The tone of Business Model Disclosure:
an analysis of integrated reports of Public Sector entities

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I, Suhail Mahomed, declare that this research report is my own work, except as indicated in the references and acknowledgements. It is submitted in partial fulfilment of the requirements forthe degree of Master of Commerce (Accountancy) at the University of the Witwatersrand, Johannesburg. It has not been submitted before for any degree or examination in this or any other University.

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Signed at 9 Crocodile Rd, Emmarentia

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Abstract

Orientation: State owned entities have recently come under scrutiny because of constant failure to ensure profitability and for corruption scandals. Examples of this can be seen through state capture corruption scandals which have been brought forward through to the Zondo Commission. Such corruption scandals have placed doubt in the minds of the public regarding the validity of integrated reports. This has called for increased accountability within the public sector. One solution to bringing about this accountability is through integrated reporting. Within the integrated report, the business model disclosure is qualitative disclosure describing how entities create value by utilising resources which is a useful component within the integrated report. However, the use of impression management strategies in business model disclosure in order to promote an entity's corporate image has been raised as a concern by prior researchers. More specifically, the use of thematic manipulation has been extensively researched.

Research purpose: The purpose of this study is to establish whether entities within the public sector adopt impression management strategies by manipulating the tone of the business model disclosure provided in their integrated reports.

Significance of study: Integrated reports contain narrative disclosures. These disclosures are subject to possible hidden manipulation and may influence users' decisions. In assessing whether impression management techniques are used, narrative disclosure analysis have given an indication whether these business models and more so the integrated reports themselves convey true information. The study contributes to the effective disclosure of business models within a South African context. Public regulatory bodies may find this study useful in assessing whether public entities concisely disclose business models.

Overview of research method: The study made use of a quantitative approach in terms of research methodology even though the data was qualitative in nature. Each sentence within the business model disclosure of public sector entities was analysed. More specifically, only schedule 2 and 3A public sector entities were observed in this study. The research design consisted of three phases. These being a content analysis, a univariate analysis and a multi-variate analysis.

Main findings: This study found that majority of disclosure in terms of business models were found to be using a non-positive tone which indicates that is no manipulation of tone through the adoption of impression management techniques. This was in line with a study performed in the private sector in a South African context (Moloto, 2019). Furthermore, the results found that there is an association between tone and other categories of disclosure (i.e. type, time and topic). Finally, when testing tone in relation to a set of disclosure variables relating to corporate governance (number of board of directors), performance (declining return on equity) and disclosure verifiability (positive tone being associated with qualitative and forward looking disclosure), it was found that there were significant statistical relationships between a more positive tone and all such disclosure variables.

Keywords: business model, impression management, tone, integrated reporting, public sector, thematic manipulation

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Chapter I – Introduction

1.1 Definition of terms

Business model - A description of how an entity generates profits creates value over the long-term.

Integrated reporting – A concise report containing an entity's financial and non – financial information and how an entity will create value in the short, medium and long term for its various stakeholders.

Impression management – A manipulative technique of influencing others' perceptions regarding a certain topic or subject matter.

Corporate governance – A system in which an entity is run and controlled by individuals in charge.

Thematic manipulation - Altering the tone of the narrative in an attempt to conceal bad news
Disclosure verifiability - Ensuring that information given to users is accurate and corresponds with other readily available information.

1.2 Context

In the twenty first century, economic development is seen as the key indicator of where a country is placed in relation to the world. Public sector entities play a key role in South Africa and other developing countries as they create opportunities for employment and development (Shekhar, 2017). Ever since the change in the government of South Africa in 1994, policy makers have been very productive. However, the results and delivery of policies have not been up to standard. Because of poor growth in the economy as well as increasing corruption, ordinary citizens are growing frustrated with the mismanagement of state owned and public sector entities (Schwella, 2001). In this study, the possible manipulation of public sector integrated reports is explored, specifically focusing on disclosure relating to business models. Business models does not have a concise meaning.

The actual description of a business model has various meanings but, at its core a business model may be seen as a description of how an entity generates cash and creates value for its stakeholders (Greiner & Ang, 2012). Business models may take different forms depending on which industry an entity is in (Cavalcante, Kesting, & Ulhøi, 2011). An entity that is within the manufacturing industry will have a different business model from financial institutions (Cavalcante et al., 2011). Distribution, franchise, manufacturing and retail are some types of business model disclosure (CIMA, 2013).

Distribution, more commonly referred to as logistics, involves delivery of goods among parties in exchange for payment (Cavalcante et al., 2011). With regards to franchising, a franchisee makes use of the franchisor's intellectual property in developing an effective business model to follow, in exchange for royalties and usually an upfront fee (CIMA, 2013). Manufacturing entities are the traditional form of a business model by means of which an entity converts raw materials into a finished product in order to meet customers' needs (Cavalcante et al., 2011). Finally, retail is similar to manufacturing except for converting raw materials as the end product is sold to customers (Cavalcante et al., 2011). Through all different types of business models, technology and artificial intelligence has now been incorporated in creating concise and effective description of an entity's business model (Zott, Amit, & Massa, 2011).

Over the past decade, the world wide web has had far reaching implications in the way in which information is shared and services are rendered by both public and private organisations (Kaisara & Pather, 2009). Examples of advancements in technology can be seen through government institutions within the public domain adopting eServices such as SARS efiling and ehomeaffairs, as an effective means of improving service delivery (Manyaka & Sebola, 2012). This has resulted in government retrenching employees within these spheres (Kaisara & Pather, 2009). This is an example of how management has placed less emphasis on human capital in creating value for public entities which, in turn, shows the effect on different stakeholders which is, in this case, employees (Achtenhagen, Melin, & Naldi, 2013). The value of business models is prevalent within integrated reports.

Greater importance has been placed on business models as they are seen to be the first determinants in influencing investors' decisions (Melloni, Stacchezzini, & Lai, 2016). An entity may explain the business model using the six capitals.

There are six capitals which consist of financial, manufactured, intellectual, human, social and relationship, and natural capitals (IIRC, 2013a). All entities try to utilise each of the capitals in order to increase value over time (IIRC, 2013a). The business model explains how an entity utilises these capitals in order to create value. However, management may be incentivised to manipulate and exaggerate such business model disclosure using different techniques (Melloni et al., 2016).

Impression management is the influence on an individual's opinions or thoughts (Merkl-Davies & Brennan, 2011). Preparers of the financial statements use certain techniques, such as impression management, in order to make an entity look a certain way in order to influence users of the financial statements (Merkl-Davies & Brennan, 2011). As evidenced by the irrationality of creating impressions, it often leads to biased and untrue financial reporting. This research focused on how management may manipulate the tone in business model disclosure (Melloni, Stacchezzini, & Lai, 2016).

According to the Oxford dictionary, tone is the general character and attitude of something such as a piece of writing or the atmosphere of an event. It is evident how tone incorporates high levels of subjectivity and could be subject to manipulation (Melloni et al., 2016). Linking business models, impression management and tone, it is easy to manipulate the business models within integrated reports using impression management techniques, more specifically using tone. Tone, as seen through the definition, is an emotive concept (Schleicher & Walker, 2010). Using future looking, unsubstantiated information, management may falsely portray an entity's business mode in its integrated report which manipulates users' views of how an entity creates value (Melloni et al., 2016). This study is a replication study following the same methodology and process of Melloni et al., (2016).

1.3 Problem statement

The use of forward looking, unsubstantiated information has been researched in many developed countries, as well as in the public sector within developing countries but information in developing countries has not yet been explored fully, more specifically within the public sector (Melloni et al., 2016). Currently, financial reporting does not consist only of financial statements as it did in prior years.

With financial reporting moving toward qualitative disclosure (Braun, 2000), an accurate representation of an entity's business model is required. Recent academic research shows that current reporting on business models are "uninformative, too optimistic, generic and incomplete" (Melloni et al., 2016). There is also a clear incentive for management of public sector entities to manipulate narrative disclosure using impression management to present an entity in a positive light. This has called into question the accountability of management within public sector entities (Schwella, 2001).

There is a lack of accountability in state owned companies as evidenced by the collapse of large public sector entities such as South African Airways and Eskom to name two (Grossi, Papenfuß, & Tremblay, 2015). The integrated report is seen as a mechanism to ensure accountability of public entities and ensure investor confidence (Frink & Ferris, 1998). Entities lacking accountability will lead to poor corporate governance and poor performance which will lead to lack of investment and failure to meet mandates (Shekhar, 2017).

Now more than ever, South Africa is in need of foreign investment because of recently being downgraded to “junk status”, as well as the negative impact of COVID – 19 (Arndt et al., 2020). To attract such investment, investors need to have confidence in integrated reports prepared by public entities (Kanyane & Sausi, 2015). Such confidence can be ensured through having sound corporate governance (Dobler, Lajili, & Zéghal, 2011). Because of major corruption scandals and fraud, public sector entities are weakening in performance even though narrative disclosures still present hopeful outcomes for public entities (Schwella, 2001). The reasons for this contradiction in terms of financial data and narrative disclosure need to be identified (Schwella, 2001).

1.4 Purpose of study

The purpose of this study is to establish whether entities within the public sector adopt impression management strategies by manipulating the tone of the business model disclosure provided in their integrated reports.

1.5 Significance of Study

As stated previously, accounting information is not based merely on quantitative information and the future of financial reporting demands more qualitative disclosures (Braun, 2000). Currently there is no audit function for qualitative information especially business model disclosures (Raimo, Vitolla, Marrone, & Rubino, 2020). These areas of an integrated report are subject to possible hidden manipulation which may not be clear and to ordinary investors and users of financials (Rutherford, 2003).

In assessing whether impression management techniques used have given an indication whether these business models and more so the integrated reports themselves portray true information. Public sector entities tend to lag behind the private sector in a South African context (Marx & Van Dyk, 2011). Deriving a conclusion of whether public sector entities adopt these impression management strategies in their business model disclosure will indicate whether this manipulation is widespread and help users in approaching narrative disclosures with caution (Schwella, 2001).

1.5.1 Practical contributions

In a practical sense, the recent collapse of South African Airways and constant load shedding by Eskom brings into question the corporate governance of the public sector. Public sector entities are not exempt from corporate governance, in fact higher levels of good corporate governance should be displayed because of the responsibility public sector entities have to the citizens (Lufuno Nevondwe, 2014). The purpose of this study is to contribute to improving the quality of disclosure by highlighting possible flaws in the business model disclosure for the benefit of all stakeholders. Furthermore, users of integrated reports will read with higher levels of professional scepticism and consequently raise important questions for those in charge of public sector entities to ensure accountability (Rensburg & Botha, 2014).

1.5.2 Methodological contributions

In terms of methodological significance, repeating the study in a public sector space will allow for further replication in countries where the public sector is struggling and where users are confused about how public sector entities collapse while it seems as if the entity was performing. It will further enable researchers in other developing nations to determine whether impression management strategies are being made use of in integrated reports of public sector entities (Guillamon-Saorin, 2007).

1.5.3 Academic contributions

In the academic space, this research will contribute to the body of knowledge on narrative disclosures. Previous studies have focused only on narrative disclosures, such as the chairman's statements (Yasseen, Moola-Yasseen, & Padia, 2017). Past research has also only been completed in the private sector i.e. JSE listed entities and not the public sector. As a result, there is limited research done in the public sector. Further, this study will be performed using an established methodology in line with Melloni et., al (2016) by observing the manipulation of tone. In comparing the disclosure variables against each other, a of linear regression analysis will be performed. This type of analysis is reliable when comparing two types of data inputs in relation to each (Passing & Bablok, 1983). This would be performed through the univariate and multi-variate analysis (Melloni et al., 2016).

1.6 Research question

The research question is: Does management of public sector entities adopt impression management strategies in their integrated reports by manipulating the tone of the business model disclosure?

1.7 Limitations of study

The research is a quantitative research and quantitative research has its inherent limitations. Both quantitative and qualitative research contains subjectivity (Libarkin & Kurdizel, 2002). There are times where information which is subjective in nature cannot be objectified and this may appear to be the case with assessing tone of narrative disclosure (Libarkin & Kurdziel, 2002). However, quantitative and qualitative research are not opposites and should be used in conjunction with each other (Bagdonienė & Zemblytė, 2005). This study will focus only on quantitative research, limiting deeper analysis of why management manipulate business model disclosure.

This research topic is subject to certain limitations. Firstly, in this research, only public sector entities are explored i.e. schedule 2 and 3 public sector entities. Further, not all public sector entities will be analysed. However, the sample will be large enough to form conclusions of the population. The annual reports observed will be the 2019 annual report and not a comparison of reports over time. will make it difficult to explore the change in tone over time. Secondly, the researcher will not discuss the effect of non-financial performances on disclosure tone.

Some government entities follow a specific mandate and are not profit-making entities so do not specifically disclose business models. These entities follow a mandate and describe how the capitals were utilised which fundamentally constitute a business model. The legal mandate together with the situational analysis, which describes how value was created using the six capitals, was used as a proxy of the business model for some of the smaller public entities.

Finally, impression management consists of strategies making use of thematic manipulation, syntactical manipulation, performance comparisons and attribution of organisational outcomes (Melloni et al., 2016).

Thematic manipulation is where preparers manipulate the complexity of written material through obfuscation (Merkl-Davies, 2007). Syntactical manipulation is where words and phrases are placed in such a way as to confuse the reader and distort a sentences' meaning (Merkl-Davies, 2007). Lastly, performance comparisons and attribution of organisational consists of comparisons to worse situations to manipulate a readers perception of a given fact. For example, "*the entity has recorded a gross profit margin of 10% compared to the market of 8%.*" This paper only focuses on thematic manipulation.

1.8 Assumptions of study

An assumption is made that good news will imply a positive tone (Clatworthy & Jones, 2003). The entire schedule of public entities was not explored and the sample chosen was assumed to be reflective of all public sector entities.

The study included subjectivity in analysing business model disclosure but the study was performed under a positivist paradigm. The assumption of such a paradigm is that the researcher is objective and unbiased in the study.

Chapter II – Literature Review

2.1 Introduction

The purpose of the literature review is to provide a foundation of knowledge on the topic (Hart, 2018). This identifies prior research performed and prevents duplication and accordingly gives credit to prior researchers and finds gaps within current research (Hart, 2018). There are different types of literature reviews.

A structured literature review (SLR) was used for this study. This ensures that business model disclosure is discussed in its entirety not leaving out any major discussion points (Hart, 2018). The diversity of sources of literature within accounting research has resulted in a need for a systematic methodology to outline associated theories and models (Armitage & Keeble-Allen, 2008). As such, when scoping out a policy-based study the SLR can be considered as a means by which critical literature central to and underpinning the research can be mapped out (Armitage & Keeble-Allen, 2008). Data was obtained from multiple sources.

Google scholar was the search engine and the main source of obtaining prior research from reliable journal articles. Keyword searches using words and phrases such as ‘business model disclosure, tone, integrated reporting, public sector within South Africa and impression management’ were conducted to find articles relevant to the research topic (Wright, Brand, Dunn, & Spindler, 2007). The literature review has been separated into subsections.

The following diagram illustrates the flow of the literature review.

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Figure 1: Literature review flow diagram

2.2 Background

The term or idea of a business model first gained popularity during the early 1990s when e-commerce made its way into the business world (Melloni et al., 2016). With the introduction of an entirely foreign way of earning income, investors initially failed to come to grips with the idea of the internet. Entities such as Amazon were on the rise and required funding in order to grow (Magretta, 2002). Investors needed convincing as to how such a foreign concept was to create value in the long term, which required the explanation of the entity's business model (Achtenhagen, Melin, & Naldi, 2013).

The term was used to describe new and innovative ways of conducting business. (Melloni et al., 2016). As a consequence, the topic of business models became more popular among academics and business researchers with the introduction of various new types of businesses as opposed to the old-fashioned retailer or wholesaler of products but it was soon realised that business models cannot be explained in a simple manner (Shafer, Smith, & Linder, 2005). This caused confusion as to what constitutes a business model.

There is no single definition of a business model which contributes to the confusion (Magretta, 2002). In a study performed in 2011, 103 business model publications were reviewed and it was found that 37% do not define the concept, while 44% explicitly define it by referring to key components making up a business model (Zott, Amit, & Massa, 2011). The remaining 19% of publications refer to prior research in defining the concept. There is however a one main description of a business model.

The dominant definition for the business model concept is that it is a description of how entities create and preserve value over the long term (Melloni et al., 2016). These different interpretations of business model disclosure have made it difficult to set a consistent basis for upcoming entities in new industries to disclose the business models (Shafer et al., 2005).

When the internet age was developing, many investors invested their money into entities with profits envisaged, only to be left disappointed. The issue does not lie with the concept of a business model but rather with its distortion and misuse (Beattie & Smith, 2013).

Before a business model can be effectively disclosed, managers require a definition of a business model. Such a definition which removes any sort of obfuscation and provides a simple image (Magretta, 2002). Because of this confusion, business model disclosure can become subjective and has resulted in inconsistencies in different business model disclosures (Zott et al., 2011).

2.3 Importance of entities within the public sector

The importance of state owned entities is obvious because of the impact that they have on ordinary citizens (Mbo, 2017). Public entities are independent bodies, partially or wholly owned by government therefore not independent from the state (Roper & Schoenberger-Orgad, 2011). They perform specific functions and operate in accordance with a particular Act. Public entities may also be described as entities which provide services by following a business based model

where profits are generated in the provision of a service as opposed to operating on a non-profit basis with total government control (Roper & Schoenberger-Orgad, 2011). However not all public entities are based on profit based business models. An example of this is the Road Accident Fund where the entity carries out its mandate to pay funds to those affected by accidents and has no profit making function. Essentially, public entities are created to perform commercial activities on behalf of the government.

In South Africa, in line with international trends, a number of state owned entities have been corporatised. Corporatisation refers to the transformation of state assets or agencies into state-owned corporations and was introduced in some sectors to promote more effective and efficient service delivery, particularly following the democratic election in 1994 (Mbo, 2017). Making use public authorities rather than full privatisation is seen as taking advantage of private-sector efficiencies while maintaining public accountability (Roper & Schoenberger-Orgad, 2011).

When looking at the list of South African public entities, many of these entities have an impact on urban growth and development (Kanyane & Sausi, 2015). The importance of public sector entities cannot be overlooked as the government is a key facilitator of economic growth (Sturesson, McIntyre, & Jones, 2015).

The Government acts as an 'economic entrepreneur' when they provide services to the public via state owned companies (Gildenhuys, Fox, & Wissink, 1991). Similarly, to how entrepreneurs create jobs and boost a country's economy, public sector entities do the same. Because of the risk of huge job losses, state owned companies are generally protected from business failure as a result of government funding which ensures this does not occur (Wong, 2004). An example pf this is South African Airways receiving R26,7 billion from government in order to save theairline. This may result in poor corporate governance and failure to meet objectives (Arndt et al., 2020).

This 'too big to fail' ideology may lead to the board and management of state-owned companies to become negligent in their duties thereby hampering entity value creation because of their failure to operate the entity in an effective and efficient manner (Kanyane & Sausi, 2015). This highlights the need for an effective oversight and performance mechanism to require the board and management to be held accountable (Frink & Ferris, 1998). Further, by investigating whether management adopts impression management strategies, this will help identify manipulation techniques are evident in integrated reports (Wong, 2004). As stated previously, the government contributes to a country's economic growth and this may be observed through recent statistics.

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In terms of statistics, public entities produce approximately 15% of gross domestic product in Africa, 8% in Asia and 6% in Latin America (Armstrong, 2015). Public entities also play an important role as stated earlier in providing jobs as approximately 5% of employment is provided by state owned entities and accounts for 20% of investment (Mnyaka, 2014).

2.4 Public Sector

2.4.1 Public sector and the PFMA

Public sector entities have been in the spotlight over many years because of inefficient operations, fraudulent activity and misappropriation of assets by management (Schwella, 2001). The public sector has been criticised for not fulfilling duty in improving infrastructure and creating stability in South Africa’s struggling economy (PWC, 2015). The need to ensure stability within the public sector is crucial (PWC, 2015). One key mechanism introduced to ensure this stability is achieved is the introduction of the PFMA (Nair, 2006).

For the public sector, the political environment requires a different mode of governance that focuses mostly on checks and balances and especially on systems which emphasise the issues of ethics and codes of conduct (Fourie, 2009). The PFMA aims to ensure transparency, accountability and sound management of revenue, expenditure, assets and liabilities of the institutions to which the PFMA belongs, being public sector entities (Fourie, 2009). In addition, new mechanisms have been introduced to ensure independent oversight.

In terms of mechanisms to ensure oversight, there is now a review process where governance is monitored by the legislature and its committees, and particularly by oversight bodies such as the Auditor-General, the Public Protector and the Public Service Commission, as well as via the activities of co-ordinating departments such as the Department of Public Service and Administration and the National Treasury (Fourie, 2009). Entities falling within the ambit of the PFMA also have to be audited which provides accountability and control in ensuring that management acts in the best interest of the entity (PFMA, 1999b). Entities falling in the ambit of the PFMA are separated into different schedules (PFMA, 1999b).

The PFMA has 289 entities included in the Act and the entities are separated according to three schedules (PFMA, 1999b). Schedule 1 includes constitutional entities, schedule 2 includes major public entities and schedule 3 includes other public entities (PFMA, 1999b). These other public entities are further separated into parts A, B and C (PFMA, 1999b). Part A includes national public entities, Part B includes national government business enterprises and Part C includes provincial public entities (PFMA, 1999b).

2.4.2 Accountability within the public sector

Accountability is the trademark of modern democratic governance (Bovens, Schillemans, & Goodin, 2014). Accountability can be defined as a social relationship in which an individual in a position of influence has an obligation to explain and to justify his or her conduct to parties affected by the individual in power (Roper & Schoenberger-Orgad, 2011). However, state owned entities have abused the position of influence and have not been good examples of accountability.

It is not surprising that state owned enterprises are at the forefront when it comes to major corruption and fraud (Kanyane & Sausi, 2015). These companies are run with contradictory goals in mind and the common outcome is corruption (Kanyane & Sausi, 2015). Many of the state owned entities get away with corruption because of the lack of oversight and few severe consequences for those who are involved in corruption which indicates a lack of accountability (Ngonini, 2014). An example of this is through the production of both Medupi and Kusile power stations. Billions of rands have exceeded budgets without management being held accountable for legitimate reasoning for the excess expenditure. It is evident that there is limited research on accountability of state owned entities (Chiu & Hung, 2004).

According to Luke (2010), public accountability is difficult to achieve. Public entities have clear objectives in terms of achieving financial goals as well as social and environmental mandates. Balancing these two objectives can be difficult as management try to operate independent of government influence, yet are ultimately answerable to government as shareholders, and are closely monitored by a wider government and non-government audience (Luke, 2010).

As a result, accountability can become complex (Luke, 2010). Taxpayers have grown frustrated at the lack of accountability within state owned entities as taxpayers monies are being misappropriated (Luke, 2010). Accountability in state owned entities is an issue which cannot be ignored because of the responsibility that is owed to the public (Sturesson, McIntyre, & Jones, 2015).

State owned entities are accountable to various stakeholders such as government, creditors, credit rating agencies and the public and its special groups (Sturesson et al., 2015). Accountability within the public sector is different from the private sector. There is a low financial emphasis in the private sector. Integrated reporting is a mechanism which can help solve the issue of accountability within state owned entities and will be discussed further (PWC, 2015).

2.4.3 Importance of integrated reporting and how it can achieve accountability in the public sector

Entities now influence and affect various stakeholders on a huge scale because of globalisation (PWC, 2015). Users of the financials are not limited to the typical investor or lender, but include a range of groups including but not limited to, the environment, general society and government

(Vaz, Fernandez-Feijoo, & Ruiz, 2016).

Management of an entity are responsible for providing accurate information to these various stakeholders in order to make informed decisions (Courtis, 1998). The stakeholders are those for whom financial reports are prepared. As society changes, so do people, governments, investors, lenders and other stakeholders of an entity (Bovens et al., 2014). Because of the ever-changing society, simple number crunching financial statements do not simply provide enough useful information (Rensburg & Botha, 2014).

Management have various means to communicate information to stakeholders (Courtis, 1998). The annual report provides comprehensive information about an entity's achievements and facilitates a reader's expectation of a particular entity (Courtis, 1998).

Stainbank and Peebles (2006) investigated the importance of information obtained from annual reports within a South African context. The results found that information provided in these reports provided vital information about investment decisions (Stainbank & Peebles, 2006). The study also found that the main source of information used by those who prepare annual reports is stockbroker advice, but that users of such reports prefer communication from management through these very reports (Stainbank & Peebles, 2006).

Entities have a broader effect on society and therefore the traditional methods of corporatereporting are changing with shifts to more non-financial information being disclosed for stakeholders (Subramanian, Insley, & Blackwell, 1993). It is imperative that the annual report is effectively used to communicate useful information (Courtis, 1998).

The annual report is seen as a mechanism to ensure accountability and good governance practices (Lee, 1994). It allows for various stakeholders to analyse financial, as well as non-financial, data on how an entity has been operating and the effects on the different stakeholders (Lee, 1994). Through disclosure within the integrated report, the public i.e. Taxpayers will have a better understanding of the utilisation of public funds (Vera-Mun˜ oz, Ho, & Chow, 2006).

Government functions through the collection of money from taxpayers i.e. the general public (Schwella, 2001). The public have a direct financial interest in how government is utilising such money and there is a need for accountability within the public sector through the annual report (Lee, 1994). Because the general public are the primary stakeholder of public entities, there is a great expectation of delivery from these entities (Manyaka & Sebola, 2012).

Public sector organisations are under constant pressure to develop better reporting (KPMG, 2012). Integrated reporting can also be used to facilitate state owned companies to achieve accountability even though there may be conflicting objectives (KPMG, 2012). The reason for this is that integrated reporting is versatile (Stainbank & Peebles, 2006). It can be adapted to take the goals of public entities into account and to provide public entities the opportunity to explain how competing objectives have been balanced (KPMG, 2012). The use of integrated reports was initially for the private sector (Stainbank & Peebles, 2006).

Now the use is not limited to the private sector and the effects of disclosure within integrated reports may provide a useful outcome within public sector entities (PWC, 2015). An example of this is poor performance and required disclosures within integrated reports. This causes a decrease in capital markets of a private entity (Baginski, Hassell, & Hillison, 2000). In a similar way this would make poor performance of public sector entities known and result in management being held accountable (KPMG, 2012).

2.5 Impression management strategies

Impression management is derived from social psychology (Tedeschi, 2013). Social psychology refers to the study of how human thought and behavior is influenced by the presence of other human beings (Tedeschi, 2013). Also sometimes referred to as self-presentation, impression management is the process of controlling how a person, fact or idea is perceived by others by making use of certain persuasive techniques (Tedeschi, 2013). In terms of this theory, individuals are viewed as actors performing to an audience to gain support for moral, social or financial goals (Tetlock & Manstead, 1985). Although this concept of impression management may be seen from a behavioral and personal influence, it can be applied to a larger context in terms of organisations where management may portray information in a favorable manner to create a desired impression (Gardner & Martinko, 1988).

Therefore, it is possible for management to make use of such mechanisms to create impressions within financial reports. An example of this is when Enron appeared to have managed impressions with words when the underlying numbers within the financial statements reflected differently (Merkl- Davies & Brennan, 2007). This is how users were deceived.

The theory of impression management examines management's attempts to manipulate how users perceive information within financial reports by selecting and presenting narrative information in corporate documents in a favorable manner intended to change readers' perceptions of corporate achievements (Godfrey, Mather, & Ramsay, 2003). Impression management may be seen from two different lenses: proactive and control-protective (Dowling & Pfeffer, 1975).

The proactive lens is management making use of impression management to enhance the reputation and status of an entity (Dowling & Pfeffer, 1975). The control-protective lens is manipulation to prevent an established image from being tainted (Dowling & Pfeffer, 1975). Impression management within financial literature tries to explain management's attempts to control the way financial data are perceived by users (Merkl-Davies & Brennan, 2007).

Within the integrated report, management may convey information in a way that purports self-interest (Gardner & Martinko, 1988). What exacerbates this issue is the fact the integrated reporting is used as a means to legitimise the actions carried out by management and convince stakeholders that management is in fact running an organisation effectively (Stainbank & Peebles,2006).

It may not be management’s intention to manipulate users using impression management techniques but within the corporate setting of disclosing certain information in a particular manner impression management may manipulate a user in decision making (Gardner & Martinko, 1988). Management has a responsibility to shareholders to act in the best interests of its shareholders as shareholders provide resources to an entity (Armstrong, 2015). Management has to give feedback to shareholders on the effectiveness of the utilisation of these resources (Armstrong, 2015). This provides management with an opportunity to make use of impression management strategies (Yasseen et al., 2017).There are two main reasons why entities make use of impression management strategies (Yasseen et al., 2017).

The first reason is that disclosures provided to stakeholders are a reflection of the performance of management i.e. a mechanism to ensure accountability and because of this management can aim to portray themselves in a positive light (Yasseen et al., 2017). This reason is supported by Frink and Ferris (1998) that concluded that in an accountability context, management engage in impression management in anticipation of an evaluation of conduct (Frink & Ferris, 1998). The first major reason is a way in which management serve their self-interest. Aerts (2005a) found that positive disclosure in annual reports is indicative of a competent management team which leads to reduced accountability and questioning from shareholders and investors (Aerts, 2005a).

Secondly, management would prefer not to place uncertainty in the minds of shareholders (Yasseen et al., 2017). This will cause more scepticism from shareholders, resulting in management's actions being questioned. Aerts (2005b) found that negative disclosures in terms of the annual report requires further explanations in order to convince shareholders that such negative outcomes have a basis and are legitimate. Investor uncertainty leads to investors selling shares which causes the signaling effect (Godfrey et al., 2003). This signaling effect causes a reduction in share prices (Aerts, 2005b). Recent corporate failures have placed increased scrutiny on management.

Corporate failures such as Enron and Worldcome and, more recently, Steinhoff have caused users of financial statements to question whether or not management are manipulating shareholders and potential investors and have brought into question the usefulness of integrated reports (Merkl-Davies, Brennan, & McLeay, 2011). Impression management is seen as a contributing factor of such corporate scandals and regulators are becoming aware of such manipulation (Merkl-Davies & Brennan, 2007).

Davison (2002) found that a large number of investment banks are facing allegations of manipulation in annual reports. Manipulation within these integrated reports was found to be making use of impression management strategies (Davison, 2002). Another example of impression management is through minimal narrative disclosure (Leung, Parker, & Courtis, 2015).

A study in Hong Kong, where impression management strategies was adopted through such minimal narrative disclosure (Leung, Parker, & Courtis, 2015). It was observed that entities which are performing well tend to disclose less as it is public information. Another study performed by Clatworthy and Jones (2006) found that another way in which management could conceal lackluster performance is hidden by manipulating the diction used within annual reports.

By making use of certain vocabulary and words to describe the financial performance, Clatworthy and Jones (2006) concluded that this may be used as a manipulation mechanism. An example of this is the use of more personal pronouns in the chairman's statement in describing financial performance (Clatworthy & Jones, 2006). It is evident that a positive tone can be used to manipulate financial information (Melloni et al., 2016). Together with investigating the importance of information within integrated reports, Stainbank and Peebles (2006) also highlighted the importance of true and unbiased reporting.

The study went on to describe the need and most important reasons for some sort of regulation of narrative disclosures and, more specifically, in the case of this study, business models (Stainbank & Peebles, 2006). It is important to understand the social psychology behind impression management in order to categorise the reasons for impression management (Leary & Kowalski, 1990).

The social psychology literature of impression management consists of two different processes which are impression motivation and impression construction (Leary & Kowalski, 1990). Impression motivation is described using the circumstances which motivate individuals to engage in impression management (Leary & Kowalski, 1990). An example of this is hoping for others to view one as a leader in the workplace. Impression construction is the tools and mechanisms used in creating the desired impressions (Leary & Kowalski, 1990). An example of this would be taking action of leading discussions when the opportunity arises in order for others to view one as leader (Leary & Kowalski, 1990). Impression management can be categorised in to four viewpoints.

2.5.1 Four viewpoints of impression management

The adoption of the different perspectives, affects the explanation for the motives. This explains the reasons why individuals adopt impression management strategies (Brennan & Merkl-Davies, 2013).

Economic – The economic perspective is linked to agency theory. Management has motivation to maximise their own compensations as good performance result in management being rewarded for optimal running of an entity through increased salaries and hefty bonuses (Brennan & Merkl-Davies, 2013). The bias prevalent in this viewpoint is reporting bias (Brennan & Merkl- Davies, 2013). The two main ways in which impression management used in the economic perspective is that management tend to disclose negative outcomes with a certain level of opacity. Conversely, management tend to emphasise positive organisational outcomes (Brennan & Merkl-Davies, 2013). This results in capital misallocations and resulting in management abusing information asymmetry (Leary & Kowalski, 1990). An example of this is the following narrative disclosure: *“The entity’s share price has dropped by 10% mainly because of market sentiment”.*

Psychological – In contrast to the economic perspective, the psychological perspective replaces the view of managers, who make corporate reporting decisions solely on the basis of cost-benefit calculations, with a psychological view which takes the social relations inherent in the decision context into consideration (Brennan & Merkl-Davies, 2013). The psychological perspective is linked to the attribution theory (Brennan & Merkl-Davies, 2013). Management’s motivation in this case is to win social and material resources such as public acclaim for being a strong management team. The bias prevalent in this case is management’s self-serving with manipulation within performance attributions (Merkl-Davies, Brennan, & McLeay, 2011). As with the economic perspective, this often leads to capital misallocations (Brennan & Merkl-Davies, 2013). An example of this is the following disclosure: *"Earnings before interest and tax has dropped by only 2% when compared to the industry drop of 20% during the 2020 financial year. This was due to management's integrated thinking to find innovative ways to maintain profitability".*

Sociological – Under the sociological perspective, there are multiple links to various theories for example, the stakeholder theory, legitimacy theory and the institutional theory. Studies adopting the sociological perspective regard impression management as resulting from structural constraints exerted by different stakeholder groups or by society (Brennan & Merkl-Davies, 2013). Impression management is seen either as a response to concerns of various stakeholder groups or as a response to public pressure relating to a controversial issue or event (stakeholder theory), or as arising from inconsistencies between organisational and societal norms and values (legitimacy theory) (Brennan & Merkl-Davies, 2013). An example of this is the following disclosure: *"The world faces a constant challenge of ensuring sustainability and the entity has ensured that production processes are environmentally friendly."*

Critical – The critical view is characterised by a realist view of an organisations reality combined with a critical stance (Brennan & Merkl-Davies, 2013). The aim of this research is commitment to changing realities. The aim of critical impression management research is to expose hidden interests in corporate reporting by making use of rhetoric and other grammatical features (Chua, 1986). Studies adopting a critical perspective predominantly focus on the use of impression management and are linked to the political economy and other critical theories (Brennan & Merkl-Davies, 2013). Managements' main motivation from this point of view is to gain/maintain power and the consequence of this is autocratic management. An example of this is the following disclosure: *"What has been the reality of the industry during the Covid pandemic? We have still maintained a low level of gearing despite the effects of Covid."* Looking at how studies adopt the different perspectives of impression management, it is important to also understand the different forms of impression management used by management to influence users decisions (Merkl-Davies & Brennan, 2007).

2.5.2 Types of impression management

The following summarises the seven types of impression management techniques. It is important to gain an understanding of the different types of manipulation in order to isolate the type of manipulation this study focuses on, thematic manipulation. Prior research may be explored in terms of these seven categories providing examples of each type.

Reading ease manipulation: Is disclosure that confuses the reader to a point where the reader cannot understand what the point of the disclosure is. Studies generally find integrated report narratives to be difficult to read and even readers who have depths of financial knowledge find it difficult to fully comprehend financial narratives (Lewis, Parker, Pound, & Sutcliffe, 1986). Another type of impression management manipulation is by using rhetoric.

Rhetorical manipulation: Within this type of impression management, managers conceal negative outcomes using rhetorical devices, such as pronouns and the passive voice (Brennan & Merkl-Davies, 2013). Thomas (1997) found that managements' disclosure to shareholders differ between profitable and unprofitable financial years using this technique. The third type of manipulation which is visual and structural.

Visual and structural manipulation: Management may use certain techniques to display financial information in a positive light using graphical representations (Merkl-Davies & Brennan, 2007). An example of this is management attempting to portray a more favorable impression using graphs as a tool to deceive readers (Aerts, 2005b). Management can make use of performance comparisons to deceive users' perception.

Performance comparisons: Bias may be prevalent within numerical disclosures (Merkl-Davies & Brennan, 2007). This type of manipulation is when entities make comparisons which allow them to display financial information in a positive light (Frink & Ferris, 1998). Lewellen, Park, and Ro (1996) investigated and found that share price performance benchmarks disclosed in corporate reports are biased negatively which has the effect of allowing managers to overstate relative share return performance. The choice of earnings numbers can also constitute impression management.

Choice of earnings number: An example of this is disclosing information regarding a positive increase in interest in investment while not making any further disclosure of revenue because revenue has decreased (Brennan & Merkl-Davies, 2013). Guillamon-Saorin (2006) defines selectivity as the choice of an earnings amount for inclusion in the media from a variety of earnings figures available in the underlying financial statements. The sixth type of impression management is through the attribution of organisational outcomes.

Attribution of organisational outcomes: Research on the attribution of organisational outcomes focuses on the explanations of an entity's performance (Merkl-Davies & Brennan, 2007). Negative organisational outcomes are explained using accounting terminology, whereas positive organisational outcomes are explained by clear cause-effect statements (Aerts, 1994). The final type is thematic manipulation.

Thematic manipulation: Thematic manipulation is a technique whereby managers conceal bad news by completely discarding such disclosure, or by not disclosing it to the same extent as good news (Merkl-Davies & Brennan, 2007). Managers are assumed to exaggerate their own performance and financial performance and this is prevalent in management making use of positive rather than negative disclosure (Merkl-Davies & Brennan, 2007). There are numerous prior studies on thematic manipulation.

Abrahamson and Amir (1996) found that the use of positive and negative meaning is not actually impression management but rather a means of overcoming information asymmetry between management and shareholders.

Rutherford (2005) found that firms tend to emphasise positive organisational outcomes regardless of the performance in a given financial year.

In the context of conference calls, Matsumoto, Pronk & Roelofsen (2006) distinguish between managerial optimism as impression management as opposed to incremental information on the basis of whether such future predictions an positive disclosure is confirmed by analyst's opinion. This emphasises the need for disclosures within annual reports to be reinforced by facts and credible sources (Matsumoto, Pronk, & Roelofsen, 2006).

Lang and Lundholm (2000) analyse positive bias in a context of entities issuing additional shares to raise finance. They classify statement as neutral, pessimistic and optimistic. The results have found that the percentage of optimistic statements increase dramatically immediately prior to a share issue in order to boost an entity's share price and raise the highest funds an entity is able to (Lang & Lundholm, 2000). This study follows a similar approach in terms of classifying disclosure of business models in terms of positive and non-positive statements (Melloni et al., 2016). The different types of impression management techniques may be linked to two theories, attribution and agency theory, which is discussed in the following sections.

2.6 Attribution theory

Attribution theory within financial reporting refers to when management take credit for positive outcomes of an entity but blame negative outcomes on external factors (Kelley & Michela, 1980). This explanation pattern, similar to impression management, is considered self-serving as it tends to define situations to the company's own advantage (Kelley & Michela, 1980). Attributional explanations are common in annual accounting narratives but they are, to a large extent, discretionary (Aerts, 2005b). As part of an ongoing research, the explanatory framing of accounting outcomes may be of significant interest in building support, sustaining confidence and credibility of investors (Aerts, 2005b).

In the organisational and management literature, asymmetrical attributions offered for success and failure outcome have generally been regarded as a form of impression management and as deliberate action (Bozeman & Kacmar, 1997). In contrast, Aerts (2005) argue that attributional biases could be the result of informational processes as opposed to impression management strategies (Aerts, 2005b). There are two types of interpretations when it comes to attributional asymmetry (Aerts, 2005b).

The two interpretations of attributional asymmetry are the informational interpretation and the motivational interpretation (Aerts, 2005b). An informational interpretation of the attributional asymmetry places emphasis on limited human information processing capacities in reaching an abstract causal understanding of events, while a motivational interpretation raises the question of and gives more weight to the consequences of the attribution process for the attributor himself (Bradley, 1978). The informational model concludes that people are likely to arrive at favourable outcomes on the basis of prior experience or prior cognitive beliefs (Bradley, 1978). However, prior studies emphasise that impression management is the root of the attribution theory because of multiple corporate failures (Aerts, 2005b). There are different ways in which attributional bias may be portrayed to disclose positive outcomes which can constitute impression management strategies (Aerts, 2005b).

Positive outcomes may be exaggerated while negative outcomes may be disclosed in such a way to seem less important and impactful (Aerts, 2005b). A way in which management may also place emphasis on positive outcomes is through disclosing a positive outcome together with a negative externality (Aerts, 2005b). An example of this could be "Despite the severe impacts of COVID-19, the entity has seen a growth in return on investment." This explains how management would attribute any success to the entity itself as well as management that is running an entity. The main objective is to attribute positive outcomes to the entity actions and manage users' impressions.

Conversely, there are also ways in which management could portray negative attribution bias in corporate disclosure (Aerts, 2005b).

Negative attribution bias portrayed by management may be grouped into three broad categories depending on the context of such disclosure (Aerts, 2005b). The following are the three groups being an attributional excuse, defense of innocence and justification.

An attributional excuse is when management disclose negative outcomes but provide reasons not within the control of the entity (Aerts, 2005b). An example of this is “there has been a decrease in profits due to lockdown restrictions imposed by government in light of the COVID-19 pandemic.”

Defence of innocence uses similar tactics as the attributional excuse. An example of the defence of innocence is through the legal system of “innocent until proven guilty”(Aerts, 2005a). In a similar way, management always defend themselves and the entity to ensure that negative outcomes were not due to error on their side (Aerts, 2005b).

Justification is similar to the previous groups but the key difference with the justification-bias, management portray a negative outcome in a way which downplays the significance of such an outcome (Aerts, 2005b). The justification is disclosed as a way to achieve a positive outcome in the long-term (Aerts, 2005b). In addition to attributional theory, the agency theory has been investigated in prior studies on impression management and is discussed below.

2.7 Agency theory

During the 1960s and early 1970s, economists explored risk sharing among individuals or groups and literature described the risk-sharing problem as one which arises when co-operating parties have different attitudes toward risk (Gomez-Mejia & Wiseman, 2007). Agency theory broadened this risk-sharing problem to include the so-called agency theory (Gomez-Mejia & Wiseman, 2007).

Agency theory occurs when co-operating parties have different goals because of different self-serving ideologies (Jenson & Meckling, 1976). Simply put, agency theory refers to a relationship, in which one party (the principal) delegates work to another (the agent), who performs that work (Jenson & Meckling, 1976). Agency theory is concerned with problems that can occur in agency relationships (Hill & Jones, 1992).

Agency theory is one of the main determinants within this field of research (Watts & Zimmerman, 1983). Scholars who publish research regarding the disclosure of information and impressions by management of an entity have argued that when shareholders' impressions are open to interpretation, officers use communication strategies which favour their own interests (Pfeffer, 1981). Both competing schools of thought, impression management and incremental information use assumptions rooted in agency theory (Leary & Kowalski, 1990).

The impression management school explains managerial discretionary disclosure strategies as exaggerated and views information provided by management as a method of promoting their self-interests (Abrahamson & Park, 1994). Negative organisational outcomes give rise to conflicts of interest between managers and shareholders therefore managers are prompted to manipulate outsiders' perceptions and decisions on financial performance and prospects and engage in impression management strategies to avoid such conflict (Abrahamson & Park, 1994).

This opportunistic managerial behaviour has given rise to the obfuscation hypothesis (Courtis, 1998). This hypothesis assumes that managers are not neutral in presenting accounting narratives (Brennan & Merkl-Davies, 2013). Managers tend to obfuscate failures and emphasise successes (Rutherford, 2003).

The business model disclosure has a specific section solely focusing on describing the value created for all stakeholders (Melloni et al., 2016). Management (agent) is responsible for the preparation of the business model disclosure and stakeholders (principal) are the recipients (Hill & Jones, 1992). In applying the agency theory to business model disclosure, such disclosure is also exposed to information asymmetry as management has access to more information than stakeholder (Melloni et al., 2016). Melloni et al. (2016) have shown in a study conducted in the UK (i.e. a developed country) that the business model disclosure is subject to impression management techniques.

According to “The International Framework,” which is an articulation of the IIRC's principles and methods, “an integrated report is a concise communication about how an organisation's strategy, governance, performance and prospects, in the context of its external environment, leading to the creation of value over the short, medium and long-term” (Churet & Eccles, 2014). Required disclosure in terms of integrated reporting has increased over time. Increased disclosure was supposed to decrease the information gap between management and shareholders (Churet & Eccles, 2014). But this is arguable as prior research shows the use of impression management in the business model disclosure (i.e. a narrative disclosure) which may be used to mislead stakeholders (Melloni et al., 2016). This argument has raised a concern in terms of the usefulness of narrative disclosures which will be discussed in the next section.

2.8 Usefulness of narrative disclosures

Accounting narratives represent an increasingly important financial reporting medium (Clatworthy & Jones, 2003). Driven by the realisation that fundamentals explain a small fraction of share price movements, accounting research has increasingly turned to the study of corporate narratives (Cenesizoglu & Timmermann, 2008). Davison (2002) has found that investors and other stakeholders are broadening the aspects they consider in their investment decisions and do not value numerical financial information on its own. Accounting narratives are either regarded as a means of providing incremental useful information to improve decision-making or, alternately, as a means of providing biased information (Merkl-Davies & Brennan, 2007).

If accounting narratives are exaggerated, this may result in capital misallocations and unfair wealth transfers from shareholders to managers for example, in the form of increased compensation through share options (Merkl-Davies & Brennan, 2007). Impression management thus constitutes an important corporate governance and regulatory issue (Merkl-Davies & Brennan, 2007). The seriousness of this for both firms and shareholders is demonstrated by Rogers and Van Buskirk (2009) finding that optimistic tone in earnings announcements is significantly associated with shareholder litigation. This suggests that corporate narrative documents may contain reporting bias and that investors are unable to assess this bias in the short term. There is a need for regulation in terms of narrative disclosure.

The IASB have issued guidelines for entities in disclosing narrative information (IASB, 2015). The fundamental principles set out in the conceptual framework is relevance and faithful representation (IASB, 2018). Relevant financial information can make a difference in the decisions made by users (IASB, 2018). Financial reports represent economic phenomena in words and numbers. For these reports to be useful, financial information must not only represent relevant phenomena, but must also faithfully represent the substance of the phenomena it wishes to represent (IASB, 2018). Faithful representation may be divided into three main elements. Figure displays these elements:

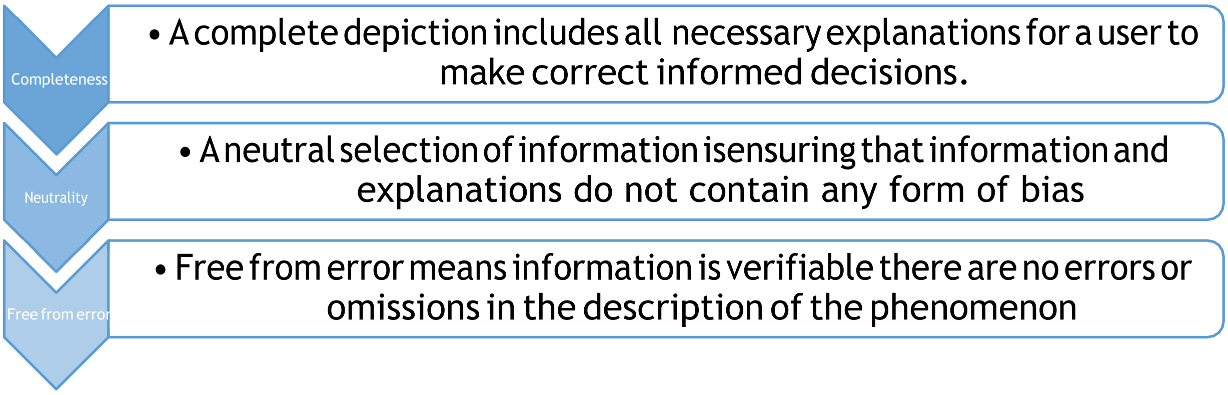

Figure 2 :Elements that form part of faithful representation (IASB, 2018)

Management and disclosure in integrated reports face criticism due to a number of corporate scandals in recent years (Aerts, 2001). Voluntary disclosure may solve the issue of information asymmetry. But for credible narrative disclosure, management must ensure that narrative disclosure is not used as a marketing and exaggeration tool of how an entity is performing (Milne & Chan, 1999).

Voluntary disclosure and social disclosure are considered to be vital in solving the alleged problems with traditional financial reporting (Milne & Chan, 1999). The shift in such narrative disclosure has caused changes in the way integrated reports are compiled, as well as areas emphasised (IIRC, 2011). Readers and users of integrated reports tend to find financial statements to be too technical for one that does not have an in depth knowledge of accounting and related subjects (David, 2001). Hopwood (1996) has stated that the integrated report has become a highly sophisticated product which should construct meaning for the user. This emphasises the potential benefit of narrative disclosures within integrated reports (Hopwood, 1996). The structure of integrated reports has also changed (Stanton & Stanton, 2002).

Financial statements are usually disclosed towards the end of an integrated report (Stanton & Stanton, 2002). The volume of disclosure required is also increasing (Stanton & Stanton, 2002). Clatworthy and Jones (2006) suggest an opposing view, that increased disclosure may result in information overload. Stakeholders do not have the ability to digest such large volumes of information and therefore will be a haphazard analysis of integrated reports by stakeholders (Clatworthy & Jones, 2006). The increased disclosure has also been found to decrease the quality of integrated reports.

Pistoni, Songini, and Bavagnoli (2018) have argued that integrated reporting quality is significantly lower than expectations. Bartlett and Chandler (1997) have found that fewer people are reading financial statements and are more interested in information within narrative disclosures. Within the narrative disclosure in integrated reports is information relating to business models (CIMA, 2013). There are opposing views regarding whether business models actually provide useful information to stakeholders (Teece, 2010).

2.9 The business model and value creation

There is much research on business models because it is seen as an integral part of the integrated report (IIRC, 2013a; Zott et al., 2011). When a business is established it, either explicitly or implicitly, applies a business model which describes the value creation process (Teece, 2010).

The concept of a business model lacks theoretical grounding in economics and in business studies (Teece, 2010). The absence of consideration of business models in economic theory probably stems from the omnipresence of theoretical constructs which have markets solving the problems which, in the real world, business models are created to solve (Teece, 2010).

The global economy is changing mainly because of technological advancements (Beattie & Smith, 2013). Customers now have access to choices and can purchase products from overseas suppliers (Jenson & Meckling, 1976). This has caused entities to re-evaluate and consider different value propositions (Teece, 2010). A well-developed business model allows an entity to capture and deliver value from its innovations (Teece, 2010). This is particularly true of internet companies where the creation of revenue streams is often complicated because of customer expectations that basic services should be free (Teece, 2010). There appears to be a correlation between compliance with the IASB and disclosure of business models.

Entities which comply with IASB (2010) and provide a wide disclosure of their business model tend to disclose more value relevant accounting amounts than do entities which do not comply with IASB (2010) and provide a limited disclosure of their business model (Mechelli, Cimini, & Mazzocchetti, 2017).

There are certain barriers to imitating business models (Teece, 2010). At a superficial level all business models might seem easy to imitate and tailor from industry to industry but this is not the case (Teece, 2010). The following diagram summarises such barriers:

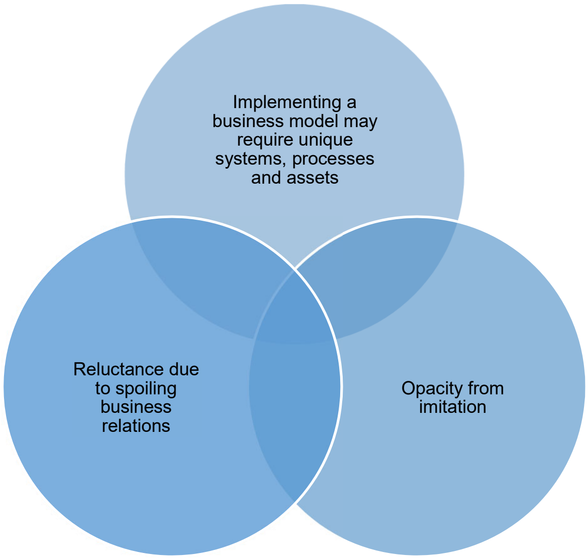

Figure 3: Barriers to imitating business models

An example of the imitating of a business model failing Gateway Computers. Gateway Computers tried to imitate Dell's model but did not achieve anywhere near the success Dell achieved because of different processes required (Teece, 2010). Through imitation of another entity's business model, there may a level of opacity within a business model and so external parties looking at imitating this business model may be confused about how exactly the business model is implemented (Teece, 2010). Finally, even though it may be rather easy to actually replicate a business model, management may not be keen to do because of the risk of collapsing business relationships between competitors and others within the industry (Teece, 2010).

There is concern that integrated reports are becoming too long and complicated causing key messages to be lost (Pistoni et al., 2018). The UK regulator has issued proposals for shortening the integrated report by removing unimportant disclosures (Mechelli et al., 2017). This represents a bottom-up approach (Beattie & Smith, 2013). Second, a top-down integrated approach is being proposed in the form of a call from various quarters for business models to be explained in the annual report (Beattie & Smith, 2013). A clear business model allows for an entity to identify what information is important and linked to the core functioning of the entity and will result in fewer unnecessary disclosures resulting in a concise integrated report (Beattie & Smith, 2013).

It is concluded that the business model concept offers a powerful overarching concept which can provide benefits for both preparers and users of integrated reports (Beattie & Smith, 2013). Outcomes of the various capitals are disclosed and entities impacting the environment in a negative way may be exposed through business model disclosure (Melloni et al., 2016). Conversely, positive outcomes may also benefit and can be disclosed (Melloni et al., 2016).

Guidelines have been prescribed concerning exactly should be disclosed within business model disclosure which is discussed in section 2.10.

2.10 Business model disclosure

The International Integrated Reporting Council is a group of members from various fields e.g. academia, standard setters, NGO's who aim to promote communication about value creation as the next phase in corporate reporting (IIRC, 2013a). In order to make their goal a reality, the International Integrated reporting Framework (IIRF) was created to provide a base to ensure concise and accurate information regarding an entity's inputs, business activities and the corresponding outputs (IIRC, 2013a).

According to the IIRF, the integrated report should consider a business model as a fundamental aspect of the report and should consider both positive and negatives of an entity's business model (Melloni et al., 2016). In essence, this framework is a tool which should be used in order to counter the view that business model disclosure is inaccurate and vague and to provide some sort of comparability of business models (Magretta, 2002). The IIRF have identified four elements within business model disclosure and is shown in the figure below (IIRC, 2013b).

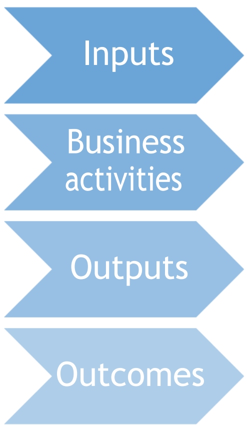

Figure 4: Four elements in business model disclosure.

These four elements are linked and described in relation to the six capitals (IIRC, 2013b). The six capitals are financial, manufactured, intellectual, human, social and relationship and natural capital (IIRC, 2013b). Each of the following is described below.

Financial Capital – This capital may be described as funds that is available to an organisation for use in the production of goods or the provision of services as well as funds obtained through financing via debt or equity (IIRC, 2013b)

Manufactured Capital – Manufactured capital consists of tangible objects except for natural physical objects that are at an organisations disposal for use in the production of goods or the provision of services (IIRC, 2013b). Examples of such capital is equipment and buildings.

Intellectual Capital – The best way to describe intellectual capital, is through the concept of intangible assets (IIRC, 2013b). Examples of such assets include patents, copyrights, supplier agreements etc.

Human Capital – Human capital is described as all resources relating to employees and personnel of an entity (IIRC, 2013b). Examples of this include the experience, competencies and capabilities of staff.

Social and relationship Capital – Social and relationship capital is described as the relationship that an entity has with its various stakeholders besides the environment (IIRC, 2013b). Such stakeholder include but is not limited to relationships with communities, competitors within industry, shared norms, and common values.

Natural Capital – Natural capital includes all renewable and nonrenewable environmental resources and processes that provide goods or services that support the goals of an organization (IIRC, 2013b). Examples of natural capital are land, water and minerals.

The "Inputs" section in integrated refers to how the inputs relate to the capitals on which the organisation depends and how such inputs grant an entity a competitive advantage (IIRC, 2013b).

The "Business activities" section in the integrated report outline the series of actions or steps taken to convert inputs in order to achieve a particular end which is to meet customers' needs and differentiate from competitors (Melloni et al., 2016). Different types of entities require different business activities or processes (Magretta, 2002). A simple example of this is explored through the difference between a producer of furniture and a plumbing service.

The furniture supplier has to collect timber and process timber through various stages before the wood can be ready to convert to furniture. In a different manner, providing plumbing service does not require any conversion of raw materials but there has to be sufficient marketing performed to undertake to ensure customers are aware of such a service. Hence, it is clear how business activities differ across businesses.

The “Outputs” section in the integrated report relates to the products and services that are intended to generate revenue for the organisation. It shows a numerical value in relation to the amount of products produced. For example, if the furniture make above produces tables, the integrated reports should disclose how many tables were produced in the 2020 financial year (Melloni et al., 2016). However, management teams of some entities have been found to be confused by the difference between the “output” and “outcomes” sections (CIMA et al., 2013).

The “Outcomes” section outlines the both positive and negative impacts of the entity within the internal as well as the external environments (Melloni et al., 2016). However, it is noted that management tend to disclose more positive outcomes than negative outcomes hence this section is seen at times to be an advertising tool (Melloni et al., 2016).

Melloni et al. (2016) concluded that business model disclosure is positive in the majority of the information reported in the integrated report. Brennan and Merkl-Davies (2013) also found that tone is considered as an important characteristic to test the presence of thematic manipulation within narrative disclosures. This means that testing the tone of business model disclosure of public sector entities will indicate whether management adopt impression management strategies in their integrated reports by manipulating the tone of the business model disclosure

Melloni et al. (2016) also tested relationships to investigate whether the tone used in the business model disclosure is affected by certain factors. The factors comprised of disclosure variables such as corporate governance, performance and disclosure verifiability which will be discussed in more detail in the following sections (Melloni et al., 2016).

2.11 Variables

2.11.1 Corporate governance

The detection of impression management strategies is researched by focusing on the association between the tone of the disclosure and specific corporate characteristics (corporate governance being one of these characteristics) speculated to impact on the use of thematic manipulation (Melloni et al., 2016). Mather and Ramsay (2007) found that a board that was more independent resulted in mitigation of the use of impression management.

As discussed previously, making use of impression management strategies is a result of the self-serving view that management wish to portray themselves and the entity in a positive space (Melloni et al., 2016). Similarly, Osma and Guillamón-Saorín (2011) demonstrate that strong governance improves transparency and reduces self-serving disclosure by management. Strength of governance is based on two factors: Board size and composition of the audit committee (Osma & Guillamón- Saorín, 2011). The more limited the number of members on the board, the stronger the corporate governance (Melloni et al., 2016). The more independent members within the audit committee. the stronger the corporate governance (Melloni et al., 2016)

In the current study, the researcher tested the following hypothesis developed by Melloni et al. (2016) in addition to assessing whether management of public sector entities manipulate the tone of business models using impression management strategies:

Hp1a:

More members on a board is associated with a more positive tone of business model disclosure.

Hp1b:

A lower number of independent audit committee members is associated with a more positive tone of business model disclosure.

2.11.2 Performance

A further characteristic likely to cause management to make use of impression management strategies is performance (Melloni et al., 2016). Management aims to disclose narrative information of a positive type. Clatworthy and Jones (2003) as well as Walker and Scheichler (2010) have found that entities tend to disclose narrative disclosures in a more positive tone when an entity is performing poorly. In line with these prior studies, it is expected that entities will try to obfuscate poor performance by making use of impression management strategies. The following hypothesis will be tested with regards to performance:

Hp2:

Declining performance is associated with a more positive tone of business model disclosure.

2.11.3 Disclosure verifiability

In line with Melloni et al. (2016) the research is not limited to factors associated with firm characteristics but also considers some of the disclosure itself. Forward looking information is subject to manipulation by management because the disclosures are based on estimates and it is likely management want to project a positive future for an entity (Dobler et al., 2011). Dobler 2008) found quantitative information to be more verifiable than qualitative information. The following hypotheses were tested on disclosure verifiability.

Hp3a: There is a significant statistical relationship between positive tone of business model disclosure and forward-looking information (Melloni et al., 2016).

Hp3b: There is a significant statistical relationship between a positive tone of business model disclosure and qualitative information (Melloni et al., 2016).

2.12 Summary

Entities have a greater effect on society and so the traditional methods of corporate reporting are changing with shifts to more non-financial information being disclosed for stakeholders as many stakeholders are not financially literate.

Public sector organisations are under pressure to perform with South Africa recently being reduced to junk status and calls have been made for improvements and accountability of those who run state owned entities. Integrated reporting can be used as a communication device between management and the public to ensure such accountability.

Stainbank and Peebles (2006) investigated the importance of information obtained from annual reports within a South Africa context and concluded that this information was vital to investment decisions.

It is evident that the business model is an important component of an integrated report. There is much research regarding business models because the business model is seen as an integral part of the integrated report (IIRC, 2011). Accounting narratives represent an increasingly important financial reporting medium (Clatworthy & Jones, 2003)

The business model disclosure is a narrative disclosure (Melloni et al., 2016). Melloni et al. (2016) investigated whether tone was used to manipulate users of integrated reports, as well as the correlation between specific variables and tone. Moloto (2019) follows the same approach in a South African context within the top 100 JSE listed entities. This report explores whether such manipulation is common in the public sector.

Chapter III – Methodology

3.1 Introduction

The purpose of this study was to determine whether public sector entities adopt impression management strategies by manipulating the tone of the business model disclosure provided in their integrated reports. This study is a replication of a study done by Melloni et al. (2016). In this section, the methodology followed is discussed. In Section 3.2, an overview of the method is provided. This is followed by a discussion of the research design of the study in Section 3.3. In Section 3.4, the researcher describes the population of the study, as well as the sample, followed by a discussion of how data were collected in Section 3.5. Section 3.6 provides a description of the data analysis which is followed by a discussion on the reliability of the research methodology in Section 3.7. Section 3.8 contains a discussion of the validity of the study and Section 3.9 concludes with ethical considerations.

3.2 Overview

The study was conducted within a positivist paradigm. This research paradigm strives to investigate, confirm and predict law-like patterns of behaviour and is commonly used in graduate research to test theories or hypotheses (Taylor & Medina, 2011). It is considered to be most appropriate for this study as this study is dependent on quantifiable observations which make use of statistical analyses (Brown & Dueñas, 2019).

This study is quantitative in nature. Quantitative research is the numerical representation of observations for the purpose of describing and explaining the phenomena which those observations reflect (Sukamolson, 2007). This methodology is appropriate as positivist paradigm primarily involves a quantitative methodology (Taylor & Medina, 2011). Quantitative research reduces subjectivity and is less open to error and subjectivity (Taylor & Medina, 2011). Tone of business model disclosure of public interest entities will be analysed in terms of a numericalscoring system. The researcher will interpret the results quantitatively based on data which are qualitative in nature. This study is a descriptive study.

Descriptive research identifies different elements of a particular phenomenon based on observation, or the exploration of the relation between two or more phenomena (Williams, 2007). This study identifies attributes of the sentences found in the business model disclosure in relation to the type of tone using observation. Correlation between the various attributes and the tone used was also explored.

3.3 Research design

The researcher will perform a multi-level analysis, more specifically a three-phase analysis. This method is consistent with similar studies conducted by Melloni et al., (2016) and Beattie et al., (2004).

The first is a manual content analysis of text units, in line with methodological studies on content analysis (Krippendorff, 2018). Business model disclosure consists of multiple sentences and a manual content analysis is needed as it allows for the compression of text into fewer content categories based on explicit rules of coding which will allow for the collected data to be summarised, interpreted and comparable among entities (Stemler, 2001).

Together with this, a univariate analysis was performed of the relationship between the disclosure variables which are type (quantitative versus qualitative disclosure), time (forward versus non-forward-looking disclosure) and content (disclosure on outcomes versus disclosure on inputs, business activities and output). A univariate analysis is appropriate as it allows for the isolation of the relationship among tone and each category determined in the manual content analysis (Melloni et al., 2016). A univariate analysis is where only one variable is involved and it allows for the test of each relationship in isolation (Melloni et al., 2016).

In the last phase, a multivariate analysis will be used to test hypotheses on the relationship between the tone of business model disclosure and a set of variables that refer to corporate governance, performance and disclosure verifiability. Univariate analysis can yield misleading results in a situation where a multivariate analysis is more appropriate (Melloni et al., 2016). A multivariate analysis will be more appropriate as the “tone” of business model disclosure can possibly be influenced by more than one variable (Beattie, McInnes, & Fearnley, 2004). A multivariate analysis is consistent with the study completed in the UK by (Melloni et al., 2016) and allows for the relationship between tone and the set of variables to be assessed simultaneously.

Figure 5: Flow diagram of research design

3.4 Population and sample selection

The population of this study is all public sector entities. There are 21 companies forming part of Schedule 2 and 269 companies of Schedule 3 of the Public Finance Management Act (PFMA, 1999a).The PFMA lists state-owned companies as either schedule 2 or schedule 3 companies. Schedule 2 companies are listed as most important state-owned companies in South Africa per PFMA whilst schedule 3 companies are listed as 'other state-owned entities' (PFMA, 1999a). This research aimed to study both schedule 2 and schedule 3 companies. The results of studying both schedules represent the population as both important state-owned companies, as well as 'other state-owned entities' was looked at.

A purposive sampling approach was applied in this research. This type of sampling technique is simple and cost effective and is based on the researchers best estimate of what sample would represent the population (Etikan, 2016). This sampling technique was appropriate as the researcher chose a sample including both schedule 2 and 3 entities and no provincial entities.

The provincial entities must be in line with national entities (Reddy, 2001). Provincial entities were not included in the sample as they would follow a similar trend to national public entities. The sample included 174 entities.

The latest integrated reports available i.e. 2019 financial year, were analysed for the purpose of this study. If the 2019 integrated report was not available, the prior latest report was used. The analysis only focused on business model disclosures within the integrated report.

3.5 Data Collection

The integrated reports were obtained from each of the entity's official websites. Each integrated report was examined for disclosure in terms of the business model and utilisation of the capitals. Out of the 174 entities in the sample, 45 entities did not have any information regarding business models or related information and were excluded from the study. Data regarding the number of board of directors were also obtained from the respective integrated reports and data relating to the performance of each entity were manually done for each entity by examining the financial statements. In summary, 129 public sector entities were observed in this study.

3.6 Data Analysis

3.6.1 Manual content analysis

The researcher analysed business models of integrated reports by performing a manual content analysis in order to determine whether the tone of business model disclosure is highly positive or not. In line with Krippendorff (2018), the researcher developed and tested the coding scheme along the steps below:

Step 1 - Definition of the sampling and recording units

The sampling units are the sections within integrated reports designated for business model disclosure. The individual sentences in the business model disclosure constitute recording units (Beattie et al., 2004).

Step 2 - Definition of the categories used to codify the text

The four categories in which the recording units was analysed are both the linguistic attributes tone, time, type as well as topic of business model disclosure as displayed in the figure below (Melloni et al., 2016).

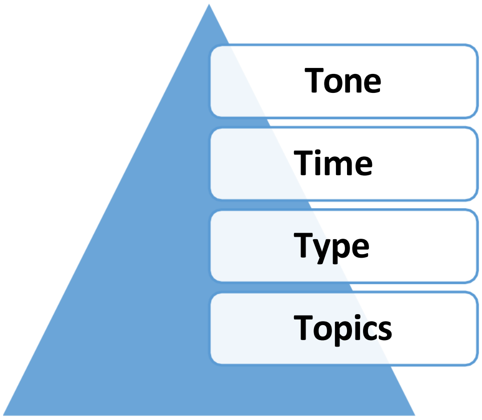

Figure 6: Four different of which the recording units will be analysed

“Tone” can be either positive or non-positive which is a neutral statement. Negative tone is the expression of an idea with a lack of optimism and connotates bad news for an entity (Clatworthy & Jones, 2003). Furthermore, in line with Clatworthy and Jones (2003) study, good news for an entity implies a positive tone.

Reference to “time” is whether information is forward looking or based on historic data.

The “type” of data refers to whether the data are quantitative or qualitative. Quantitative information will be coded based on the inclusion of a numerical element in the sentence whereas, sentences which consisted solely of words are considered to be qualitative information.

Finally, the two headings as displayed in the business model disclosure constitute the “topics”. The first are inputs, business activities and outputs and the second include the outcomes of business model disclosure (Melloni et al., 2016). Inputs, business activities and outputs relate to the actual resources an entity commits to putting in i.e. activities undertaken, while the outcome is the result of such activities undertaken (IIRC, 2013a)

Step 3 - Coding of the text

Each recording unit was allocated a number in terms of one or zero by the researcher. For example, when considering the “tone” category, one will be allocated to the positive tone subcategory and zero to the non-positive sub-category if the sentence was considered to be positive. Below is a figure illustrating an example of how each category was measured.

Company name	Tone		Type		Time		Topic	
	Positive	Non-positive	Quantitative	Qualitative	Forward-looking	Non-forward looking	Inputs, business activities and outputs	Outcomes
Air Traffic and Navigation Services Company Limited								
The Air Traffic and Navigation Service Company Limited is an SOC.		1		1		1	1	

Figure 7: Example of the data was collected for the manual content analysis

In the table below, examples of different types of sentences within business models are displayed explaining how sentences were classified in to the different categories.

Table 1: Examples of disclosure tone of IR statements, and other disclosure characteristics of BMD (Melloni et al., 2016)

	IR statements with positive tone	**IR statements with non-positive tone (i.e. negative or neutral)**
Quantitative and forward looking disclosure	The Asian market currently represents only about 6–7 % of total global pharmaceutical spend, but this is estimated to rise to 20 % by 2020 (Source: Credit Suisse/IMS)a	We estimate that each semiconductor company would need to spend over $100 million dollar every year to reproduce what […] does
Quantitative and non-forward looking disclosure	The business group realized sales of € 356 million, 10 % higher compared to previous year	Our largest single region is North America, accounting for 33 % of total net sales while emerging markets account for 34 %
Non-quantitative and forward looking disclosure	There are also opportunities to invest in new distribution channels: partnership with banks,	If life expectancy increases more quickly than projected, we may also have to increase
	more direct marketing and utilization of social media	reserves to cover future payments, reducing our earnings
Non-quantitative and non-forward looking disclosure	We've always been clear about our way of doing things, of seeing opportunities to create value that others don'ta We've always been clear about our way of doing things, of seeing opportunities to create value that others don'ta	We distributed the Apple I Pad in the UK and to our enterprise customers in Europe

<u>Step 4 - Reliability assessment.</u>

Finally, a reliability assessment was performed in which a list of detection and classification rules for each category was identified and discussed with the researcher's supervisors. Consistency was ensured through trial runs at different time periods whereby the sentences of the same entity were examined and analysed by the researcher and the supervisors. This concluded phase one, which is the manual content analysis.

3.6.2 Univariate analysis

A univariate analysis was performed to determine whether tone is associated with disclosure variables, being

- Quantitative versus qualitative disclosure;
- Forward versus non-forward looking disclosure and
- Disclosure on outcomes versus disclosure on inputs, business activities and output.

Crosstabs was used in conducting the univariate analysis (Wong, Wei, Qi, & Zhao, 2008). Crosstabs show that the researcher captured all the data and there are no missing values (Wong et al., 2008).

Pearson Chi square tests were also used to assess whether the tone is dependent on the disclosure variables. (Melloni et al., 2016). This type of testing is appropriate as it is a measure to test independence (Alamartine, Sabatier, Guerin, Berliet, & Berthoux, 1991).

If the Pearson Chi-square probabilities were below the conventionally accepted significance ,=level of 0.05 (i.e. $p < 0.05$), then it was regarded that the two variables (for example, "tone" and "type") are statistically associated (Melloni et al., 2016).

3.6.3 Multivariate statistical analysis

Previous research evaluated possible relations between variables and tone of disclosure which refer to corporate governance, performance and disclosure verifiability were associated (Beattie et al., 2004). The researcher tested the hypotheses to determine whether the findings of Melloni et al. (2016) are consistent with the findings in the public sector in a South African context.

Null hypotheses:

H0: There is no significant statistical relationship between a more positive tone in disclosure and set of variables which refer to corporate governance, performance and disclosure verifiability.

Alternate hypotheses:

Hp1: A larger number members on a board is associated with a more positive tone of business model disclosure.

Hp2: Declining performance is associated with a more positive tone of business model disclosure.

Hp3a: There is a significant statistical relationship between a more positive tone of business model disclosure and forward-looking information (Melloni et al., 2016).

Hp3b: There is a significant statistical relationship between a more positive tone of business model disclosure and qualitative information (Melloni et al., 2016).

The researcher studied the relationship between the positive tone of disclosure and corporate governance, performance and disclosure verifiability variables. (Melloni et al., 2016).

Dependent variable

Disclosure tone is the dependent variable and represents the average tone score of the report. It is measured as the number of positive texts deflated by the total number of texts.

Independent variables

Governance variable is the number of the board of directors.

Declining performance is a dummy variable as a performance variable set equal to 1 if an entity's return on equity is decreasing and if an entity's return on equity is increasing, it is set at 0.

Disclosure verifiability variables are measured as the following:

Disclosure time orientation is the "time" score measured as number of historic information deflated by the total number of text units. The "type" of information score is measured as the number of quantitative information text units deflated by the total number of text units (Melloni et al., 2016).

The Box's test of equality was used to determine if there was homogeneity of variance to ensure the assumption of a multivariate test is not violated (Geisser & Greenhouse, 1958). The Levine's Test was used to test the assumption that variances of each variable are the same across groups

(Braver, MacKinnon, & Page, 2003). If the Levine's Test is significant, it means that the assumption has been violated and the researcher must examine the data with caution (Braver et al., 2003).

For each hypothesis tested, the researcher compared the means between positive tone and non-positive tone for the set of independent variables. The Wilks Lambda test was used to determine if the difference was significant (Friston, Poline, Holmes, Frith, & Frackowiak, 1996). If the p-value is lower than 0.05, the relationship is significant with 95 percent confidence (Ramana, Babu, & Venkateswarlu, 2012). **Hp1, Hp3a** and **Hp3b** were tested using the Pearson Chi-square correlation coefficients, as the variables involved did not meet the conditions for a multivariate analysis.

3.7 Reliability

Reliability refers to the quality of the data gathered and the method used to analyse the data (Carmines & Zeller, 1979). It is important for a researcher not to be subjective while doing research (Sutrisna, 2009). The possibility of subjectivity is reduced since this study was conducted following a quantitative research methodology (Bagdonienė & Zemblytė, 2005). As the study has been performed in the UK (Melloni et al., 2016), this makes the methodology more reliable as it has been completed before. The reliability of the manual content analysis is assessed to be high as it is in line with Krippendorff (2013). The integrated reports can be considered reliable as they will be obtained from entities that are mostly subject to a statutory audit in terms of companies act.

3.8 Validity

Validity refers to the credibility of both the research design and methodology of the study in determining whether it is representative of the phenomenon the researcher is claiming to measure (Carmines & Zeller, 1979).

3.8.1 Content validity

Content validity refers to the extent to which a measure represents all facets of a given construct (Lawshe, 1975). The data which were collected and the research methodology enabled the researcher to answer the research question as well, as to test each hypothesis to reach a conclusion.

3.8.2 Internal validity

Internal validity refers to whether the quality of the conclusions reached is logical and factual (Roberts & Priest, 2006). Internal validity of the classification procedure is high as it was tested using the Krippendorff's alpha coefficient. The supervisors of the researcher have experience in analysing narrative disclosures in integrated reports such as chairperson's statements which resulted in concise conclusions regarding the research design and methods.

3.8.3 External validity

External validity refers to whether the study of the sample is representative of the population i.e. the findings of a study can be generalised to the entire population (Roberts & Priest, 2006). The sample consisted of only public sector entities. Both important as well as "not so important" entities

was looked at giving a true reflection of the entire population. As both schedules were looked at, this increased the external validity. The sample size included a total of 174 entities which is a large sample size in comparison to the population of 290 entities (Kelley & Michela, 1980). Another factor increasing the external validity of the study is that similar studies were performed by Melloni et al. (2016) and Beattie et al. (2004) following the same methodology.

3.9 Ethical considerations

All integrated reports were obtained from each entity's official website. The study is a quantitative study, even though the data are qualitative to minimise subjectivity. The results faithfully represent the findings and there was no manipulation of any data in order to obtain a desired outcome. The results are reflective of the findings and include no bias. The data were protected and kept confidential through a password-protected document. The only individuals with access were the researcher's supervisors and statistician. The study did not identify company names in order to manipulate any such data as well.

Chapter IV – Analysis of results

4.1 Introduction

In this chapter, the results of the data are analysed. Section 4.2 discusses the results of the manual content analysis. This is followed by a discussion of the results of the univariate analysis in Section 4.3. In Section 4.4, there is an analysis of the hypotheses testing results obtained. The chapter concludes with summarised results obtained from the three-level analysis.

4.2 Manual content analysis

A total of 3053 sentences were examined and analysed by the researcher. The researcher separated each sentence across the four categories by allocating a one or a zero.

Table 2: Content analysis results

	Tone		Type		Time		Topic	
	Positive	Non-Positive	Quantitative	Qualitative	Forward looking	Non-Forward looking	Inputs, Business Activities or Outputs	Outcomes
Number of sentences per category	1233	1820	650	2403	783	2270	1490	1563
% per category	40.39	59.61	21.29	78.71	25.65	74.35	48.80	51.20
Total number of sentences	3053		3053		3053		3053	

Out of the 3 053 sentences analysed, 40.39% were positive in tone while 59.61% was non-positive. In a similar study conducted by Melloni et al. (2016), the content analysis revealed that 42.93% of the sentences were positive and 57.07% was non-positive. Another similar study performed in the public sector by Moloto (2019) where the top 100 JSE listed entities were observed, found that 40.57 % have a positive tone whilst 59.43 % have a non-positive. The results of this study are consistent with both the above mentioned studies.

In terms of “type” of the disclosure of each sentence, 21.29% were found to be quantitative in nature and 78.71% were qualitative. Both Melloni et al. (2016) and Moloto (2019) also found qualitative disclosure more prevalent with 74.42% and 66.29% respectively. The results of the study support the suggestion that management prefer disclosing information which does not have evidence e.g. accurate figures and findings (Beattie et al., 2004). It may not be management’s intention to manipulate users by impression management techniques but within the corporate setting of disclosing information in a particular manner, in this case disclosing more qualitative information, may manage the impressions of users (Gardner & Martinko, 1988).

Non-forward reporting supersedes forward looking reporting (74.35% to 25.65%). This is a higher ratio in comparison to Melloni et al. (2016) which found 87.89% to be non-forward looking information. Moloto (2019) also found 94.39% to be non-forward looking information. However, this majority of 74.35% is still significant and illustrates that management prefer disclosing historic information than to future looking information. This further indicates that management adopt a stewardship approach in reporting narrative disclosures (Hopwood, 1996). This may because of the fact that reporting on historic information is seen as more credible and justified (Landsman, 2007). The above results of "time" indicate that management do not make use of unsubstantiated forward-looking information in managing impressions of users.

In terms of the "topic" category of the disclosure of sentences within business models, 48.80% relate to inputs, business activities and outputs while 52.20% relate to outcomes. These results are not in line with previous studies which favoured majority of disclosure relating to inputs, business activities and outputs. Melloni et al. (2016) found that 58.89% of disclosure we related to inputs, business activities and outputs. Moloto (2019) also found the minority of 45.40% relating to outcomes. The contrast may be because of public sector entities having heavier responsibility as their stakeholders are the general public who expect a level of service delivery (Gildenhuys et al., 1991). Management of public entities would rather disclose the value and outcomes created for stakeholders i.e. the public, in order to legitimise their actions (Dowling & Pfeffer, 1975).

4.3 Univariate analysis

The manual content analysis revealed the composition of each category of the sentences within business model disclosure. The researcher then performed a univariate analysis in order to determine whether or not there was a significant statistical relationship between "tone" and the other categories being "type", "time" and "topic". The case processing summary below illustrates that across each category the same number of sentences were analysed i.e. this was to ensure there was no discrepancy in the data in terms of the number of sentences analysed. Across all categories, 3 053 sentences were examined. The first test conducted was between "tone" and "type."

Table 3: Case processing summary

	Cases					
	Valid		Missing		Total	
	N	Percent	N	Percent	N	Percent
Tone * Type	3053	100.0%	0	0.0%	3053	100.0%
Tone * Time	3053	100.0%	0	0.0%	3053	100.0%
Tone * Topic	3053	100.0%	0	0.0%	3053	100.0%

4.3.1 Relationship between tone and type

The results in the table below show that non-positive tone in the "type" category is dominant with a percentage of 59.6%. Within the qualitative sentences, 84% are using a positive tone. The higher disclosure in relation to qualitative sentences do not promote accountability of management as these statements are not verifiable because of a lack of accurate figures and timelines of goals (Harvey & Green, 1993).

Table 4: Crosstab of the relationship between "tone" and "type" of information

			Type		Total
			Qualitative	Quantitative	
Tone	Non - Positive	Count	1367	453	1820
		% within Tone	75.1%	24.9%	100.0%
		% within Type	56.9%	69.7%	59.6%
		% of Total	44.8%	14.8%	59.6%
	Positive	Count	1036	197	1233
		% within Tone	84.0%	16.0%	100.0%
		% within Type	43.1%	30.3%	40.4%
		% of Total	33.9%	6.5%	40.4%
Total		Count	2403	650	3053
		% within Tone	78.7%	21.3%	100.0%
		% within Type	100.0%	100.0%	100.0%
		% of Total	78.7%	21.3%	100.0%

The Pearson Chi-Square test indicates whether or not there is a significant statistical relationship between the two variables being "tone" and "type".

Table 5: Pearson Chi-Square test for the relationship between “tone" and "type"

	Value	df	Asymptotic Significance (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	34.844	1	.000		
Continuity Correction	34.314	1	.000		
Likelihood Ratio	35.778	1	.000		
Fisher's Exact Test				.000	.000
N of Valid Cases	3053				

The Pearson Chi-Square value is 34.844 with the probability of the Pearson Chi-Squared test being 0.000 rounded. This shows that “tone” and “type” are associated and there is a significant relationship at a 95% confidence level. These results are inconsistent with both Melloni et al. (2016) and Moloto (2019).

4.3.2 Relationship between tone and type

As previously mentioned in the manual content analysis and evidenced in the table below, indicate the majority of sentences disclosed are non-forward looking information. This is consistent with Moloto (2019). 63.1% of forward-looking sentences were found to have a positive tone which is consistent with the observation made by Melloni et al. (2016). Out of the total number of 3053 sentences analysed, majority of the sentences is attributable to non-positive, non-forward looking information at 50.1%. The release of more positive forward looking information indicates that management wish to portray increased optimism in relation business model disclosure (Melloni et al., 2016).

Table 6: Crosstab of the relationship between "tone" and "time"

			Time		Total
			Forward-looking	Non – Forward Looking	
Tone	Non - Positive	Count	289	1531	1820
		% within Tone	15.9%	84.1%	100.0%
		% within Time	36.9%	67.4%	59.6%
		% of Total	9.5%	50.1%	59.6%
	Positive	Count	494	739	1233
		% within Tone	40.1%	59.9%	100.0%
		% within Time	63.1%	32.6%	40.4%
		% of Total	16.2%	24.2%	40.4%

Total	Count	783	2270	3053
	% within Tone	25.6%	74.4%	100.0%
	% within Time	100.0%	100.0%	100.0%
	% of Total	25.6%	74.4%	100.0%

Pearson Chi-Square test indicates whether or not there is a significant statistical relationship between the two variables being “tone” and “type”.

Table 7: Pearson Chi-Square test for the relationship between “tone" and "time”

	Value	df	Asymptotic Significance (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	225.472	1	.000		
Continuity Correction	224.206	1	.000		
Likelihood Ratio	222.960	1	.000		
Fisher's Exact Test				.000	.000
N of Valid Cases	3053				

The Pearson Chi-Square value is 225.472 with the probability of the Pearson Chi-Squared test being 0.000 rounded. This shows that “tone” and “time” are associated and there is a significant relationship at a 95% confidence level between the two categories as the Pearson Chi-squared probability is below 0.05. These results are in line with Melloni et al. (2016) where a Pearson – Chi value of 47.324 was obtained. The final relationship tested in the univariate analysis is the relationship between “tone” and “topic”.

4.3.3 Relationship between tone and topic

As previously mentioned in the manual content analysis and evidenced in the table below indicate the majority of sentences disclosed with regards to “topic” is related to outcomes. A more positive tone is evident in the inputs, business activities and outputs with 52.6% of positive tone of the total 1233. This is contrary to previous studies performed by Melloni et al. (2016) and Moloto (2019) which found positive tone to be associated with outcome disclosure in terms of business models. The results may imply that, even though entities within the public sector prefer disclosing outcomes as opposed to inputs, business activities and outputs, management may be weary to exaggerate such outcomes and disclose with a positive tone (PWC, 2015).

Table 8: Crosstab of the relationship between "tone" and "topic"

			Topic		Total
			Inputs, business activities and Outputs	Outcomes	
Tone	Non - Positive	Count	842	978	1820
		% within Tone	46.3%	53.7%	100.0%
		% within Topic	56.5%	62.6%	59.6%
		% of Total	27.6%	32.0%	59.6%
	Positive	Count	648	585	1233
		% within Tone	52.6%	47.4%	100.0%
		% within Topic	43.5%	37.4%	40.4%
		% of Total	21.2%	19.2%	40.4%
Total		Count	1490	1563	3053
		% within Tone	48.8%	51.2%	100.0%
		% within Topic	100.0%	100.0%	100.0%
		% of Total	48.8%	51.2%	100.0%

Pearson Chi-Square test indicates whether or not there is a significant statistical relationship between the two variables being “tone” and “type”.

Table 9: Pearson Chi-Square Test for the Relationship between “tone" and "topic”

	Value	df	Asymptotic Significance (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	11.643	1	.001		
Continuity Correction	11.392	1	.001		
Likelihood Ratio	11.647	1	.001		
Fisher's Exact Test				.001	.000
N of Valid Cases	3053				

The Pearson Chi-Square value is 11.643 with the probability of the Pearson Chi-Squared test being 0.001. This shows that “tone” and “topic” are associated and there is a significant relationship at a 95% confidence level between the two categories as the Pearson Chi-squared probability is below 0.05. These results are in line with Melloni et al. (2016) and Moloto (2019) however these studies contained much higher Pearson Chi – Square values of 137.405 and 295.330 respectively.

4.4 Multivariate analysis

The researcher performed a multivariate analysis in order to test whether or not tone is related to certain variables in relation to corporate governance, performance and disclosure verifiability. The first hypothesis tested was in relation to corporate governance, more specifically, whether or not there is a relationship between a larger board and a more positive tone.

4.4.1 Corporate governance

The following hypotheses were tested:

H0: There is no significant statistical relationship between a larger group of board members and a more positive tone of business model disclosure.

Hp1: There is a significant statistical relationship between a larger group of board members and a more positive tone of business model disclosure.

Hp1 tests the relationship between the tone of business model disclosure and the size of a board i.e. the number of members that constitute the board. It is found that good corporate governance is associated with a board that contain a limited number of members (Klein, 2002). As evidenced by the descriptive statistics provided below, the highest and lowest number of members on the board for public entities are 31 and 5 respectively. Most entities have a board of 9-15 members on the board.

Table 10: Descriptive statistics for board members in relation to “tone”

	Number of Board Members	Mean	Std. Deviation	N
Positive Tone	5	6.00	.	1
	6	9.00	7.071	2
	7	11.67	10.050	9
	8	5.22	2.333	9
	9	10.58	7.366	12
	10	8.31	6.799	16
	11	10.67	8.139	15
	12	5.64	3.906	11
	13	10.50	5.802	4
	14	11.23	6.534	13
	15	12.21	4.173	14
	16	12.00	7.239	6
	17	4.50	4.123	4

	18	12.50	4.950	2
	19	1.00	.	1
	20	12.00	.	1
	21	10.67	8.042	6
	23	5.00	.	1
	30	19.00	.	1
	31	.00	.	1
	Total	9.56	6.733	129

Non-Positive Tone	5	18.00	.	1
	6	17.00	7.071	2
	7	15.11	8.418	9
	8	18.67	10.283	9
	9	11.92	7.267	12
	10	14.94	8.645	16
	11	12.47	5.125	15
	12	11.91	7.436	11
	13	13.25	9.323	4
	14	16.62	8.160	13
	15	11.71	8.435	14
	16	14.50	9.072	6
	17	11.75	7.500	4
	18	12.00	11.314	2
	19	45.00	.	1
	20	2.00	.	1
	21	15.33	8.116	6
	23	14.00	.	1
	30	12.00	.	1
	31	8.00	.	1
	Total	14.11	8.313	129

In order for a multivariate test to hold true, covariance matrices of the dependent variable must be the same across all levels of the independent variable (Von Eye & Bogat, 2004). The Box test of equality indicates whether or not this principle has been breached if $p < 0.05$.

The results as evidenced by table below indicate a $p=0.019$ (i.e. $p<0.05$). The researcher observed that there is no homogeneity of variance and the assumption is violated. The data does not allow for a multivariate test.

Table 11: Box's Test of equality of covariance matrices in relation to corporate governance

Box's M	59.546
F	1.577
df1	33
df2	3997.166
Sig.	.019

The researcher then performed a test using the Pearson Chi – squared correlation coefficient to assess whether the two variables were statistically associated and the results are evident in table below.

Table 12: Pearson correlation coefficient for “tone” in relation to the number of board members

		Number of board members	Positive/Non-Positive
Number of board members	Pearson Correlation	1	.036
	Sig. (2-tailed)		.047
	N	3053	3053
Positive/Non-Positive	Pearson Correlation	.036*	1
	Sig. (2-tailed)	.047	
	N	3053	3053

Even though the correlation is 0.036, which is low, the p value is less than 0.05 (i.e. p=0.047), indicating a significant statistical relationship between the number of members on the board and a more positive tone (95% confidence level). The results from this are consistent with the study performed by Melloni et al. (2016) where a larger board was associated with a more positive tone.

4.4.2 Performance

The following hypotheses were tested:

H0: There is no significant statistical relationship between declining profitability (decreasing return on equity) and a more positive tone of business model disclosure.

Hp2: There is a significant statistical relationship between declining profitability (decreasing return on equity) and a more positive tone of business model disclosure. Hp2 tests the relationship between the tone of business model disclosure and the performance of an entity. An entity's return on equity (profit after tax/total equity) was used as a proxy for performance. Schleicher and Walker (2010) have found that loss-making firms, risky firms and firms with an analyst earnings forecast provide a more positive tone, while firms with a contemporaneous earnings decline provide a more negative tone. As evidenced in the table below 77 out of the 129 entities experienced a decline in performance.

Table 13: Descriptive statistics between tone and declining performance

	Performance	Mean	Std. Deviation	N
Positive Tone	0	9.69	6.192	52
	1	9.47	7.113	77
	Total	9.56	6.733	129
Non-Positive Tone	0	15.19	8.102	52
	1	13.38	8.426	77
	Total	14.11	8.313	129

The Box's test of equality had to be performed to ensure a multivariate test can be performed to ensure that the assumption of variances of each variable are the same across groups. The table below shows p=0.643 i.e. p>0.05 and hence the assumption is not violated and a multivariate test can be performed.

Table 14: Box's Test of equality of covariance matrices with regards to performance

Box's M	1.703
F	.558
df1	3
df2	693183.218
Sig.	.643

The results of the multivariate tests using the Wilks Lambda test are shown in the table below.

Table 15: Multivariate tests with regards to performance

Effect		Value	F	Hypothesis df	Error df	Sig.
Intercept	Pillai's Trace	.841	332.645	2.000	126.000	.000

	Wilks' Lambda	.159	332.645	2.000	126.000	.000
	Hotelling's Trace	5.280	332.645	2.000	126.000	.000
	Roy's Largest Root	5.280	332.645	2.000	126.000	.000
Performance	Pillai's Trace	.012	.777	2.000	126.000	.462
	Wilks' Lambda	.988	.777	2.000	126.000	.462
	Hotelling's Trace	.012	.777	2.000	126.000	.462
	Roy's Largest Root	.012	.777	2.000	126.000	.462

Effect		Partial Eta Squared
Intercept	Pillai's Trace	.841
	Wilks' Lambda	.841
	Hotelling's Trace	.841
	Roy's Largest Root	.841
Performance	Pillai's Trace	.012
	Wilks' Lambda	.012
	Hotelling's Trace	.012
	Roy's Largest Root	.012

As evidenced in the table above, the means for positive and non-positive tone are 9.56 and 14.11 respectively. The Wilks Lambda test show p=0.012 i.e. p<0.05 and there is a significant statistical relationship between the tone of business model disclosure and declining performance. This conclusion is consistent with Melloni et al. (2016) which also found a significant statistical relationship between a more positive tone and declining performance. The last two hypotheses related to disclosure verifiability.

4.4.3 Disclosure verifiability

The following hypotheses were tested:

H0: There is no significant statistical relationship between forward-looking information and a more positive tone of business model disclosure.

Hp3a: There is a significant statistical relationship between forward-looking information and a more positive tone of business model disclosure.

Hp3a tests the relationship between the tone of business model disclosure and time orientation and the Pearson Chi-square correlation coefficient was used to test the relationship between the two variables as depicted in table below.

Table 16: Pearson correlation coefficient for “tone” in relation to “time”

		Positive/Non-Positive	Forward Looking/Non-Forward Looking
Positive/Non-Positive	Pearson Correlation	1	.272
	Sig. (2-tailed)		.000
	N	3053	3053
Forward Looking/Non-Forward Looking	Pearson Correlation	.272	1
	Sig. (2-tailed)	.000	
	N	3053	3053

Even though the correlation is 0.272 which is relatively low, the p value is less than 0.05 (i.e. p=0.000). There is a significant statistical relationship between a forward-looking information and a more positive tone at a 99% confidence level. The results from this are consistent with the univariate analysis as well as the study performed in the UK (Melloni et al., 2016).

H0: There is no significant statistical relationship between qualitative information and a more positive tone of business model disclosure.

Hp3b: There is a significant statistical relationship between qualitative information and a more positive tone of business model disclosure.

Hp3b tests the relationship between the tone of business model disclosure and type of information and the Pearson Chi-square correlation coefficient was used to test the relationship between the two variables as depicted in table below.

Table 17: Pearson correlation coefficient for “tone” in relation to “type”

		Positive/ Non-Positive	Qualitative/ Quantitative
Positive/Non-Positive	Pearson Correlation	1	.107
	Sig. (2-tailed)		.000
	N	3053	3053

Qualitative/Quantitative	Pearson Correlation	.107	1
	Sig. (2-tailed)	.000	
	N	3053	3053

The correlation between "tone" and "type" of disclosure is low but still positively correlated at 0.107. The p=0.000 (i.e. $p<0.05$) indicating there is a significant statistical relationship between a more positive tone and qualitative information at a 99% confidence level. These results are inconsistent with findings of both Melloni et al. (2016) and Moloto (2019).

4.5 Summary of results

Results from the manual content analysis found similarities with past studies performed by Melloni et al. (2016) and Moloto (2019). The only difference was that this study found outcomes to be dominant in terms of "topics" category.

The univariate analysis found significant relationship across all categories in relation to tone. There is a significant statistical relationship between "tone" and "type", "time" and "topic".

The multivariate analysis also found a significant statistical relationship between a more positive tone and a larger board, declining performance as well as more positive tone being associated with qualitative and forward-looking disclosure.

Chapter V – Conclusions and recommendations for future research

5.1 Conclusion

In this study the researcher investigated whether the integrated report of public entities provides informative content regarding public sector entity's business model disclosure. More specifically, this paper investigated whether or not management of public entities adopt impression management strategies by manipulating the tone of business model disclosure. A three-level analysis was performed to determine whether or not this was the case. This study replicates a study conducted in the United Kingdom by Melloni et al. (2016), as well as, a study conducted in a South African context in the private sector, looking at the top 100 JSE entities (Moloto, 2019). The purpose was to observe whether or not the public sector's findings were consistent or different from those in the private sector.

The methodology followed was in line with Melloni et al. (2016) in splitting it into three phases, namely a manual content analysis, univariate analysis and a multivariate analysis. The results were analysed using a range of statistical methods and the main findings are summarised below.

With regards to the manual content analysis, the results found majority of sentences in business model disclosure to be non-positive. This is inconsistent with the findings of Melloni et al. (2016), but consistent with Moloto (2019). This proves that in a South African context, management of both public and private sector entities may be weary in adopting impression management techniques by manipulating corporate disclosures to present an entity in a more positive light. This also may be because of the fact that recently public sector entities are being exposed for corporate failures and management are being held accountable (Kanyane & Sausi, 2015). It may be concluded that management of public entities do not make use of impression management strategies by manipulating the tone of business model disclosure.

The univariate analysis found significant relationships between tone and other categories of disclosure (i.e. type, time and topic). The multivariate analysis of assessing whether a more positive tone was associated with certain disclosure variables in relation to corporate governance, performance and disclosure verifiability concluded that there was a significant statistical relationship between a more positive tone and all the above mentioned disclosure variables.

The findings in relation to corporate governance show that a limited number of members on the board is associated with a more neutral tone. The study also found declining performance to be associated with more positive tone of business model disclosure. Finally, the multivariate results revealed that a more positive tone is associated with forward looking disclosure and qualitative information. All the above findings in relation to the multivariate analysis is in line with prior research performed.

This study is subject to certain limitations. The study only observed schedule 2 and 3A entities and may not fully represent the population. The study was limited to only observing the business model section and is not fully indicative whether other areas of the integrated report make use of impression management techniques. Some of the small Schedule 3A entities did not specifically disclose business models and other sections were used as a proxy of a business model that described how the entity created value. Finally, impression management strategies consist of thematic manipulation, syntactical manipulation, performance comparisons and attribution of organisational outcomes and this study only focused on thematic manipulation.

In conclusion, the results from this study were mostly consistent with the findings by Melloni et al. (2016). But, interestingly enough, the results differed quite significantly to Moloto (2019) who assessed entities listed on the JSE. Management of public sector entities do not manipulate business model disclosure by making use of a more positive tone. However, when testing association between tone against a number of variables, the researcher found that there was a significant statistical relationship between positive tone and certain variables. This may be because of the fact that public entities have recently been performing poorly and the good news that is disclosed is unquantifiable and unsubstantiated information (Manyaka & Sebola, 2012).

5.2 Recommendations for future research

The findings in this study provide different areas for future research. As narrative disclosures become more prevalent and important (Brennan & Merkl-Davies, 2013), research could be done whether management adopt impression management strategies within other narrative disclosures. This study only focuses on brief reasons for adopting impression management strategies through the manipulation of tone. A future study may look at the deeper underpinnings of why impression management strategies have been adopted. Investigations can be done on whether or not stakeholders feel current business model disclosure provide value and is easily understandable. Research may be performed whether or not entities incorporate sustainability within business model disclosure by making use of a sustainability checklist. The ultimate aim for all such future research is to ensure business models are unique, concise and add value in describing how an entity creates value by utilising the 6 capitals.

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