- Harari, Y.N. (2011). *Sapiens- A brief history of humankind*. Vintage Books.
- Herbert, S. (2018). *Trends in sustainability disclosures in the integrated reports of South African listed companies* [Master's thesis: University of Cape Town]. Open UCT Repository. https://open.uct.ac.za/bitstream/handle/11427/29783/thesis_com_2018_herbert_shelly.pdf?sequence=1&isAllowed=y
- Hoffman, A.J. (2018). The Next Phase of Business Sustainability. *Stanford Social Innovation Review*, 16(2), 34-39. https://ssir.org/articles/entry/the_next_phase_of_business_sustainability#
- Institute of Directors South Africa. (2009). *King code of governance principles for South Africa 2009*. https://cdn.ymaws.com/www.iodsa.co.za/resource/collection/94445006-4F18-4335-B7FB-7F5A8B23FB3F/King_III_Code_for_Governance_Principles_.pdf

- Institute of Directors South Africa. (2020). *King Report on Corporate Governance in SA*. <https://www.iodsa.co.za/page/kingIII>
- The International Integrated Reporting Committee. (2013). *The International <IR> Framework*. <https://integratedreporting.org/wp-content/uploads/2015/03/13-12-08-THE-INTERNATIONAL-IR-FRAMEWORK-2-1.pdf>
- Johnston, P. (2019, November, 12). Farming in South Africa is under threat from climate change- here's how. *The Conversation*. <https://theconversation.com/farming-in-south-africa-is-under-threat-from-climate-change-heres-how-125984>
- JSE (The Johannesburg Stock Exchange). (2004). Table 2: Impact Classification. *JSE SRI Index: Background and Selection Criteria*. <https://www.jse.co.za/content/JSEIndexSelectionCriteriaItems/2004-Background%20and%20criteria%20.pdf>
- JSE (The Johannesburg Stock Exchange). (2013a). *Setting a strong enabling framework*. <https://www.jse.co.za/about/sustainability/regulator-influencer-advocate>
- JSE (The Johannesburg Stock Exchange). (2013b). *The JSE and Sustainability*. <https://www.jse.co.za/about/sustainability>
- JSE (The Johannesburg Stock Exchange). (2018). *JSE Listings Requirements*. <https://www.jse.co.za/content/JSERulesPoliciesandRegulationItems/JSE%20Listings%20Requirements.pdf>
- JSE (The Johannesburg Stock Exchange). (2020). *Why list on AltX?* Retrieved April 13, 2020, from <https://web.jse.co.za/raise-capital/equities-market/altx>
- KPMG. (2016, November 2). *King IV summary guide*. Retrieved September 7, 2020, from <https://home.kpmg/za/en/home/insights/2016/10/king-iv-summary-guide.html#:~:text=When%20is%20the%20effective%20date,commencing%20from%2001%20April%202017>
- KPMG International. (2012). *Integrated Reporting*. <https://integratedreporting.org/wp-content/uploads/2012/06/KPMG-Integrated-Reporting-Performance-Insight-Through-Better-Business-Reporting-Issue-2.pdf>
- Krippendorff, K. (2018). *Content Analysis- An introduction to its methodology* (4th ed.) Sage publications.
- Landrum, N., & Ohsowski, B. (2017). Identifying worldviews on corporate sustainability: a content analysis of corporate sustainability reports. *Wiley Online Library/ Business strategy & the Environment*. 27(1), 128-151 DOI: 10.1002/bse.1989

- Lavrakas, P. J. (2008). *Encyclopaedia of Survey Research Methods*. Sage Publications.
- Lexico. (2020). Sustainability. *UK Dictionary*. Retrieved June 30, 2020, from <https://www.lexico.com/definition/sustainability>
- Marrone, A., & Olivia, L. (2019). The level of integrated reporting alignment with the IIRC Framework: Evidence from South Africa. *International journal of business and management*, 15(1), 99 – 108. <https://doi.org/10.5539/ijbm.v15n1p99>
- McCutcheon, A.L. (1987). *Latent class analysis*. Sage Publications.
- Merriam-Webster. (1940). Content analysis. *Merriam-Webster.com Dictionary*. Retrieved June 30, 2020, from <https://www.merriam-webster.com/dictionary/content%20analysis>
- Oxford University Press. (2020). *Oxford Advanced Learner's Dictionary*. <https://www.oxfordlearnersdictionaries.com/definition/english/sustainability>
- Payne, G.T., & Petrenko, V. (2019). Agency Theory in Business and Management Research. In: *Oxford Research Encyclopedias*. <https://doi.org/10.1093/acrefore/9780190224851.013.5>
- Perez, S. (2018, July, 12) *How reports drive accountability*. Brightgauge. <https://www.brightgauge.com/blog/how-reports-drive-accountability>
- Rezaee, Z., & Brockett, A. (2012). *Corporate Sustainability: Integrating Performance and Reporting*. O'Reilly Media Incorporated. Retrieved February 10, 2020, from <https://www.oreilly.com/library/view/corporate-sustainability-integrating/9781118238066/chapter02.html>
- Ritchie, N. (2015, January, 23). *A five-step guide to kick starting integrated reporting*. Integrated reporting. <https://integratedreporting.org/news/a-five-step-guide-to-kick-starting-integrated-reporting/#:~:text=You%20won't%20perfect%20integrated,nov%20and%20in%20the%20future>.
- Rodrigues- Fernandez, M. 2016. Social Responsibility and Financial Performance: The Role of Good Corporate Governance. *BRQ Business Research Quarterly*, 19(2). 137-151. <https://doi.org/10.1016/j.brq.2015.08.001>
- Serafeim, G. (2014). *The Role of the Corporation in Society: An Alternative View and Opportunities for Future Research*. Harvard Business School Working Paper14-110. Harvard Business School. https://www.hbs.edu/faculty/Publication%20Files/14-110_e7a7f1b3-be0d-4992-93cc-7a4834daebf1.pdf

- SmartSheet. (2020). *What is Stakeholder Theory and how does it Impact and Organisation?* Retrieved March 1, 2020, from <https://www.smartsheet.com/what-stakeholder-theory-and-how-does-it-impact-organization>.
- South African Institute of Chartered Accountants. (2011). *An Integrated Report is a New Requirement for Listed Companies*.<https://www.saica.co.za/tabid/695/itemid/2344/language/en-ZA/An-integrated-report-is-a-new-requirement-for-list.aspx>
- South African Institute of Chartered Accountants. (2016). *King II*.
<https://www.saica.co.za/Technical/LegalandGovernance/King/Archive/tabid/3913/language/en-US/Default.aspx>
- South African Institute of Chartered Accountants. (2017). *King report on corporate governance*.
<https://www.saica.co.za/Technical/LegalandGovernance/King/tabid/2938/language/en-ZA/Default.aspx#:~:text=King%20III%20%2D%20CODE%20AND%20PRINCIPLES,particpant%20on%20the%20King%20Committee>.
- South African Government. (2018). *Land reform*. <https://www.gov.za/issues/land-reform>
- Sustainability Accounting Standards Board. (2015). *Agricultural products: sustainability accounting standard*. Retrieved October 12, 2020, from https://www.sasb.org/wp-content/uploads/2015/07/CN0101_Agricultural-Products_Standard.pdf
- Sustainable Stock Exchanges Initiative. (2019). *ESG Disclosure*. <https://sseinitiative.org/esg-disclosure/>
- Sustainable Stock Exchanges Initiative. (2020). *ESG Disclosure Guidance Database*.
<https://sseinitiative.org/esg-guidance-database/>
- Thompson, L. (2018, November, 18). A Second Industrial Revolution: The benefit of a sustainability report. *Fordham Journal of Corporate & Financial law*.
<https://news.law.fordham.edu/jcfl/2018/11/18/a-brief-history-of-the-corporate-form-and-why-it-matters/>
- Thorlakson, T., Hainmueller, J., & Lambin, E.F. (2018). Improving environmental practices in agricultural supply chains: The role of company-led standards. *Global environmental change*, 48(2018), 32-42. <https://doi.org/10.1016/j.gloenvcha.2017.10.006>
- Van Zyl, A. (2013). Sustainability and integrated reporting in the South African corporate sector. *Journal of sustainability management*, 1(1), 19-42.
- World Wildlife Fund South Africa. (2010). *Agriculture: facts and trends*.
http://awsassets.wwf.org.za/downloads/facts_brochure_mockup_04_b.pdf

CHAPTER 3: CONCLUSION AND RECOMMENDATIONS

This chapter summarises the research article in Chapter 2. Limitations of the study are elaborated upon in an attempt to suggest further research and make recommendations. Lastly, the final conclusions drawn based on the findings of the research article are highlighted.

3.1 Summary

The first three industrial revolutions created improvements to the way humans live their lives but is followed by a stark realisation of the need to implement these technological improvements sustainably. The agricultural industry (food producer sector), in particular, created a host of environmental and social problems. Corporate reporting is fundamental to the concept of accountability. This paper sought to examine the level of ESG disclosures of food-producing companies listed on the JSE over time in order to identify progress and possible determinants of progress. A secondary objective of this paper was to determine an appropriate evaluation framework to use to rank the level of ESG disclosures of such companies. A disclosure evaluation framework was developed and a qualitative content analysis was employed to rank the levels of ESG reporting over a 10-year period from 2010 to 2019. The study found that great progress was made from the start to the end of the decade, however, the reason for the progress is likely due to changes in JSE reporting requirements, thus supporting agency theory and advocating for such requirements in other jurisdictions. Furthermore, the findings of the study indicated that reporting on biodiversity impact and supplier ESG impact assessments are areas of improvements for the companies within this sector.

3.2 Limitations

There are a number of limitations to this paper. Firstly, the sample group upon which the study is performed is limited in size and therefore the results can be highly influenced by one individual within the population.

Secondly, the evaluation framework drawn up was based strongly on GRI and WWF recommendations, since companies tend to rely heavily on specific guidelines, should

a particular company within the sample group have not applied GRI guidance, performance would be poor.

Thirdly, and possibly the most important limitation, is that this study is based purely on the ESG reporting practices of the entities within the sample group. Therefore, it is highly likely that the actual ESG practices of these companies could differ from what is reported, most notably, is that positive sustainable ESG practices could be omitted from a company's reporting.

3.3 Recommendations

In light of the findings of the paper and bearing in mind the limitations, future studies may include interviews with members of the companies to verify actual sustainable ESG practices and determine if this is translated into the ESG reporting.

Given that food producer sector JSE-listed companies have a high environmental and social impact it is also recommended that such companies disclose:

- Biodiversity impact assessments as part of the integrated reports.
- Supplier ESG impact assessments as part of the integrated reports.
- Elements of ESG as part of strategy, financial and risk assessment portions of reporting.

3.4 Conclusion

The objective of the paper was to examine the level of ESG disclosures of food-producing companies listed on the JSE over time in order to identify progress and possible determinants of progress. A secondary objective of this paper was to determine an appropriate evaluation framework to use to rank the level of ESG disclosures of such companies.

The evaluation framework was applied to perform content analysis on companies within the sample group. The results of this paper show great progress in the 10-year analysis period, largely driven by improvements in environmental reporting. The change in reporting over time indicates that the driving force behind the reporting is changes in JSE requirements, supporting agency theory and previous studies that

show that companies report on ESG in support of a business case as opposed to a sustainable case. Furthermore, the results show that disclosures of company biodiversity impact as well as evaluation of supplier ESG practices are areas of disclosure which still have room for improvement in this sector.