

The effectiveness of paper-based reporting within the Department of Social
Development, Women, Children and People with Disabilities in the Ngaka
Modiri Molema District Municipality

By

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DECLARATION

I, Gadifele Patricia Kepadisa, hereby declare that this dissertation entitled, "the effectiveness of paper-based reporting within the Department of Social Development, Women, Children and People with Disabilities in the Ngaka Modiri Molema District Municipality", is an original piece of work produced by myself and all references and sources have been accurately reported and acknowledged and that this document has not previously in its entirety or in any part been submitted to any university in order to obtain an academic qualification.

Gadifele Patricia Kepadisa

October 2012

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ABSTRACT

The aim of this study was to assess the effectiveness of paper-based reporting within the Department of Social Development, Women, Children and People with Disabilities, in the Ngaka Modiri Molema District Municipality. The objectives of the study were to evaluate if paper-based reporting addresses the concerns of compliance and quality to reporting requirements, to establish the kind of evaluating and effectiveness research that meets paper-based reporting and also to identify what can be done to improve reporting mechanisms within organisations. The study explained what paper-based reporting is and outlined the reporting practices in different fields as well as the metrics used in paper-based reporting. The study further explained the environmental, human and control factors associated with reporting. The quality of reporting and its social responsibility in relation to reporting was also indicated. The study focused on a population size of 45 staff member working in the Department of Social Development, Women, Children and People with Disabilities. All forty five (100%) of the total population selected participated. Thirty (67%) participants were females and fifteen (33%) were males. No preference was given according to any sex; the sample breakdown was considered as being a fair representation of the demographics of paper-based reporting. The findings of the study concluded that paper-based reporting role is occupied by thirty (71%) respondents who were involved in the paper-based reporting and from an organisation perspective, the paper-based reporting cycle was successful. This indicates that the majority of respondents are familiar with the effectiveness or ineffectiveness of technology including electronic reporting. The bulk of respondents are thus specialists, and this can be attributed to the profile of paper-based reporting, who are highly skilful, qualified and with the ability to work without supervision.

Furthermore, about 56% of the respondents indicated that the concurrent restructuring and centralisation process had a negative effect on the paper-based reporting implementation in the organisation. This indicates that organisations must refrain from the practice to improve reporting mechanisms.

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CHAPTER 1

OVERVIEW OF THE STUDY

1.1 INTRODUCTION

Records are acknowledged as being vital resources for effective control and administration and a means of retaining references to past events and decisions which enable an institution or organisation to make accurate and informed decisions. Records management is a process of ensuring the proper creation, maintenance, use and disposal of records to achieve efficient, transparent and accountable governance (Chao and Chen, 2009).

Records are the output of the business and administrative processes of a governmental body. They serve as essential proof of the business that was conducted and should remain unaltered over time for as long as they are needed. They also form the memory of the institution that created them and by extension they are part of society's memory and the broader cultural heritage. In some cases, records also have a bearing on the rights of citizens. The need for effective management of records is enhanced by the Public Finance Management Act, 1999, the Promotion of Access to Information Act, (2000), the Promotion of Administrative Justice Act, (2000) and the Electronic Communications and Transactions Act(2000).

The literature used in this chapter is retrieved from the internet and is literature that supports statements made in the chapter. The chapter looks at the problem statement, research design, significance of the study and layout of the study.

1.2 BACKGROUND OF PROBLEM STATEMENT

The Advisory Committee for the Co-ordination of Information System states that businesses have relied on paper-based documents and forms for most of their internal business processes for centuries. In fact, throughout history, the practice of viewing, copying, editing and transferring paper documents has been performed without much focus on the sensitivity of their content. Today, document security is of paramount importance for any organisation. Identity theft, scams, forgeries and corporate espionage have elevated document security to a pressing issue for every

organisation. With the introduction of legislation such as the Health Insurance Portability and Accountability Act (HIPAA) in 1996 (Republic of South Africa, 1996) and the Financial Modernisation Act of 1999 (also known as the Gramm-Leach-Bliley Act), (RSA, 1999), the urgency and focus has grown even more intense. Beyond the risks and regulatory issues, however, organisations must also deal with the gross inefficiencies of having to handle, copy, distribute, file, store and retrieve paper documents, which slow the execution of tasks and negatively impact employee productivity.

Paper documents create costly overhead, hinder the efficiency of processes and pose potentially serious liability and litigation exposures for organisations that are unable to secure, manage and account for sensitive information contained in their paper-based documents and forms (Maltby, 2004). In today's environment, organisations with multiple locations need document solutions that can capture sensitive information at the local level and facilitate their distribution to internal and external entities in a secure and efficient manner. The ideal solution would also enable enterprises to reduce their exposure to litigation while lowering operating expenses and with the increasing legal challenges and government regulations regarding information privacy and data security, the traditional approach for managing paper documents has become a liability in the modern workplace. Mismanaging important documents, such as employment applications and personnel forms, can result in hefty fines, litigation or both and may result in the levy of severe penalties for those who fail to ensure proper security. Moreover, the handling, distribution and storage of paper documents is cumbersome, inefficient and costly (Waterson, 2005).

Organisations face distinct challenges in managing time sensitive information via paper-based documents (Waterson, 2005). The challenges are as follows:

(a) Information Security— Securing documents within the workplace represents the single greatest challenge for companies. For example, offices and workstations are often left unattended. Situations such as open desk drawers or file folders carelessly left on desks create opportunities for personal or financial information theft.

(b) Execution Speed – The faster that information is processed and verified for accuracy, the better the result, especially in the areas of personnel administration, inventory management and finance. Relying on conventional postal delivery or interoffice mail to send documents from a distributed location to a headquarters location

can add days or weeks to the process, creating slower transactions and higher operating costs while increasing the likelihood for lost documents.

(c) Productivity Inefficiencies— The more opportunities that the organisation has to remove paper documents from its processes, the more likely that productivity will increase as a result. In manual paper-based operations, the greater the number of people who touch a document, the higher the likelihood for human error. Often, an important document must be delivered to several employees in different departments. This delivery process relies on the ability of each employee to handle the document correctly and quickly. The risks and consequences of failure along the way are real.

(d) Limitations and Costs of Physical Storage— Storing paper records limits an organisation's ability to quickly retrieve information and because paper documents are often filed in a central location, convenient access to the documents by a wide range of users is limited. Access is often further limited by physical proximity, such as an offsite location which may be used for storing older or closed files.

1.3 PROBLEM STATEMENT

Governments find themselves caught between central agencies such as treasuries, Auditors General and Public Accounts Committees demanding greater levels of accountability for outsourced service provision and, more recently, renewed pressures to reduce the red tape and paperwork compliance costs (Waterson, 2005). Such paperwork reports were a waste of time to compile and provided public servants with inadequate information upon which judgments might be based.

Mullen and Nadler (2008) reiterate that purpose of the Paperwork Reduction Act (PRA) in most countries, is to

- minimise the public's paperwork burdens resulting from the collection of information by or for the government;
- co-ordinate agencies' information resources management (IRM) policies;
- improve the dissemination of public information;
- ensure the integrity of the government statistical system; and
- Paperwork Reduction Act also requires agencies to indicate, in strategic information management plans, how they are applying Information Resource management to improve the effectiveness of government programmes, including improvements in the delivery of services to the public.

Mullen and Nadler (2008) further emphasise that the purposes of the Government Information Security Reform Act (GISRA) in most countries are

- to provide a framework for establishing and ensuring the effectiveness of controls over information resources that support operations and assets;
- to recognise the highly networked nature of the federal-computing environment, including the need for federal government interoperability and, in the implementation of improved security management measures, ensure that opportunities for interoperability are not adversely affected;
- to provide effective government-wide management and oversight of related security risks, including co-ordination of information security efforts throughout the civilian, national security and law enforcement communities;
- to provide for development and maintenance of the minimum controls required to protect federal information and;
- to provide a mechanism for improved oversight of information security programmes in federal agencies.

Brown, De Jong and Lessidrenska (2009), state that advanced technologies have put pressure on the way Government agencies are performing business. Enhanced public service has been proven to increase through the use of advanced technology that created electronic government. Wireless technology is a supplement to electronic government that will improve the productivity levels and develop better decision making tools for government agencies. For example, using handheld devices allows personnel to collect, track and report data as well as query government databases based on various criteria.

Glancy and Yadaf (2011) reported the importance of examining the global scope of e-government as well. The relative development of these technologies in various countries has a significant impact on the ability of most governments to function well. Some countries have used their technological and educational abilities to create e-government structures, while development has been slow in other countries that have the same resources because the citizens do not trust e-government structures. Other developing countries are creating their technology, communication and education base and are moving towards an e-government system.

Glancy and Yadaf (2011) further state that resistance to change by long-term employees is always a concern. Employees must understand the benefits of the new procedures to implement e-government or they will unknowingly sabotage implementation efforts. A study by Glancy and Yadaf (2011) identifies the following barriers: culture, lack of federal architecture, trusted resources and stakeholder resistance. It is important to overcome these concerns in order to meet implementation deadlines (Glancy&Yadaf, 2011).

Few departments using paperwork systems set out concrete statements of what they plan to achieve and then report back specifically against those expectations; they focus too much on listing activities and outputs and too little on linking them to and reporting on the intended outcomes. Reporting, therefore, makes too little use of evaluation findings and there is little linking of financial and non financial information and performance reports lack balance. In most cases, paper-based reporting cannot be accessed by other departments working on the same activities.

A study undertaken by Glancy and Yadaf (2011) indicates that there is mounting empirical evidence that identical paper-based and computer based test will not obtain the same results. Such findings are referred to as the “test mode effect”.

1.4 RESEARCH OBJECTIVES

The aim of this study was to assess the effectiveness of paper-based reporting within the Department of Social Development, Women, Children and People with Disabilities in the Ngaka Modiri Molema District Municipality. The objectives of the study were to

- evaluate the extent to which paper-based reporting addresses the concerns of compliance and the quality of reporting requirements (ie usefulness, reliability, etc);
- establish what evaluating and effectiveness research satisfies paper-based reporting;
- identify what can be done to improve reporting mechanisms within organisations.

1.5 RESEARCH DESIGN/ METHODOLOGY

According to Waterson (2005), research design focuses on the end product of what kind of study is being planned and what kind of result is aimed at, while the research methodology focuses on the research process and the kind of tools and procedures to be used. Research methodology consists of two methods, quantitative and qualitative. Sellen (2003) describes quantitative category as experiments, survey and content analysis. Types of experiment described are the classic experimental design, pre-experimental designs such as the one-shot case study, one-group pre-test post-test design and the static group comparison. Quasi-experimental and special designs described are the two-group post-test-only design, interrupted time series, equivalent time series. On the other hand Creswell (2002) describes qualitative method as a research that yields detailed information reported in the voices of participants and contextualised in the settings in which they provide experiences and the meanings of their experiences as the entire process of research from conceptualising a problem to writing the narrative.

1.5.1 Data sampling

Sampling is that part of statistical practice concerned with the selection of an unbiased or random subset of individual observations within a population of individuals intended to yield knowledge about the population of concern, especially for the purposes of making predictions based on statistical inference. Sampling is an important aspect of collecting data. A population is a set of elements to which the results obtained by testing the sample should be generalised (Waterson, 2005)

The population of this study is made up of five municipalities of the Ngaka Modiri Molema District Municipality: Ditsobotla, Mafikeng, RamotshogaMoiwa, Ratlou and Tswaing Local Municipalities. The focus is on the five (5) service points and two institutions. Nine (9) managers were given questionnaires from every centre, the data capture, information officers and service point managers giving the total of (n) 45.

1.5.2 Data collection

Data collection is a term used to describe the process of preparing and collecting data. The purpose of data collection is to obtain information to keep on record, to make

decisions about important issues and to pass information on to others (Uwe, 2007). There are many methods of collecting primary data such as questionnaires, interviews, observations and case study.

In this study questionnaires were administered by the researcher in all five local municipalities. Complete anonymity was guaranteed because no name was required on the questionnaire. Structured and unstructured questionnaires were distributed to the target group using random sampling.

1.5.3 Data analysis

In any research study, the research process culminates in the analysis and interpretation of some set of data, be it quantitative data, literary text, qualitative transcripts or discursive data. Analysis of data involves looking into the available statistics and breaking up the data into manageable themes, patterns, trends and relationships (Uwe, 2007).

A combination of both qualitative and quantitative analysis was employed in this research study. The combination of these two research methods come about in this study because data was collected using a single research instrument. This occurs as a result of open-ended questions and self administered questionnaire. The study focuses on paper-based reporting as compared to information system reporting in the Department of Social Development, Women, Children and People of Disabilities in the Ngaka Modiri Molema District Municipality.

1.6 SIGNIFICANCE OF THE STUDY

The significance of this study is paramount as it hopes to contribute valuable insight and theory into the successful implementation of technology as a decision making tool, especially in light of the amount of resources being dedicated to the implementation of information systems. The consolidation of reports for reporting to Treasury, National Departments and other relevant stakeholders is frustrating and time consuming. Furthermore, the lack of timeous information due to the delays in extracting and combining the information may lead to incorrect information being submitted and subsequently resulting in incorrect management decisions being made. This may be detrimental to a business which intends to do critical performance analyses so as to measure service delivery. The results of the study may be utilised to develop improved

training models, environments and implementation strategies to promote the effectiveness of paper-based reporting as opposed to electronic reporting.

1.7 DISSERTATION LAYOUT

The study is divided into five chapters as outlined below:

Chapter 1: Introduction and orientation of the study. This chapter introduces the report. Among other things, it discusses on the background of the study, the methods used to collect data as well as how data is analysed.

Chapter 2: Literature review on the study. This chapter reviews literature on the topic from both secondary and primary sources.

Chapter 3: Research design and methodology. This chapter explains the method of research that was used and the research design followed.

Chapter 4: Data presentation and analysis. This chapter presents and analyses the collected data.

Chapter 5: Summary, findings, recommendations and conclusion. This chapter summarises the entire study whereby the findings and recommendations are provided as well as the conclusions reached.

1.8 CONCLUSION

This chapter serves as the introduction and outlines the foundation of the subsequent research. It discusses the research problem to place the study into perspective. It is followed by the chosen research methodology and highlights the objectives of this business research.

The background of the research was described. The paper-based reporting by the department for performance management had been practised since the establishment of the department. It is thus imperative to measure its effectiveness as compared to electronic reporting. The next chapter describes the literature that details paper-based reporting.

CHAPTER 2

LITERATURE REVIEW

2.1 INTRODUCTION

The study is about evaluating the effectiveness of paper-based reporting which is used by the Department of Social Development, Women, Children and People with Disabilities in the North-West Province. The study seeks to understand if manual reporting is more effective than electronic reporting.

The department is expected to provide monthly, quarterly, annual as well as ad hoc reports to different entities including Treasuries, Auditors General and Public Accounts Committees. These entities demand greater levels of accountability for outsourced service provision and, more, recently renewed pressures to reduce the red tape and paperwork compliance costs (Waterson, 2005). It has been noticed that the paperwork reports constitutes a waste of time to compile, and provide public servants with inadequate information upon which judgments can be based. Paper documents create costly overhead, hinder the efficiency of processes and pose potentially serious liability and litigation exposures for organisations that are unable to secure, manage and account for sensitive information contained in their paper-based documents and forms (Uwe, 2007).

The literature reviewed for this study includes both national and international research in evaluation and comparative studies of online and paper-based reporting. Furthermore, the review has identified important principles for the effective evaluation of paper-based reporting and electronic reporting. Part of the literature search has been performed through the Internet where the search engines Google, Google Scholar and science direct have been used. The keywords applied involve those dealing with reporting practices in different fields, quality and reporting and environmental factors in reporting. Other sources used include text books, white papers and journals relevant to the research topic. The literature review is concluded by the research questions that still remain to be answered.

2.2 DEFINITION OF PAPER-BASED REPORTING

Augmenting paper-based learning with mobile phones for decades, paper and traditional books, have always served as useful tools that support knowledge intensive tasks. The unique characteristics of paper include its support for the reading processes (Chao & Chen, 2009) and facilitation of co-operative work among group members (Normura, Hutchins & Holder, 2006). According to Weiss, Banilower, McMahon & Smith (2000), most high school science teachers in the USA reported using at least one commercially published textbook in their classes.

The use of paper textbooks could help teachers prepare course instruction or could support students in collaborative learning tasks (MacDonald, Higginins & Podmore, 2005). To students, these printed books could also be perceived as critical vehicles for acquiring knowledge or principal sources for receiving specific course credits (Chao & Chen, 2009).

2.3 REPORTING PRACTICES IN DIFFERENT FIELDS

Paper-based and electronic patient records are generally used to support different tasks. Many studies comparing their quality do not report sufficiently on the methods used. Few studies refer to the patient. Instead, most studies regard the paper record as the gold standard. Focusing on quality criteria, a study was conducted by Adolfsso and Rosenblad (2011) which compared paper-based with electronic patient records. That study compared the two records of two surgical patients at a non university hospital. The comparison was on the diagnosis and procedure codes from the hospital's Electronic Patient Record (EPR set) with the Paper Records (PPR set). The two record patient by patient, presuming that each might hold unique advantages. For surgical patients at a non university hospital, the diagnosis and procedure codes from the hospital's electronic patient record (EPR set) were compared with the paper records (PPR set). Diagnosis coding from the paper-based patient record resulted in minor qualitative advantages.

The EPR documentation showed potential advantages in both quality and quantity of procedure coding. As in many previous studies, the study relied on a single individual to extract and transform the contents from the paper record and compare PPR with EPR. Coons, Gwaltney, Hays, Lundy, Sloan, Revicki, Lenderking, Cella & Basch (2008), in their

exploratory study, although limited, support the previous views of the complementary nature of paper and electronic records.

The lessons learned from this study are that medical professionals should be aware of the possible discrepancies between paper and electronic information and look toward combining information from both records whenever appropriate. The inadequate methodology (transformations done by a single individual) used in the study is typical of other studies in the field. The limited generalisability and restricted reproducibility of this commonly used approach emphasises the need to improve the methods for comparing paper-based with electronic versions of a patient's chart.

The authors are aware of the methodological shortcomings in the current study. Nevertheless, the study results support the finding of Peterchev., Wagner, Miranda, Nitsche, Paulus, Lisanby, Pascual-Leone & Bikson (2011) that the parallel use of electronic and paper-based patient records can lead to inconsistencies in the medical documentation. Medical professionals should be aware of this situation and combine the information from both records whenever possible. The authors concede that it may be too expensive to strive for a total concordance between paper and electronic data sets, which are often used for dramatically different purposes in medical practice (Sellen, 2003). It is ultimately the goal to join all data into one ubiquitous electronic record. But this is only possible if care providers accept that valid data must be present to represent the truth in patient records for all intended uses of the record.

Peterchev et al. (2011) indicate that the paper-based information systems that nowadays support the immunisation programmes in developing countries have long struck readers as arcane and ineffective. All around the world, at the end of each month, nurses and other health workers typically take a break from their real job to prepare a set of reports for their district supervisors, to report the numbers of children they vaccinated, the quantities of vaccines they used and the orders they want to place for the next month.

Yet despite their best efforts, this data gets distorted as it moves up the chain and by the time it reaches its final destination, the information is not detailed, timely or even accurate enough to use for meaningful decision making. Computerised immunisation registries are even more ambitious and may not be a good solution for many countries. But where they can be implemented, the benefits compensate for the higher complexity. They track each child's vaccinations and feed that information into a national database.

This personalised recording system allows for individualised follow-up, helping ensure that children receive all necessary vaccinations no matter where in the country they move.

By tracking this information, immunisation programmes can reduce the number of defaulters, find the unimmunised and ensure that the right vaccines are distributed when and where they are needed, minimising vaccine wastage, loss and stock outs. They also allow for a lot of tracing down to the level of the child, which is an essential tool for vaccine safety and the management of Adverse Events Following Immunisations (AEFI). This system is currently being piloted in Albania, Vietnam and Guatemala by project Optimise (Perrini, 2005).

Sanne (2008) describes how a voluntary accident reporting scheme has been used to identify the requirements for and monitor the effectiveness of interventions within the New Zealand logging industry. Two examples were used, i.e. the development of chainsaw cut-resistant leg wear and determination of the most appropriate colour for high visibility clothing. The underlying rationale for each intervention is described and the effectiveness of the intervention is evaluated based on the data drawn from the accident reporting.

The two case studies describe why the Accident Reporting Scheme (ARS) is an essential tool for the improvement of safety within the New Zealand logging industry. The detailed information supplied to the ARS allows research, development and training resources to be targeted to the areas of greatest need. The effectiveness of this targeting is illustrated by the widespread acceptance and the relatively fast implementation of Logging Industry Research Organisation (LIRO) research findings by the forest industry. The ARS is particularly effective due to its defined forest industry focus.

The collection of data for a wider group could potentially hide important accident trends, as well as the effects of interventions implemented by the industry. This has shown that an industry focused accident reporting scheme can play an invaluable role in injury prevention and illustrate how, in the New Zealand logging industry, this has been achieved (Sanne, 2008). This needs to be evaluated by the type of reporting mechanism used by the organisation.

One of the most frequent reasons why companies appear disposed voluntarily to offer accounting information by the Internet is their interest in showing the more favourable

aspects of the company to the market. For example, its value has increased or that its costs of capital have been reduced (Sellen, 2003).

Brown, De Jong and Lessidrenska (2009), state that, although the core guidelines are universally applicable, some sectors have unique, detailed needs and thus require additional specialised guidance (for instance, Public Sector; Logistics and Transport; Apparel and Footwear and Energy Utilities). Thus, assessing the social and environmental performance of organisations becomes limited without some alignment to the concerns and issues prevalent in the specific industry context.

In developing the disclosure instrument, the Global Reporting Initiative's Sustainability Reporting Guidelines (Brown et al., 2009), were used to develop the Social and Environmental framework. This framework was supplemented with industry-specific items relevant to the AGRI Food Biosciences Institutes (AFBI). The industry specific items were identified from three sources. These were publicly available reports from various AGRI Food Biosciences Institutes associations, councils and government bodies, industry-specific indicators identified by well recognised sustainability ranking organisations, for example, Repu Tex and publicly available reports of companies within the AFBI that have been recognised for best practice in sustainability reporting (Guthrie, Cuganesan & Ward, 2008). These findings illustrate the need for policy setters to establish generally accepted guidelines for disclosure of Social and Environmental framework information in order to improve measurability, credibility and comparability between reporting periods and between companies. The benefits of the implementation of IFRSs include the harmonisation of accounting practice across adopting countries, which in turn leads to higher comparability, lower transaction costs and enhances international investment.

The persistent influence of conservatism on accounting practice suggests that it confers benefits to economic agents who use, prepare or regulate financial reports. To investigate the sources of these economic costs and benefits, the authors extended earlier cross country research (Belal & Cooper, 2011) examining the association between country level institutions and conservative accounting practices. In contrast, private enforcement aspects of securities law as embodied in disclosure requirements and the burden of proof requirements of the liability regime have no impact on conservative financial reporting. A feature of the paper is an analysis of the influence of political economy on incentives for conservative reporting. They find that in countries characterised by high state involvement in the economy, firms speed recognition of

good news and slow recognition of bad news in reported earnings relative to firms in countries with less state involvement.

Belal et. al.(2011),provides a reasonable indication of the nature of accounting practice and policy choice of a firm and is broad enough to capture the effects of institutional influences on accounting practice.Maltby (2004) argues that abnormal accruals using the Joseph (2012) model capture the insiders' tendency to both overstate reported income to conceal resource diversion and to understate income in good performance years to create reserves for poor-performance periods in the future.

According to them, this measure also avoids conceptual ambiguity associated with benchmark measures. Benchmark measures do not consider whether the observed results are achieved through income management, expectations management or improvement in operations.

Bushman and Piotroski(2006),aim to address such a gap in the current literature and support the evaluation of security assurance at the operational systems level by introducing metrics for the continuous evaluation of security assurance of runtime systems. The outcome of evaluation is a statement about the extent to which confidence has been gained that the security mechanisms are operating properly.Metric is a value, selected from a partially ordered set by some assessment process that represents an information system related quality of some object of concern (WISSR, 2001).

These characteristics can be integrated and communicated to users (including system administrators and security managers) to ensure a good understanding of the security posture. Such a challenge is partially answered by considering NIST's special publication NIST800-33 (Sullman, Kirk, Parker& Gaskin,1999). No metrics are worthwhile if the results of applying them cannot be effectively understood and security assurance metrics are no exception.

According to Shiva (2011), organisations match the demands of their environment with management and organisational systems in order to survive and succeed. They argue that management and organisational systems most appropriate for any given firm are the product of the specific set of environmental contingencies being faced by the firm. Similarly, the choice of capital structure is less a matter of predefined alternatives and more of a search for alternatives in a complex and uncertain environment in which the firm exists.

The choice of managerial and organisational systems and the capital structure, in turn, affects accounting practices of firms within a particular corporate environment. Prior studies have shown that various forms of organisational and capital structures exist outside the Anglo-American countries (Perrini, 2005).

Institutional theory offers a generic framework to analyse corporate practices. It provides insights into how an organisation functions in its environment and allows for an explanation of the relationship between organisational practices and its environment. Its premise is that organisations adopt or adapt to institutional norms and rules to gain stability and enhance survival prospects. Through the processes of adoption and adaptation, the institutional norms and rules impact the positions, policies, programmes, and procedures of organisations (Sellen, 2003).

The reporting incentives of firms are shaped by institutional environments of countries (Roe and Just, 2009). Accordingly, they adopt the precepts of institutional theory and examine how the different institutional settings of firms in five countries bring about different accounting practices in these countries. The countries chosen are the United States, Japan, Thailand, France and Germany.

This implies that if companies want to obtain their stakeholders' trust and build a good reputation in the market (Bhimani, 2008), they must give concrete evidence that they are committed to continual, long-term improvement (Cormier & Magnan, 2007), as well as identifying, monitoring and reporting all social, environmental and economic effects of its operation on society at large.

The theme supplier management received a good deal of attention in the reports that have been analysed, perhaps because the companies seem more aware than ever that they are part of an open system, dynamically linked to its environment of reference and that their suppliers are an extension of the company itself. Clearly, organisations aspiring to be responsible, "think about" the effects of their operations, from "cradle to grave" (Church, Hannan & Kuang, 2012).

In this regard, companies share the will to make CSR and sustainable development mutually compatible with one another, trying to communicate their ability to take into consideration needs expressed by the different stakeholders it deals with and the overall impact of its operation on the environment.

Corporate attention to this issue has extended exponentially and this emerges from the social, environmental and sustainability reports. Looking at the themes and topics for each stakeholder-based category gives a clear view of what the main function of a social and environmental report is and the relationship between it and the CSR concept. By using this kind of data container, a company is able to self-evaluate and organise all the aspects of its role within a complex and multidimensional environment (Bushman & Piotroski, 2006).

The more knowledge generated about what stakeholders need, the more effectively companies can communicate with them and serve their needs. These can be traced back to seven main themes, operational efficiency or group profitability, maximum safety at each level (from product and service safety to working conditions, without excluding suppliers' relationship and impact), product quality and innovation, environmental protection and contribution to widespread environmental training, dialogue with stakeholders, attention to skill development (apart from its being company-oriented or community-oriented) and, finally, responsible citizenship.

The literature suggests a number of reasons why companies would disclose voluntary environmental information. Legitimacy theory suggests that to achieve legitimacy an organisation should be operating within the norms and expectations of the society within which it operates and implies that organisations make voluntary disclosures in order to gain legitimacy from or maintain legitimacy with relevant stakeholders or publics (Joseph, 2012).

The reactive approach is demonstrated in the many empirical studies finding that companies publish more environmental information in reaction to increased environmental exposures or some environmental event (Hsu & Cheng, 2012) and also the results from research which examines the relation between environmental disclosures and environmental performance often indicate a reactive approach.

2.4 ASSESSMENT OF THE DISCLOSURES

The study assessed the extent of environmental reporting by counting the number of sentences of environmental reporting in each report. Tables, graphs and figures were included in the count by employing a standard sentence of fifteen words but pictures/photographs and spaces were not defined as sentences. Glancy and Yadaf,

(2011) acknowledges that this is not a precise measure; however, it does provide a means of comparing variations in levels of disclosure between companies. This was done for each mode of reporting and in total.

The difference between the mean and median for the annual report disclosures can be explained by the fact that a few companies published extensive environmental information in the annual report (rather than in a stand-alone environmental report). The environmental performance indicators used in the literature often do not tell much about the company's general attitude towards the environment and therefore propose environmental responsiveness as a more comprehensive measure of companies' environmental orientation.

A manifestation of extreme distortion and lack of timeliness in financial reporting is the incidence of accounting fraud or accounting misstatements. In addition to distorting the information environment in which outside directors make decisions, accounting fraud and misstatements subject the firm to regulatory, litigation and other costs (Hazera, Hernandez, Stevens, Cardenas&Schwarzbach, 2011).

Another incentive-based approach to promoting a transparent information environment is to tie executive compensation to performance measures that are sensitive to the quality of the information environment. For example, Needles,Ramamoorti& Shelton (2002) argue that the stock price is increasing in the quality of the information environment and providing executives with equity based incentives which should therefore promote a commitment to high quality disclosure.

Consistent with the theory that worsening earnings cause earnings,Skouloudis, Evangelinos&Kourmousis(2010), argue that the results from time-series and cross-sectional regressions indicate a strong association between rising idiosyncratic return volatility and falling earnings. The quality, together with the temporal link between idiosyncratic volatility and the two information quality proxies persist even after recognising the spurt in new listings.New business models may decrease the quality of accounting information, identifying firm years with negative earnings, as the increasing incidence of negative earnings may have contributed to the decline in earnings quality over the last several decades (Coons, Gwaltney, Hays, Lundy, Sloan, Revicki, Lenderking, Cella&Basch, 2008).

Kwon,Yoo, Kim, Shang, & Lee (2009)examine the consequences of improved disclosure quality on a firm's bid ask spreads, trading volume and stock-return volatility

in the context of German firms that switched from German GAAP to US GAAP or IAS. They state that these German firms switch to an arguably better financial reporting regime, commit to increased disclosure and hence experience a reduction in the asymmetric information component of the cost of capital.

The authors find that bid ask spreads decline and trading volume improves when German firms switch to an international reporting regime. Motivated by the recent Discussion Paper (DP) issued by the Financial Accounting Standards Board (FASB) and the International Accounting Standards Board (IASB) on how to define reporting entities, the study investigates the value relevance of consolidated statements under the ownership based approach of US Accounting.

Although there are a few studies like those of McGhan, Maiween, Doshi, Kamae, Marx and Rindress (2009) who analyse the determinants of Internet financial reporting by New Zealand companies or that of Kwon et al. (2009) who analyse the factors behind Chinese listed companies' voluntary adoption of Internet based financial reporting, more studies are needed to examine companies that are located in other countries to enable analyses of the information divulged using the Internet, together with the determining factors.

The voluntary disclosure of information by companies is not a recent practice. Companies have traditionally supplied information voluntarily, either through the printed Annual Report (Kaplan et al., 2012) or at general meetings of shareholders with the object of influencing the behaviour of investors, consequently achieving a reduction in the asymmetry of information existing between the managers and investors (Glancy & Yadaf, 2011).

2.5 A COMPREHENSIVE COMPARISON OF CORPORATE ENVIRONMENTAL REPORTING AND RESPONSIVENESS

Sanne (2008) argued that previous studies involving content analysis generally used only an extent-based content analysis and usually focused only on annual report disclosures. The study proposed that evaluating the quality and extent of environmental disclosures in different media gives a more comprehensive picture of organisations' attempts to discuss environmental activities.

Likewise, Sellen (2003) notes that financial report environmental disclosure has been widely criticised as being misleading because companies appear to increase the provision of positive disclosure in response to increased exposures facing the firm and because this disclosure does not appear to be an accurate measure of firm environmental performance. Perrini (2005) identifies a number of reasons why companies may not report. These include a concern that environmental reporting may damage the reputation of the company or may be too expensive or because competitors are not doing it.

In recent times, regulators and other industry associations have recognised the importance of considering the industry setting when determining SE policy and reporting requirements. As reported by the Global Reporting Initiative (GRI, 2002) in their 2002 Sustainability Guidelines, GRI recognises the limits of a one-size-fits-all approach and the importance of capturing the unique set of issues faced by different industry sectors.

These reports are regarded as 'best practice' in sustainability reporting. Included in the top 50 are seven best practice companies from the Food and Beverage Industry. These include South African Breweries, Chiquita, Kesko, Unilever, TESCO and Danone (Rahman et al., 2010). The annual reports and other available reports were examined for each of these companies to offer insights into 'best practice' in SE reporting. The reports were specifically examined for items that are considered to be significant and important to the Food and Beverage Industry.

A consideration concerns what kind of documents are to be used to define the SE items of the sample companies. There are arguments for and against the use of annual reports as the sole source of a company's SE disclosures. Traditionally, the annual report has been viewed as the primary means of the dissemination of information to various stakeholders.

Armstrong, Guay and Weber (2010), recommend a multi-faceted corporate communication approach that includes more detailed web-based communication that complements hard copy reports. If this approach is adopted, generally accepted guidelines for corporate websites would allow more rigour and reliability of such disclosure. This finding also supports the growing body of evidence that indicates the demise of the annual report as the most important medium for the disclosure of extended performance information (Guthrie, 2006).

International Financial Reporting Standards and the quality of financial statement information Agency theory make a number of predictions regarding the behaviour of managers. It seems to suggest that by adopting IFRSs, firms act optimally and promote financial reporting quality and investor interests (Guerreiro et al., 2012). For example, highly leveraged firms would be keen to adopt IFRSs in order to satisfy the needs of lenders and the requirements of debt covenants and/or avoid political attention and scrutiny (Maltby, 2004). Jose and Rao (2006) suggest that the flexibility allowable in financial reporting may cause managers to behave opportunistically.

The main objective of the IASB is to develop, in the public interest, a single set of high quality, understandable and enforceable global accounting standards that require high quality, transparent and comparable information in financial statements and other financial reporting to help participants in the world's capital markets and other users who make economic decisions (Harvey, 2000).

2.6 TAX REGIMES

To the extent that financial and tax reporting are linked, the demand for conservative reporting to minimise the present value of tax payments will be increasing in the firm's expected tax burden. Similarly, taxation can be viewed as an alternative mechanism for the state to extract wealth from corporations and shareholders, thus giving rise to political costs that can influence observed reporting practices. There is limited data on the cross-country differences in the connection between financial and tax reporting or the enforcement of tax laws (Bushman & Piotroski, 2006).

Rajgopal and Venkatachalam (2011) have uncovered a wide array of important contracting roles for financial reporting. With respect to governance, much of the literature emphasises informal contracting based on signalling, reputation and certain incentive structures, whereas in the debt-contracting literature, research is balanced across formal and informal contracts. The conclusion in this literature is that financial reporting is useful because efficient contracts are possible when contracting parties commit to a more transparent information environment.

This view builds on the surveys of Bushman and Smith (2001) and Hazera et al. (2001), and it strives to limit the overlap with those papers by focusing on research that has evolved since the time of those surveys. Specifically, in the governance area, papers have begun to explore how a commitment to financial reporting quality influences both

board structure and ownership structure, although the causality of this relation is likely to go in both directions.

Muniandy, and Ali(2012) note that the efficacy of the accounting system in reducing agency conflicts depends, at least in part, on contracting parties' assurances that the financial reports have been prepared in accordance with the provisions of the contract. Broadly viewed, the auditing process is a set of mechanisms that provides this assurance to contracting parties by monitoring the financial reporting system.

Examples of the benefits of debt include lower taxes (Needles et al., 2002), reduction of agency costs stemming from free cash flow and reduction of agency costs via monitoring by lending institutions and credit rating agencies. In this section, emphasising the monitoring of the financial reporting process by lenders and the potential role of debt as a mechanism is to commit to financial transparency. Oudraogo et al.(2012) discuss the research establishing creditors' role in resolving agency problems through their expertise as monitors.

At the same time, Rajgopal (2011) documents that conservative reporting and CEO equity incentives are substitute monitoring mechanisms. The idea here is presumably that when a firm suffers from low information transparency and cannot employ or chooses not to employ, more conservative reporting that would reduce information asymmetry and thereby allow more direct board monitoring, is resorted to including indirect monitoring via equity incentives. This result is similar conceptually and empirically to Bushman and Piotroski (2006) finding that earnings timeliness is negatively related to the equity incentives of both executives and outside directors.

Some other links between various commitment mechanisms have recently been identified. For example, Hsu, Duh and Cheng(2012) document that a commitment to more frequent and timely earnings forecasts is a substitute for conservative financial reporting. Bushman and Piotroski (2006) find that the presence of active investors is a substitute for the timely reporting of earnings.

A number of recent studies argue that the Chief Financial Officer (CFO) often has as much influence over the firm's financial reporting as the Chief Executive Officer (CEO), if not more (McGhan et al., 2009). They highlight the important role that the CFO plays in the firm's financial reporting. They require both the CEO and CFO to personally certify the material accuracy and completeness of the firm's financial information and disclosures.

Hsu et al. (2012) explore this question by arguing that in emerging markets with weak property rights, controlling shareholders may enhance value because such owners are better able to negotiate and enforce contracts with outside parties. And, recognising the concerns of minority shareholders, controlling shareholders in this setting have incentives to introduce monitoring and bonding mechanisms, such as a commitment to timely and credible financial reporting, to limit their ability to extract private benefits.

Overall, it remains an open question whether ownership structures with controlling shareholders use financial reporting as a commitment mechanism that restricts the controlling shareholder's ability to extract private benefits of control or instead, use financial reporting to distort the information environment to facilitate greater extraction of private benefits.

Achieving useful and comparable financial reporting of corporate position and performance has always been of concern to accounting academics, commentators and financial regulatory bodies. Many European listed enterprises were early adopters that chose to use International Financial Reporting Standards (IFRS) issued by the International Accounting Standards Board (IASB) in preparing consolidated financial statements before the European Commission's stipulation that this be done from 2005.

Alvarez et al. (2005) investigated how shared interests in budgetary slack affect the honesty of budget reports. Specifically, how the sharing of the benefits from budgetary slack between the subunit manager making the report and other non-reporting employees affects the honesty of such reports. Broadly speaking, benefits from slack can be obtained by reporting dishonestly during the budgeting process in two ways. Costs can be overstated so that the subunit receives excess resources. The study also contributes to the stream of research that investigates how non-pecuniary preferences have a bearing on the effectiveness of management control (Armstrong et al., 2010). Conventional economic theory predicts that, in any setting, whether the benefit of slack is shared or not should have no impact on the manager's reporting behaviour because the wealth maximising level of slack is unaffected by any shared interest.

Several experimental studies have examined managers' honesty in budget reporting (Kwon et al., 2009). All of these studies are in settings without shared interest in misreporting (i.e. only the individual submitting the budget reaps the benefit of misreporting). In the basic setting, the manager, who has private information on local

production costs, submits a budget report to corporate headquarters requesting resources.

While securities market regulators focus primarily on financial information reporting, investors will assess a firm's financials using regulated and non-regulated disclosure. For instance, Kaplan, Pany, Samuels and Zhang (2012) as well as Iatridis (2010) provide evidence showing that investors rely on a firm's nonfinancial disclosure (e.g. number of new subscribers for wireless firms) to assess how its earnings are to be valued.

Chao and Chen (2009) paired a mobile phone with a paper document containing visual codes to facilitate data collection from rural microfinance groups in India. These visual codes were two dimensional data glyphs that can be recognised by camera equipped mobile phones. Both the short-cut and data glyph techniques employ index mechanisms to reduce or to eliminate data entry into mobile phones.

2.7 LINKING AMONG PAPER TEXTBOOKS, MOBILE PHONES AND A LEARNING COMMUNITY

Integrating a mobile phone with paper textbooks to facilitate paper-based reading and question resolution within a learning community involves challenges. Mechanisms that permit communication between the mobile phone and the paper textbooks are required so that students can extract information from a tangible book and co-ordinate reading on mobile phone screens and paper textbooks for different purposes (Chao and Chen, 2009).

The addition would also lead to the complementary use of two different vehicles' students who would read a large amount of text on paper textbooks, while they welcome adaptive, short and summarised text on mobile phone screens, such as recommendatory messages or short digital notes. The linking of traditional paper-based learning with an online learning community would help students to develop awareness of available learning support resources.

Although both a mobile phone and a paper textbook have high portability, their inherent characteristics distinguish them from each other in terms of the ways in which users interact with them. Paper documents are static objects that can present high-quality text

interact with them. Paper documents are static objects that can present high-quality text and produce less visual fatigue than a computer screen would do (Belal and Cooper, 2011). They serve the purpose of illustrating a large amount of expository text and of encouraging intensive and critical reading.

Conversely, mobile phones demonstrate communicative and computational capabilities as interactive devices. They permit immediate responses to user requests for connecting people or for managing personal information. When the complementary use of a mobile phone and a paper textbook is considered for the purpose of studying, the paper textbook provides detailed information for intensive reading, whereas the mobile phone supports the process by allowing students to extract verbatim notes from textbook paragraphs via line numbers, organise those extracts and send comprehension questions to a discussion forum (Belal and Cooper, 2011).

2.8 FINANCIAL REPORTING QUALITY IN INTERNATIONAL SETTINGS

The financial and organisational settings of countries are far more complex than what the legal and financing dichotomies reflect. For East Asian countries, Alvarez et al (2005) find that concentrated ownership and the associated pyramidal and cross-holding structures create agency conflicts between controlling owners (insiders) and outside investors, whereby, controlling owners report accounting information for self-interest purposes. Their explanation of concentration and controlled hierarchies suggest that firms in East Asia do not display separation of ownership and control.

The role of financial reporting in facilitating activity in the market for corporate control has recently gained attention from researchers, the basic research question being to better understand how potential acquirers obtain the information necessary to make efficient investment decisions (Beyer et al., 2010).

Although the results in Armstrong et al (2010) suggest that high quality accounting might be one way for firms to commit to more active monitoring from the market for corporate control, their study does not examine precisely how higher quality information facilitates efficiency in the takeover market.

Brown et al. (2009) take a step in this direction and explore Ball and Shiva (2011) argument that timely loss recognition serves as a disciplining mechanism that forces managers of acquiring firms to make better ex ante investment decisions and better ex

post divestiture decisions. As a result, the demand for high quality public disclosures and financial reporting for the purpose of monitoring management seems less important in firms with controlling shareholders than in firms with dispersed ownership that rely more heavily on outside directors to monitor management (Skoudis et al., 2010). However, although manager-shareholder conflicts are smaller in firms with controlling shareholders, there are important agency conflicts between minority shareholders and controlling shareholders, since the latter have the ability and incentives to extract private benefits from control, such as perquisite consumption and self-serving investments (Sullman et al., 1999).

Van Stander (2007) predicts and finds that firms with a dual class stock structure (that is two classes of stock with equal cash flow rights but different voting rights) have relatively lower earnings informativeness, measured as the strength of the return-earnings correlation. In a related paper with similar predictions and findings, Hsu et al (2012) examine a large sample of East Asian companies with substantial cross-sectional variation in ownership structure and minority rights and provide evidence that ownership control is negatively related to earnings informativeness.

Guthrie et al. (2008) state that, because controlling shareholders can monitor management without public disclosures, there may be less governance related demand for high quality financial reporting, thereby allowing controlling shareholders to protect proprietary information through less transparent reporting.

They conclude that rational individuals make their organisational structures, functions, and operations increasingly homogeneous not necessarily to increase efficiency but to meet social expectations or to be socially acceptable. In other words, institutional theory can explain why businesses have similar organisational structures and cultural elements within a particular socio-cultural setting, even though they are separate entities and, in turn, can explain why the features of an organisation in a particular setting are different from those of another. Such relationships can further stifle the relevance of accounting information as these firms are likely to have inside information. Inside information by both the partners and the outside affiliates lowers the relevance of publicly disclosed earnings information. Therefore, such financiers rely less on public information of the firm's earnings and have little reason to monitor the quality of accounting information in external reports.

demonstrate legitimacy, otherwise organisations may face a legitimacy threat if society is not aware that they are operating within its norms and expectations.

Along similar lines, Church (2012) suggested that a corporate decision to undertake a legitimating strategy may be reactive or proactive. The proactive approach is aimed at preventing a legitimacy gap as opposed to attempting to narrow such a gap. Regulators and other industry associations have recognised the importance of considering the industry setting when determining Social and Environmental (SE) policy and reporting requirements. However, the levels of social and environmental impacts can vary greatly from industry to industry. Despite the industry contextualisation imperative, few academic studies to date have attempted to address the reporting of social and environmental accountabilities at the industry level (Guthrie et al., 2012). They chose companies in industries that have *prima facie* more to justify than others and also gathered together a control group that *prima facie* may be considered to have less to justify. Accordingly, three groups of companies were selected depending on society's perception of their supposed depth of 'sinfulness'.

The authors believed that the three sectors selected for their study were perceived differently by society in terms of their social and ethical behaviour and hence their need to disclose social information, if legitimacy theory is a partial explanation of reporting behaviour.

There is growing evidence that adopting alternative media results in less information about extended performance being provided in the annual report (Rahman et al., 2010). Thus, the measures that are employed should only be considered as proxies for the attributes that are measured in the study. Future research might want to consider the development of a comprehensive framework for analysing the behaviour of firms and capturing the actions of managers.

Corporate Social Responsibility (CSR), a concept whereby companies integrate social and environmental concerns into their business operations and interactions with their stakeholders on a voluntary basis, increasingly calls for companies to pursue their objectives by shifting to stakeholder inclusive strategic thinking (Perrini, 2005). As a result, although an unquestionable business case for social responsibility is still lacking, companies are paying growing attention to the importance of demonstrating commitment to CSR by providing clear and verifiable data and information, similar to more traditional financial documents.

The more knowledge generated about what stakeholders need, the more effectively companies can communicate with them and serve their needs. Summing up, even if the intrinsic subjectivity that characterises responsible behaviour makes standardised judgment not entirely useful, corporate responsible strategic orientations seem to converge on a pool of socially responsible issues wider than in the past. But the process goes on and further develops: in order to evaluate and communicate responsible behaviour and results, CSR strategy must be given its due consideration in sub-themes that come together to compose a more detailed and specific CSR portrait of the enterprise as a whole. It might also be stimulating to clarify how standardisation could enhance corporate ability to disclose critical social and environmental data and information or how it could stimulate or change current prioritisation.

At the moment, along with the increasing number of companies reporting, there is a greater diversity in the types of reports issued, making it necessary to look for a common standard that would be useful both to support the measurement and evaluation process and to facilitate the consequent assurance process (Peterson et al., 2004).

2.9 RESEARCH QUESTION

The main research question:

1. What is evaluating and effectiveness research that meets paper-based reporting?

The minor research questions

2. Is paper-based reporting addressing the concerns of compliance to reporting requirements (i.e. compliance, usefulness and reliability)?
3. Is paper-based reporting necessary in collecting data on an organisation?
4. What can be done to improve reporting mechanisms within organisations?

2.10 CONCLUSION

Perrini (2005) indicated that many organisations have taken advantage of the benefits that computer networks offer but between 85% and 90% of corporate information is not accessible through these networks because it still resides in paper documents. Inherent in these paper-based systems are wasted man hours spent filing, searching, retrieving,

and re-filing these documents. In a business environment where organisations are looking for ways to cut costs and increase productivity, antiquated paper filing systems need to be replaced with a document imaging system. When information is freed from the physical limitations of paper and converted into an electronic document, it becomes a strategic resource.

The time saved in retrieving electronic documents is enormous. The cost of ignoring this problem can literally be hundreds of thousands of dollars that could otherwise go directly to the company's bottom line. It is very clear that authors have different views in terms of reporting within different organisations.

The next chapter looks into the research methodologies used to establish the effectiveness of paper-based reporting in an organisation. The research paradigm is also discussed, including the population and sample size. The detailed account of both data collection techniques and data analysis and interpretation are also presented. Issues of the validity and reliability of the study are discussed. Ethical issues are also discussed and the limitations on the research are clarified.

CHAPTER 3

RESEARCH METHODOLOGY

3.1 INTRODUCTION

This chapter contains the detailed description of the research plan. It defines the research methodology used in this study to give answers to the raised questions. Research methodology refers to the steps or approach taken to link the research questions and objectives to data collection, analysis and interpretation in a logical manner (Denzin & Lincoln, 2005). The methodology used for a particular research problem must always take into account the nature of the data to be collected in the resolution of the problem. The major distinction in classifying research by method is the distinction between quantitative and qualitative research (Lunenburg & Irby, 2008). Qualitative and quantitative research can be broken down further into several distinct types, each designed to answer a different kind of research question.

The primary goal of this study is to evaluate the extent to which paper-based reporting addresses the concerns of compliance and quality to reporting requirements (ie usefulness, reliability, etc), to establish the type of evaluating and effectiveness research that meets the requirements of paper-based reporting and to identify what can be done to improve reporting mechanisms within organisations as stated in chapter one.

The aim of the study was to determine the extent to which information quality impacts on the quality of managerial decisions. To validate this, it is necessary to collect information from targeted population using correct methodology and analysing the responses. Overall, this chapter defines the research methodology used in this study, describes the data collection method chosen, types of questions that can be asked and development of the questionnaire, the survey population and sample size determination, data handling and concludes with a discussion of the researcher's compliance with research ethics.

3.2 TYPES OF RESEARCH

This study employed the qualitative and quantitative methodology of data collection and analysis. The two methodologies are explained as follows:

3.2.1 Quantitative

Quantitative research involves the collection and analysis of numerical data which are usually rendered in the form of statistics. Advocates of quantitative studies tend to prefer such research types as descriptive or survey, correlational, causal – comparative and experimental research (Denzin et al., 2005). It is conclusive in its purpose as it tries to quantify the problem and understand how prevalent it is by looking for projectable results to a larger population. Here, we collect data through surveys (online, phone, paper), audits, points of purchase (purchase transactions) and click-streams. Quantitative research also focuses on counting and classifying features and constructing statistical models and figures to explain what is observed.

3.2.2 Qualitative

Qualitative research involves mostly non numerical data such as extensive notes taken at a research site, interview data, video tape and audio tape recordings as well as other non numerical artefacts. Qualitative researchers stress the socially constructed nature of reality (Denzin et al., 2005). It is by definition exploratory and it is used when we don't know what to expect, to define the problem or develop an approach to the problem. It's also used to go deeper into issues of interest and to explore nuances related to the problem at hand. Common data collection methods used in qualitative research are focus groups, triads, dyads, in depth interviews, uninterrupted observation, bulletin boards and ethnographic participation/observation.

The primary aim of a Qualitative Research is to provide a complete, detailed description of the research topic. It is usually very exploratory in nature. Uwe (2007) argues that it has become more difficult to find a common definition of qualitative research which is accepted by the majority of qualitative research approaches and researchers. He indicates that qualitative research has developed an identity or multiple identities of its own. He also mentioned that qualitative research is intended to approach the word 'out there' and to understand, describe and sometimes explain social phenomena' from the inside' by analysing experiences of individuals or groups, analysing interactions and communications in the making and analysing documents.

Table 1: Distinction between quantitative and qualitative methodology

(Source: Nicholls, 2009)

	Qualitative	Quantitative
Purposes	Contextualisation	Generalisability
	Interpretation	Prediction
Research Questions	Vague	Precise
Project Life Cycle	Earlier in Cycle	Later in Cycle
Approach	Inductive	Deductive
	Interpretive	Measurable
	Avoids numerical analysis	Emphasizes numerical analysis
	Uses interviews	Uses fixed survey instrument
	Fusion	Analytical
Participants	Few	Many
Researcher Role	Personally involved and partial	Detached and impartial
	Subjective understanding	Objective portrayal
Traditional Methodology	Focus groups	Telephone surveys
Web Methodology	Online research communities	Web surveys
Phase	Early	Late
Hypothesis	Broad	Narrow
Description	Whole picture	Focused
Type of Research	Exploratory	Conclusive

3.3 DATA SAMPLING

Sampling is that part of statistical practice concerned with the selection of an unbiased or random subset of individual observations within a population of individuals intended to yield knowledge about the population of concern, especially for the purposes of making predictions based on statistical inference. Sampling is an important aspect of collecting data. A population is a set of elements to which the results obtained by testing the sample should be generalised (Waterson, 2005). One desirable characteristic of a

sample is representativeness. Representativeness enables results from the sample to be generalised to the population. The major sampling procedures that provide representativeness are simple random sampling, stratified random sampling, cluster sampling and systematic sampling (Lunenburg and Irby, 2008).

The sampling method used in this study is the simple random sampling. The population of this study is made up of five Local Municipalities of the Ngaka Modiri Molema District Municipality ieDitsobotla, Mafikeng, RamotshegaMoiwa, Ratlou and Tswaing Local Municipalities. The focus is on the five (5) service points and two institutions. Nine (9) managers were given questionnaires from every centre, the data capture, information officers and service point managers giving the total of (n) 45.

3.4 INSTRUMENTATION

This section describes the psychometric adequacy of the instruments used in the study. These are several key points that provide important information about the instruments but reliability and validity are critical (Lunenburg and Irby, 2008). The instruments used must be both reliable and valid.

3.4.1 Validity

According to Lunenburg and Irby (2008), validity is the degree to which an instrument measures what it purports to measure. There are three main types of validity which are content validity, criterion related validity and construct validity.

Roe and Just (2009), argue that validity requires an integrated effort on several fronts to develop conclusion that may defended as valid. They also define internal validity as the ability of a researcher to argue that observed correlations as casual and the external validity as the ability to generalise the relationships found in the study to other persons, times and setting.

3.4.2 Reliability

Lunenburg and Irby (2008), state that reliability is the degree to which an instrument consistently measures whatever it is measuring. There are five different types of reliability each of which deals with a different kind of instrument consistency viz test

rates reliability, equivalent forms reliability, internal consistency reliability, alpha reliability, split half reliability and reliability.

3.5 DATA COLLECTION

Data collection is a term used to describe the process of preparing and collecting data. The purpose of data collection is to obtain information to keep on record, to make decisions about important issues and to pass information on to others (Uwe, 2007).

3.5.1 Sources of data

The sources of data may be classified into (a) primary sources and (b) secondary sources.

3.5.1.1 Primary Sources

Primary sources are original sources from which the researcher directly collects data that have not been previously collected. Primary data are first hand information collected through various methods such as observation, interviewing, mailing etc.

3.5.1.2 Secondary Sources

These are sources containing data that have been collected and compiled for another purpose. The secondary sources consist of readily available compendia and already compiled statistical statements and reports whose data may be used by researchers for their studies, e.g., census reports, annual reports and financial statements of companies, statistical statements, reports of government departments, annual reports on currency and finance published by the National Bank.

Secondary sources consist of not only published records and reports but also unpublished records.

3.5.2 Data collection methods

There are many methods of collecting primary data such as questionnaires, interviews, observations and case study as mentioned below:

3.5.2.1 Interviews and interviewing

In interviews, information is obtained through inquiry and recorded by enumerators. Structured interviews are performed by using survey forms, whereas open interviews are notes taken while talking with respondents. The notes are subsequently structured (interpreted) for further analysis. Open-ended interviews, which need to be interpreted and analysed even during the interview, have to be carried out by well-trained observers and/or enumerators (Roe and Just, 2009).

Although structured interviews can be used to obtain almost any information, as with questionnaires, information is based on personal opinion. Data on variables such as catch or effort are potentially subject to large errors, due to poor estimates or intentional errors of sensitive information.

Interviewing is one of the major methods of data collection. It may be defined as two-way systematic conversation between an investigator and an informant, initiated for obtaining information relevant to a specific study. It involves not only conversation but also learning from the respondents' gestures, facial expressions and pauses and his environment. Interviewing requires face-to-face contact or contact over telephone and calls for interviewing skills. It is done by using a structured schedule or an unstructured guide. Interview can add flesh to statistical information. It enables the investigator to grasp the behavioural context of the data furnished by the respondents. It permits the investigator to seek clarifications and brings to the forefront those questions, that, for one reason or another, respondents do not want to answer.

3.5.2.1 Types of Interviews

The interviews may be classified into structured or directive interview, unstructured or non-directive interview, focused interview, clinical interview and in depth interview.

3.5.2.2 Questionnaires

Questionnaires refer to forms filled in by respondents alone. Questionnaires can be handed out or sent by mail and later collected or returned by stamped addressed envelopes. This method can be adopted for the entire population or sampled sectors.

Questionnaires may be used to collect regular or infrequent routine data and data for specialised studies (Mitchell et al., 1986).

A questionnaire requires respondents to fill out the form themselves and so requires a high level of literacy. Where multiple languages are common, questionnaires should be prepared using the major languages of the target group. Special care needs to be taken in these cases to ensure accurate translations. In order to maximise return rates, questionnaires should be designed to be as simple and clear as possible, with targeted sections and questions. Most importantly, questionnaires should also be as short as possible. If the questionnaire is given to a sample population, it may be preferable to prepare several smaller, more targeted questionnaires, each provided to a sub-sample. If the questionnaire is used for a complete enumeration, then special care needs to be

taken to avoid overburdening the respondent. Questionnaires, like interviews, can contain either structured questions with blanks to be filled in, multiple choice questions or they can contain open-ended questions where the respondent is encouraged to reply at length and choose their own focus to some extent (Roe and Just, 2009).

3.5.2.3 Observation

Observation may be defined as a systematic viewing of a specific phenomenon in its proper setting or the specific purpose of gathering data for a particular study. Observation as a method includes both 'seeing' and 'hearing.' It is accompanied by perceiving as well. Observation also plays a major role in formulating and testing the hypothesis in social sciences.

Observation may be classified in different ways. With reference to the investigator's role, it may be classified into (a) participant observation and (b) non-participant observation. In terms of mode of observation, it may be classified into (c) direct observation and (d) indirect observation. With reference to the rigour of the system adopted, observation is classified into (e) controlled observation and (f) uncontrolled observation

3.5.2.4 Experimentation

Experimentation is a research process used to study the causal relationships between variables. It aims at studying the effect of an independent variable on a dependent variable, by keeping the other independent variables constant through some type of control. The applications of experimental method are 'Laboratory Experiment', and 'Field Experiment'.

3.5.2.5 Simulation

Simulation is one of the forms of observational methods. It is a process of conducting experiments on a symbolic model representing a phenomenon. Abelson defines simulation as "the exercise of a flexible imitation of processes and outcomes for the purpose of clarifying or explaining the underlying mechanisms involved. Simulation is a theoretical model of the elements, relations and processes which symbolise some referent system. It is thus a technique of performing sampling experiments on the model of the systems. The experiments are done on the model instead of on the real system,

because the latter would be too inconvenient and expensive. Simulation is a recent research technique; but it has deep roots in history (Roe and Just, 2009).

3.5.2.6 Panel method

The panel method is a method of data collection, by which data is collected from the same sample respondents at intervals either by mail or by personal interview. This is used for longitudinal studies on economic conditions, expenditure pattern, consumer behaviour, recreational pattern, effectiveness of advertising, voting behaviour and so on. The period, over which the panel members are contacted for information may spread over several months or years. The time interval at which they are contacted repeatedly may be 10 or 15 days or one or two months depending on the nature of the study and the memory span of the respondents.

3.5.2.7 Mail survey

The mail survey is another method of collecting primary data. This method involves sending questionnaires to the respondents with a request to complete them and return them by post. This can be used in the case of educated respondents only. The mail questionnaire should be simple so that the respondents can easily understand the questions and answer them. It should preferably contain mostly closed-end and multiple-choice questions so that it could be completed within a few minutes.

The distinctive feature of the mail survey is that the questionnaire is self-administered by the respondents themselves and the responses are recorded by them and not by the investigator as in the case of personal interview method. It does not involve face-to-face conversation between the investigator and the respondent. Communication is carried out only in writing and this requires more co-operation from the respondents than does verbal communication (Roe and Just, 2009).

3.5.2.8 Projective techniques

Projective techniques involve presentation of ambiguous stimuli to the respondents for interpretation. In doing so, the respondents reveal their inner characteristics. The stimuli may be a picture, a photograph, an inkblot or an incomplete sentence. The basic assumption of projective techniques is that a person projects his own thoughts, ideas and attributes when he perceives and responds to ambiguous or unstructured stimulus materials. Thus, a person's unconscious operations of the mind are brought to a

conscious level in a disguised and projected form and the person projects his inner characteristics.

In this study questionnaires were administered by the researcher in all five local municipalities. Complete anonymity was guaranteed because no name was required on the questionnaire. Structured and unstructured questionnaires were distributed to the target group using random sampling.

3.6 DATA ANALYSIS

As stated in Chapter one, a research process culminates in the analysis and interpretation of some set of data, be it quantitative data, literary text, qualitative transcripts or discursive data. Analysis of data involves breaking up the data into manageable themes, patterns, trends and relationships (Uwe, 2007). The data was presented in the form of tables, diagrams, charts and figures.

Combination of both qualitative and quantitative analysis will be employed in this research study. The combination of these two research methods come about in this study because data was collected with a single research instrument. This occurs as a result of open-ended questions and self administered questionnaire.

3.7 VARIABLES

According to Denzin and Lincoln (2005), a variable is a characteristic of persons or objects or a condition which they have been exposed to that is not the same for all persons or objects.

3.7.1 Types of variables

Each question in a questionnaire or collected in quantitative research, gives rise to a variable. A variable is thus an empirically observable characteristic of some phenomenon that can take on more than one value or response category (e.g. gender, job level, level of agreement with a statement, profit, percentage of budget spent on advertising (Denzin et al.,2005).

3.7.1.1 Categorical and Continuous Variables

Categorical variables are also known as discrete or qualitative variables. Categorical variables can be further categorised as nominal, ordinal or dichotomous(Denzin et.al., 2005).

- Nominal variables are variables that have two or more categories but which do not have an intrinsic order.
- Dichotomous variables are nominal variables which have only two categories or levels.
- Ordinal variables are variables that have two or more categories just like nominal variables only the categories can also be ordered or ranked. Continuous variables are also known as quantitative variables. Continuous variables can be further categorised as either interval or ratio variables.
 - Interval variables are variables for which their central characteristic is that they can be measured along a continuum and they have a numerical value (for example, temperature measured in degrees Celsius or Fahrenheit.
 - Ratio variables are interval variables but with the added condition that 0 (zero) of the measurement indicates that there is none of that variable.

3.8 ETHICAL CONSIDERATIONS PERTAINING TO THE STUDY

The respondents were approached and informed about the purpose and the subject of the study. The consent of participant was sought through signing the consent form. Participation in the study was entirely voluntary. The researcher also obtained consent from the University of North-West and the Department of Social Development, Women, Children and People with Disabilities to conduct research. The questionnaires were distributed to the employees in different service point within Ngaka Modiri Molema District, participants remained anonymous and the participation was entirely voluntary. It will be considered unethical to use any personal details of respondents in the report, which can identify who the respondent is. Each participant was informed of the exact nature of the research and participation in the survey was entirely voluntary. Participants were also assured of their anonymity and that the information provided

3.9 LIMITATIONS

The limitations of the study include those characteristics of design or methodology that impacted or influenced the application or interpretation of the results of the study. They are the constraints on the generalisability and utility of the findings that are the result of the ways in which arechooses to design the study and/or the method used to establish internal and external validity. The most obvious limitation relates to the ability to draw descriptive or inferential conclusions from the sample data about a larger group (Mitchell, Wirt, & Marshall, 1986).

3.9.1 POSSIBLE METHODOLOGICAL LIMITATIONS

The possible methodologies are described by Denzin et al. (2005), as follows:

- **Sample size** - the number of the units of analysis you use in your study is dictated by the type of research problem you are investigating. If the sample size is too small, it will be difficult to find significant relationships from the data, as statistical tests normally require a larger sample size to ensure a representative distribution of the population and to be considered representative of the groups of people to whom results will be generalised or transferred.
- **Lack of available and/or reliable data** - a lack of data or of reliable data will likely require the researcher to limit the scope of the analysis, the size of the sample or it can be a significant obstacle in finding a trend and a meaningful relationship.
- **Lack of prior research studies on the topic** - citing prior research studies forms the basis of literature review and helps lay a foundation for understanding the research problem that is being investigated. Depending on the currency or scope of the research topic, there may be little, if any, prior research on the chosen topic.
- **Measure used to collect the data** - sometimes it is the case that, after completing the interpretation of the findings, it is discovered that the way in which data is gathered inhibited the ability to conduct a thorough analysis of the results. For example, the researcher may regret not including a specific question in a survey that, in retrospect, could have helped address a particular issue that emerged later in the study.

- **Self-reported data** -- self-reported data is limited by the fact that it rarely can be independently verified. In other words, the researcher has to take what people say, whether in interviews, focus groups or on questionnaires, at face value. However, self-reported data contain several potential sources of bias that should be noted as limitations: (1) selective memory (remembering or not remembering experiences or events that occurred at some point in the past); (2) telescoping [recalling events that occurred at one time as if they occurred at another time]; (3) attribution [the act of attributing positive events and outcomes to one's own agency but attributing negative events and outcomes to external forces]; and, (4) exaggeration (the act of representing outcomes or embellishing events as more significant than is actually suggested from other data) (Denzin et al., 2005).

3.9.2 Possible Limitations of the Researcher

- **Access** -- if the study depends on having access to people, organisations or documents and, for whatever reason, access is denied or otherwise limited, the reasons for this need to be described.
- **Longitudinal effects** -- the time available to investigate a research problem and to measure change or stability within a sample is constrained by the due date of the assignment.
- **Cultural and other type of bias** -- Bias is when a person, place, or thing is viewed or shown in a consistently inaccurate way. It is usually negative, though one can have a positive bias as well.
- **Fluency in a language** -- if the researcher is limited in being able to read and interpret the used language.

The limitation of this study was that the sample was obtained from employees at service points only in Ngaka Modiri Molema, therefore, it limits the generalisation of the findings. The researchers' biggest limitation is to ensure sufficiently high return rate. Furthermore the limitation was that all variables were assessed with the same method. The returned questionnaires may not be representative of the sample originally selected for the specific discipline, which may impact on the relevance of the research findings.

3.10 CONCLUSION

This chapter defined the research design and methodology including the population and sample size used in this study. Further, it looked at instrumentation, research type, population, sampling method and data gathering methods from a theoretical perspective. The detailed account of both data collection techniques and data analysis has been presented. Issues of the validity and reliability of the study have been detailed and the ethical issues and limitations on the research clarified. A discussion of how these were applied in this study was also presented. The following chapter provides a presentation of findings, a detailed discussion and interpretational and statistical analysis of the data collected from the research methodology described in chapter 3.

CHAPTER 4

RESEARCH RESULTS AND ANALYSIS

4.1 INTRODUCTION

This chapter discusses the research findings and provides analyses and interpretation of data. In the survey, certain specific questions were asked and the analysis was done based on the application of Pearson correlation coefficient and finding the p-value. The Pearson correlation coefficient method correlates all listed variables with each other (taking two at a time) and indicates which of the resulting relationships are statistically significant. The p-value provides information on how far down in the significant region the results lie (Denzin & Lincoln, 2005).

The survey was conducted with the custodians of paper-based reporting (PBR) in different Business Units (BU) within the organisation, to assess the impact of paper-based reporting on managerial decisions. Paper-based reporting is a specialised discipline that manages management information and managerial decisions are based on that information.

Paper-based Reporting is identified as the extent to which users think that the information is useful, good, current and accurate (Chao & Chen, 2009). Hence, the focus of the questionnaire has been to explore the usefulness, accuracy and consistency of paper-based reporting in measuring paper-based reporting and its impact on managerial decisions. The paper-based reporting literature suggests that the usefulness of information has been used to determine whether the information provided meets user requirements (Denzin & Lincoln, 2005). The accuracy of information is used as a measure of paper-based reporting and the consistency of paper-based reporting means good representation of information in terms of being easy to understand and how concise and consistent it is (Guerreiro et al., 2012).

This chapter opens with a descriptive introduction, based on the biographical profile of the respondents. The next section reflects the findings of the target market's perceptions regarding the impact of paper-based reporting on managerial decisions.

4.2 ANALYSIS OF VARIABLES

4.2.1 Response rate

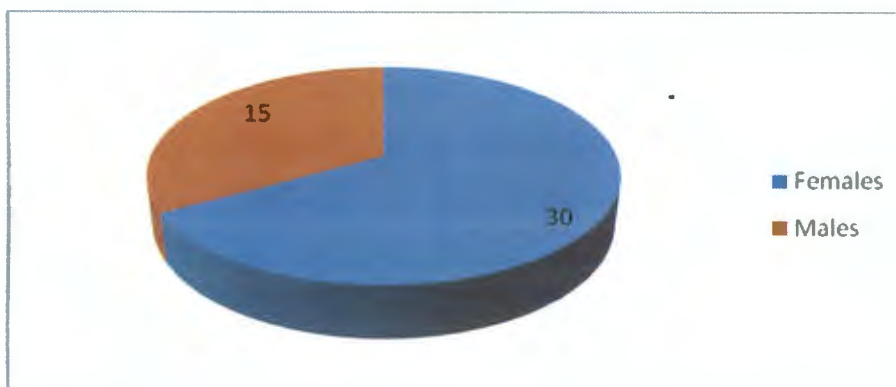
The study focused on a population size of 45 staff member working in the Department of Social Development, Women, Children and People with Disabilities. All 45 (100%) of the total population selected participated. Thirty (67%) of participants were female and fifteen (33%) were male. The preference was not given according to sex; the sample breakdown is considered as being a fair representative of the demographics of paper-based reporting. The figure reflects employees that use paper-based reporting as predominantly female employees. This may be due to the fact that the department is dominated by female employees. All age groups were selected to establish an understanding of the concept from the point of view of both young and older employees. The data was summarised on a spreadsheet and the stats were calculated using SPSS.

The researcher has tried many times to show that she had met the requirements for the sample. The following statistical sample shows that the sample met the strict rules and that it was randomly selected. All names were allocated a number and numbers were drawn. If somebody did not complete a questionnaire, the next number was drawn and the person was used. In this way the sample could be regarded as being representative. It is also acknowledged that, should somebody else want to use the results, they first test the results in their organisation before it is used to confirm the results.

4.2.2 Demographic Variables

4.2.2.1. Gender Distribution

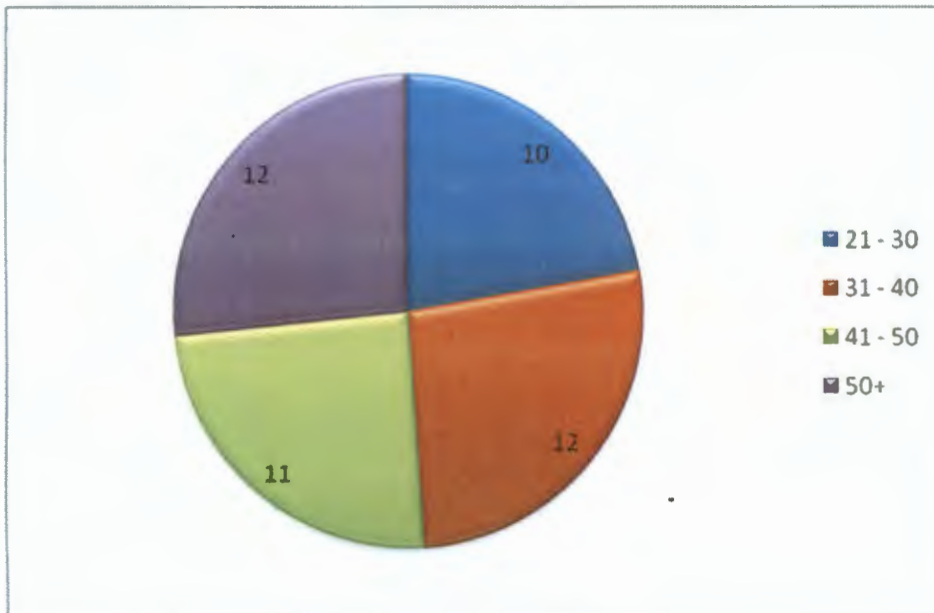
Figure 1: Gender Distributions of Respondents



Out of the total sample of 45 respondents, 30 were female (figure 4.1). As no preference was given to sex, the sample breakdown is considered as being a fair representative of the demographics of the paper-based reporting role. These figures indicate that the employees that occupy paper-based reporting roles are dominantly female employees. This may be due to the fact that the paper-based reporting role is a managerial role indicative of the historical background that supported the employment of female employees into management roles.

4.2.2.2. Age Distribution

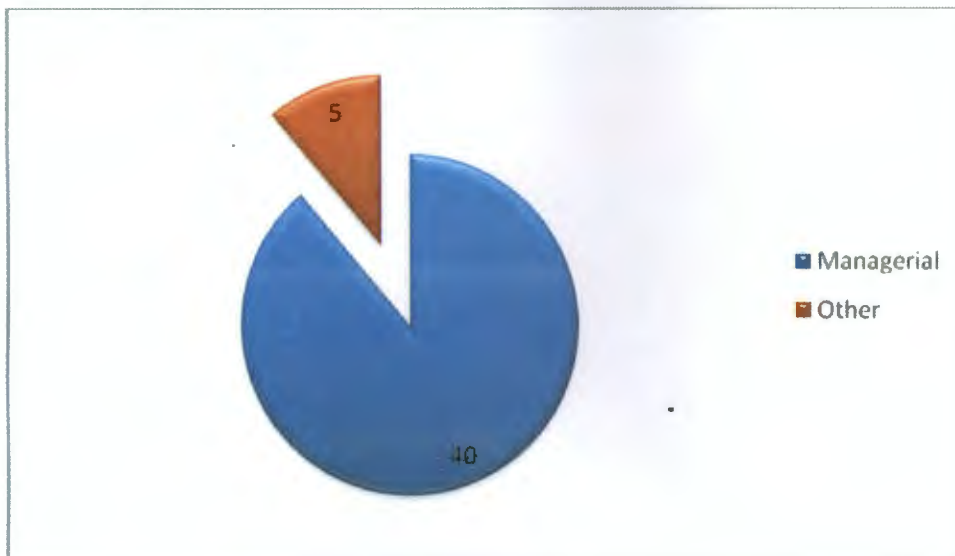
Figure 2: Age Distribution of Respondents



From the 45 respondents, 5 (17%) were aged between 21 and 30 years; 15 (52%) were aged between 31 and 40 years; 7 (24%) were aged between 41 and 50 years; and 2 (7%) were aged between 51 and 60 years. The majority of respondents were aged between 31 and 40 years, this implies that the majority of paper-based reporting employees are aged between 31 and 40 years, which is the average age group within the working class that may have acquired sufficient work experience to understand the role of paper-based reporting and its importance in managerial decision making (see Figure 4.2).

4.2.2.3. Distribution by Position

Figure 3: Position Distribution of Respondents



From the 45 respondents as in Figure 4.3 above, 40 are occupying managerial positions in the organisation. The majority of respondents are occupying a managerial level. This is due to different maturity levels of divisions within the organisation in terms of paper-based reporting. Maturity within paper-based reporting means that the division acknowledges the strategic role of information in the organisation and is putting strategies in place to ensure that the organisation realises the value of paper-based reporting. Paper-based reporting is among key strategies being implemented (Denzin & Lincoln, 2005). Having paper-based reporting custodians operating at management levels will enhance the management's experience of quality as paper-based reporting custodians will form part of the decision makers and also contribute towards the strategy for continuous improvement of paper-based reporting in support of better managerial decisions (David, 2005).

4.2.2.4. Period worked in an organisation

Figure 4: Years of Experience in PBR Role

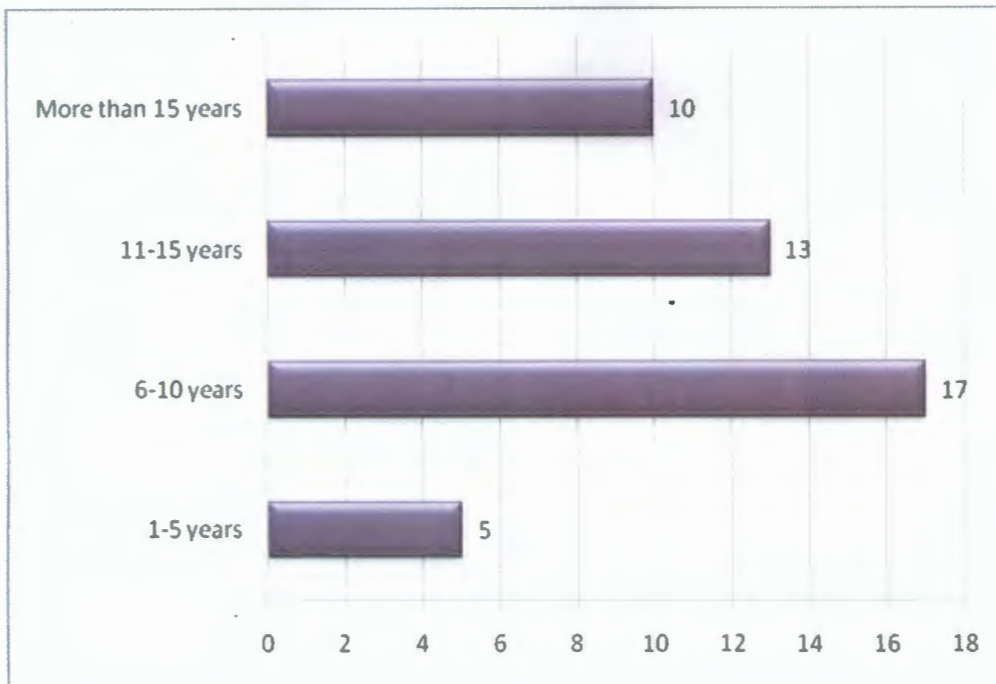
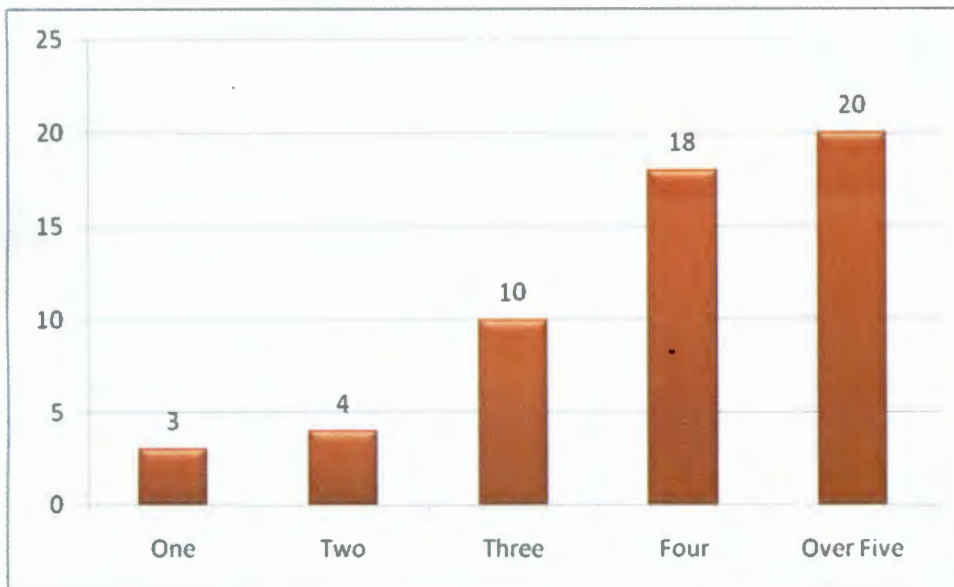


Table 4.3 depicts that, of 45 respondents, many have less than 3yrs experience within paper-based reporting role; 5 have experience that is between 1 and 5 years in this role; 17 have between 6 and 10 year experience in this role and 13 have between 11 and 15 years of experience in this role and 10 have more than 16 years of experience in this role. These figures indicate that the majority of respondents fell into the category of less than 3 years of experience. Paper-based reporting is relatively a new discipline (Sellen, 2003) hence the majority of paper-based reporting custodians have lesser experience. Lesser experience may imply that MI employees may have limited understanding of the impact of paper-based reporting. Therefore, respondents may not provide a true reflection of the impact of paper-based reporting on managerial decisions. More experienced candidates would have the ability to share what they have learned from past efforts that did not work and use their experience of different approaches to deliver quality (Sellen, 2003).

4.2.2.5. Paper-based projects involvement

Figure 5: Number of paper-based projects



The other question posed to the participants was about their number of paper-based projects that they were involved in. Out of 45 respondents 3 were involved in 1; 4 have some involvement, 10 were involved in more than 4 and 20 were involved in over 5 paper-based reporting. This indicates that the majority of employees that occupy paper-based reporting roles are highly educated, is be an advantage to the organisation to have paper-based reporting custodians that are well trained to understand the role of paper-based reporting and its impact on managerial decisions. This form of training would have involved education on paper-based reporting strategies, paper-based reporting governance, policies and procedures, why they exist and how they are managed (Ouedraogo, 2012).

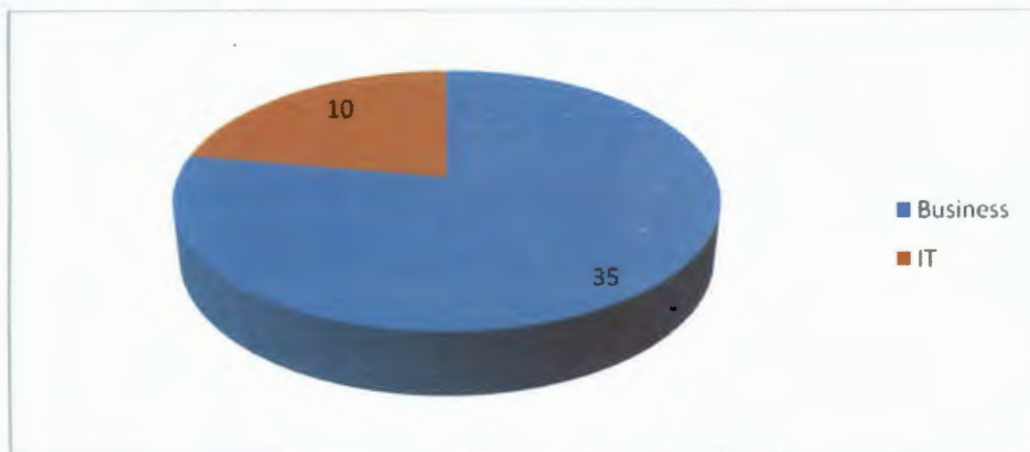
4.3 GENDER IMPLICATIONS ON PERCEIVED IMPACT OF PBR

In this section, the aim is to establish if age, position in the organisation, paper-based involvement, years of experience and perceived impact of paper-based reporting are significantly different for different genders. Hence the following questions are asked:

- What evaluating and effectiveness research meets the requirements for paper-based reporting?

- Is paper-based reporting addressing the concerns of compliance to reporting requirements?
- Is paper-based reporting necessary in collecting data of an organisation?
- What can be done to improve reporting mechanisms within the organisation?

Figure 6: Was involvement in paper-based reporting from IT or business perspective?



As indicated above in Figure 4.6, paper-based reporting role is occupied by 35 (78%) of the respondents that were involved in paper-based reporting from a business perspective. This indicates that the majority of respondents are familiar with the effectiveness or ineffectiveness of technology including electronic reporting. In this instance they will be able to compare the effectiveness of paper-based and electronic reporting. According to Figure 4.1, females that serve in the paper-based reporting role are occupying managerial positions and males working in this role are also occupying managerial positions. The difference is not significant, which indicates that gender has no effect on appointing employees to occupy paper-based reporting positions. This analysis reveals that despite gender, majority of employees that occupy paper-based reporting positions are operating at a managerial level. This reflects the importance of paper-based reporting in the organisation that the majority of employees that occupy this position need to be part of management, and be the decision makers themselves in order to understand the impact of paper-based reporting on managerial decisions. Of particular importance is the impact of paper-based reporting on strategic decisions which determine the shape and direction of the organisation. Strategic decisions, like

all decision making, turn the complex paper-based reporting inputs into action (Sanne, 2008).

Figure 7: Your effectiveness was within the functional timelines originally stipulated

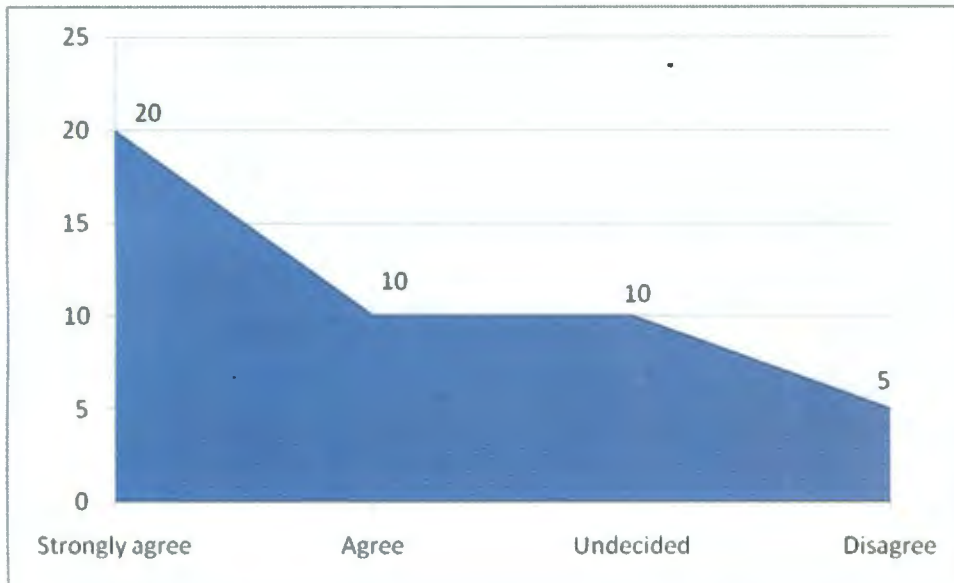


Figure 4.7 indicates that 44% of respondents strongly agree and 22% agree that the effectiveness of paper-based reporting was within the functional time frame set for reporting. The critical part is that another 22% were not able to pronounce and 11% disagree with the effectiveness of the functional timelines. This implies that employees are equally qualified to occupy the paper-based reporting positions. Candidates need to have acquired the required level of education to occupy PBR roles. The role of paper-based reporting is critical for managerial decisions as it allows decision makers to justify their decision choices (Rahman et al., 2010), hence the occupants of paper-based reporting roles need to have acquired the necessary education to have a relevant understanding of the dynamics of paper-based reporting and its impact on managerial decisions (Rajgopal, 2011).

Figure 8: The budget assigned to the project was appropriate.

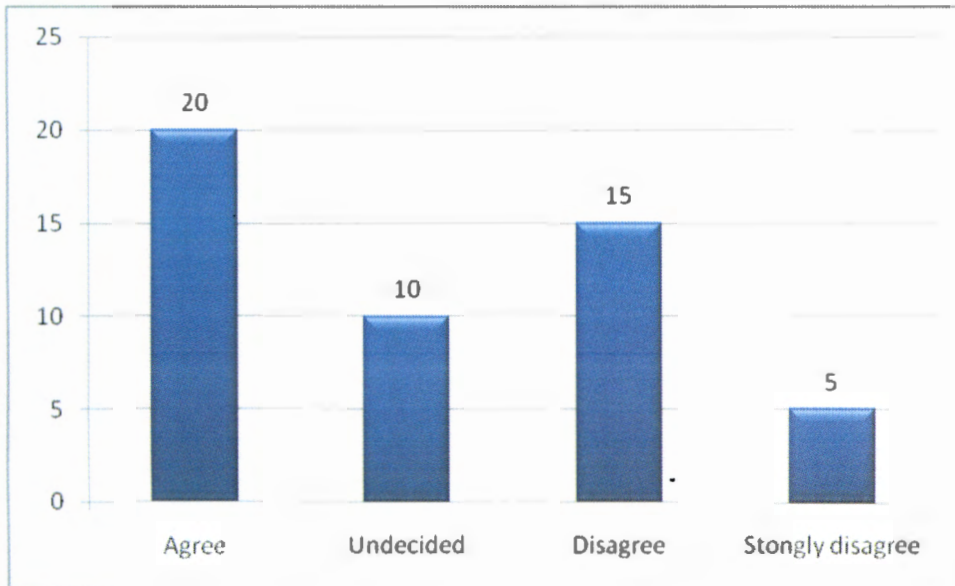


Figure 4.8 indicates that 44% of the respondents agree that the budget allocated for the project was adequate while more than 50% do not agree and some of them are not sure. This indicates that the respondents will not be able to indicate the economical standing of paper-based reporting. It also shows that the females that occupy this role are more experienced than the males. This also implies that female employees are perceived to have better understanding of the impact of paper-based reporting on managerial decisions than male employees in this sample. Highly experienced employees would have the appropriate skills in terms of tracking changes and be able to critically evaluate and validate paper-based reporting in a way that brings confidence to decision makers (Perrini, 2005).

Figure 9: Your functional area received sufficient and timeous training.

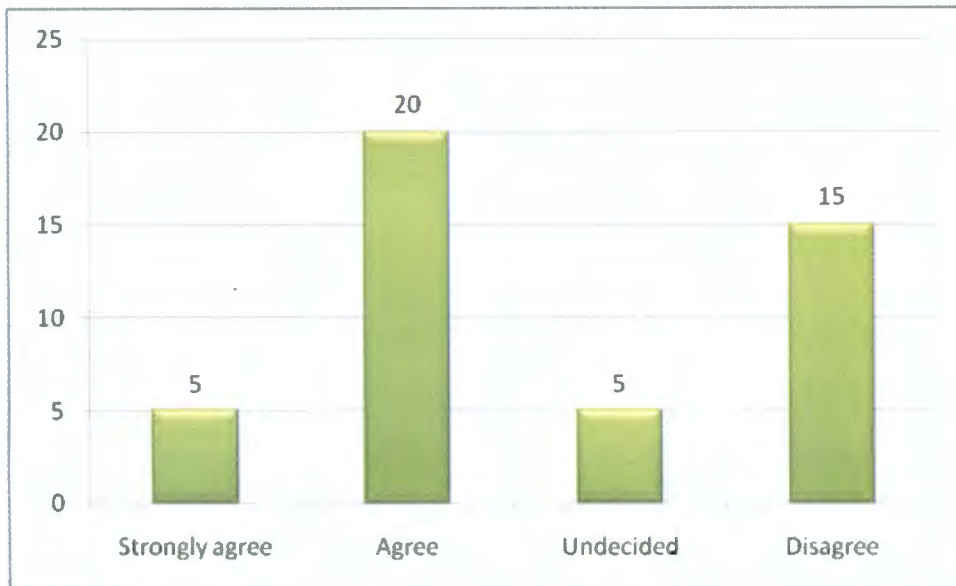


Figure 4.9 illustrates that 44% and 11% of respondents received adequate training timeously while 33% did not receive adequate training timeously. Another 11% are not sure if the training offered was adequate and timeous. This indicates that even though training was offered, it was not offered at the same time and maybe also offered by different training providers at different intervals. This shows that some employees are able to receive information or training earlier while others are trained late or not trained at all. Figure 4.2 shows that the majority of respondents were aged between 31 and 40 years, implying that the majority of paper-based reporting employees are aged between 31 and 40 years. This may also imply that the opportunity to retain knowledge and skill is high as none of these employees will be retiring anytime soon. However, the challenge may be with the rate at which this age group changes jobs. Knowledge management within paper-based reporting space plays a key role as the understanding of trends and tools utilised to manage paper-based reporting is important (Huang et al, 1999). Therefore the organisation needs to find strategies to use to retain this age group (31-40 yrs) as their knowledge is key for the continuous improvement of paper-based reporting with the intention of improving managerial decision making.

Figure 10: Was there adequate management support and commitment throughout the paper-based training i.e. was the management buy-in to the project suitable?

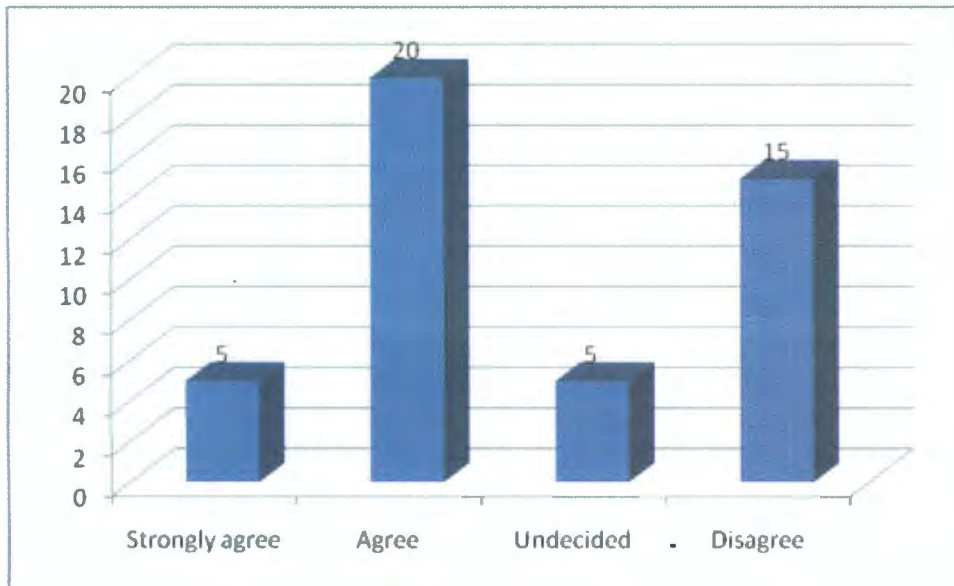
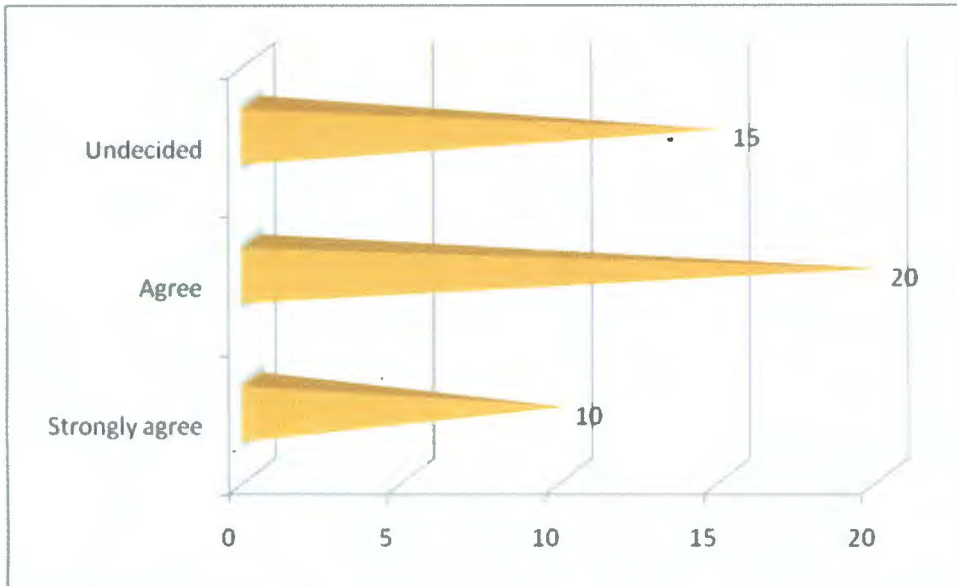


Figure 4.10 indicates that most of the respondents received management support during the training. Eleven percent (11%) also strongly indicate that support from the management was adequate. This may illustrate the fact that paper-based reporting is the supported option in the department or paper-based reporting is the only option available in the department. Figure 4.1 indicates that 35 females and 10 males perceived the impact of quality paper-based reporting on managerial decisions as a high priority and suitable in the management buy-in to the project. The difference between perceived paper-based reporting by different genders is not significant. This implies that all respondents have the understanding that an organisation depends on paper-based reporting for effective operations and decision making, thus paper-based reporting in management decision is vital for any organisation. Furthermore, there was adequate management support and commitment throughout the paper-based training.

Figure 11: Satisfactory accountability was placed on the team for their function in the project.



Thirty (67%) and 10 (22%) of the respondents agree that the team was given accountability and responsibility along the process. Majority of respondents believe that their skills will be required to manage paper-based reporting as a team for their function in projects. This will promote commitment and ownership of the product.

Figure 12: Satisfactory accountability was placed on the business for their function in the project.

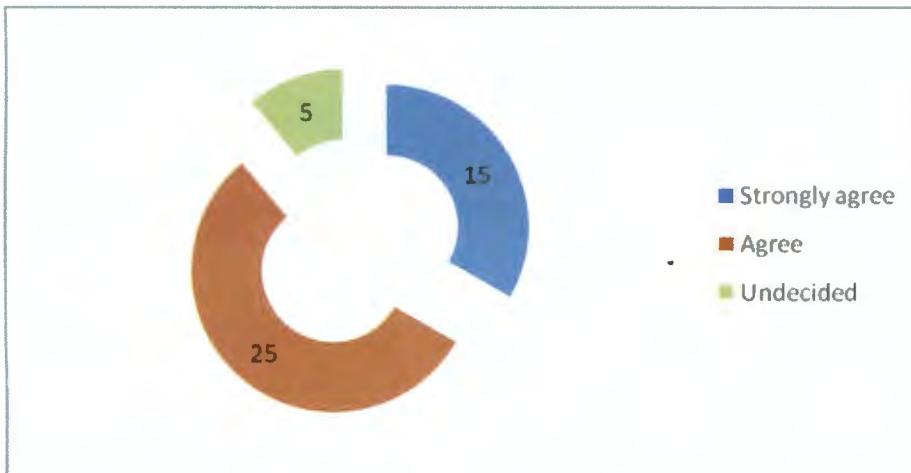
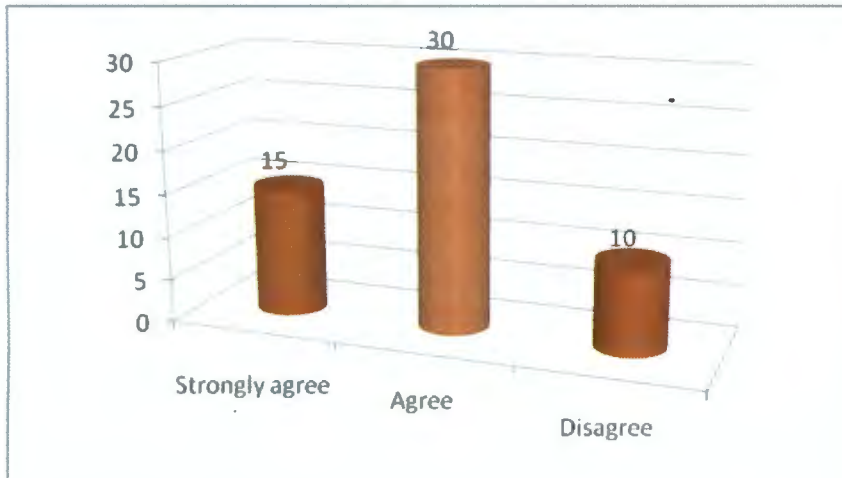


Figure 4.12 indicates that 40 (89%) respondents indicate that satisfactory accountability was placed on the business for their function in paper-based reporting. This illustrates that the organisation interest was taken into consideration and was prioritised during the

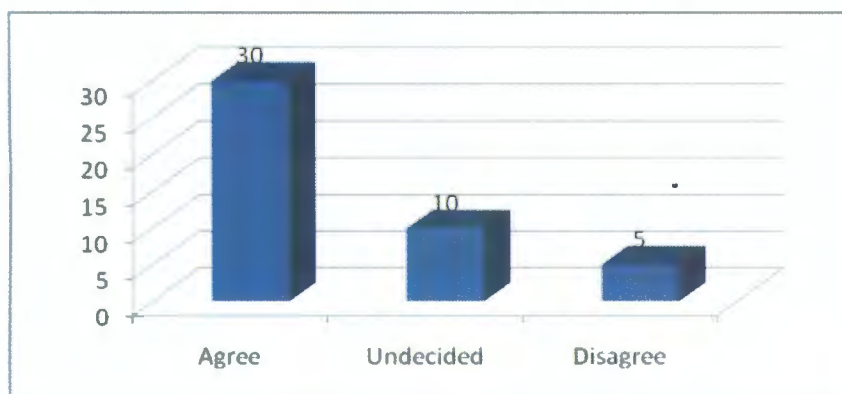
project process. This further indicates that the paper-based reporting skills possessed by respondents will be required for the success of the organisation.

Figure 13: Team leaders were sufficiently monitored to ensure that they were fulfilling their functions



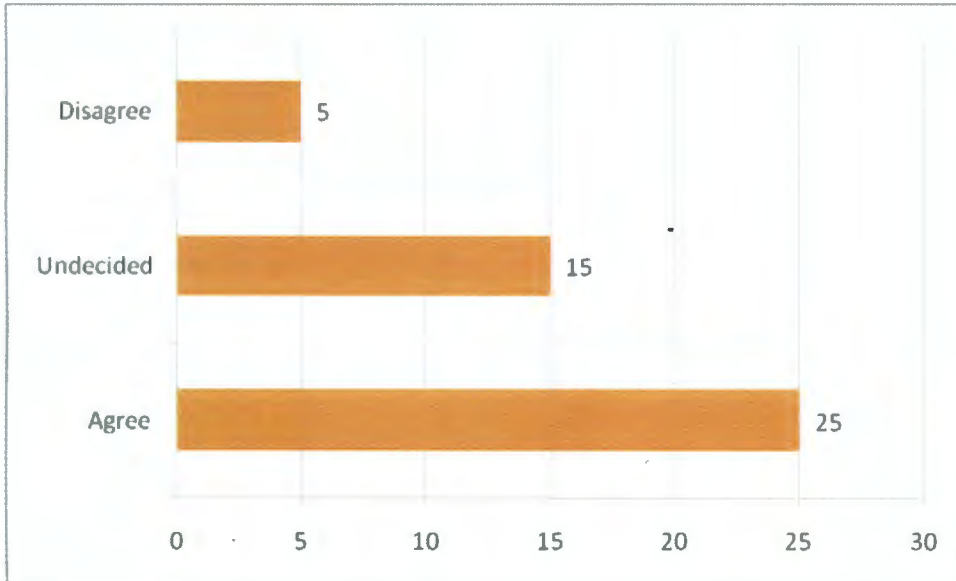
Thirty five (78%) of the respondents indicate that team leaders were monitored sufficiently to ensure that they were fulfilling their functions. This indicates the support that the department is providing to employees to ensure the achievement of their objectives in paper-based reporting. Continuous monitoring ensures adequate support throughout the process and at the same time monitoring achievement of objectives. This assists in addressing challenges and shortcomings along the process.

Figure 14: Appropriate planning measure implemented for the project.



Sixty seven percent (67%) of respondents indicated that appropriate planning measures were implemented for the project. This suggests that efforts are undertaken to ensure the effective achievement of objectives in paper-based reporting.

Figure 15: Sufficient compliance throughout the phases



More than half of the participants (56%) indicated that compliance was checked throughout project implementation. The compliance issues include the quality dimensions which must be ensured during the implementation. The 33% and the 11% of those undecided and disagreeing also are a concern as they suggest that there could be loopholes which need to be tightened up. Non-compliance may lead to substandard output (figure 4.15).

Figure 16: Did you partake in any compliance management event?

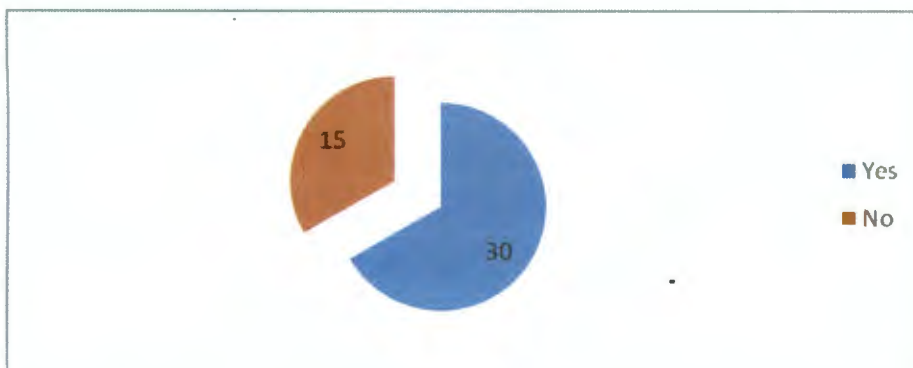
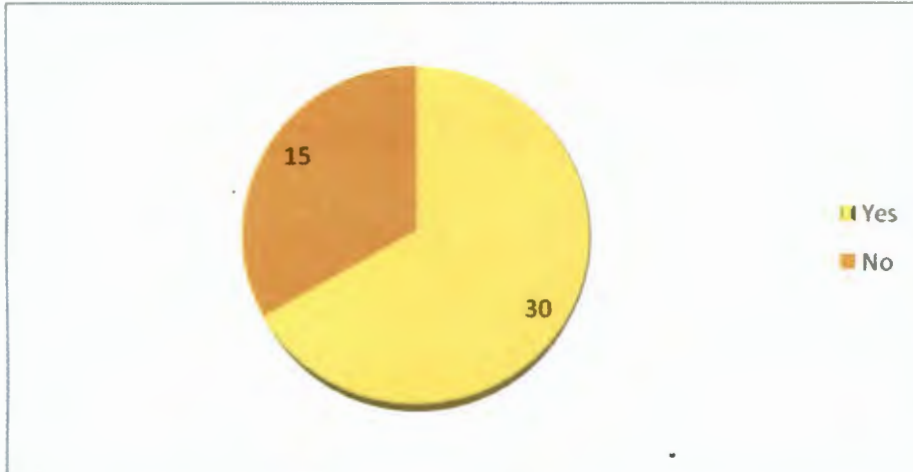


Figure 4.16 indicates that 67% of respondents participated in the compliance management event. This shows that most of the employees understand the compliance

issues regarding paper-based reporting. In this way, they will be able to ensure the effectiveness of the process in most of the time.

Figure 17: Were you part of a compliance team?



Most of the respondents (67%) were part of the compliance team. This is mainly because most of the respondents are the managers and are involved in paper-based reporting on regular basis. This will ensure compliance during paper-based reporting.

Figure 18: Do you know what the paper-based planning strategy was?

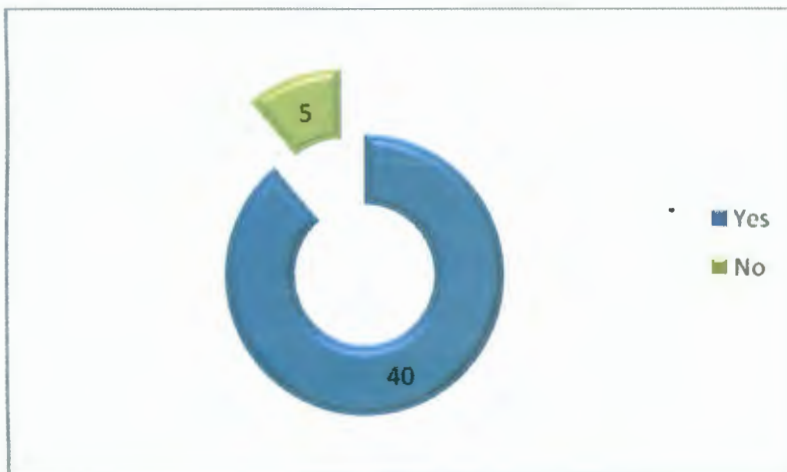


Figure 4.18 indicates that 89% of the respondents know what the planning strategy for paper-based reporting was. This implies that managers understand the strategy used by the organisation in terms of paper-based reporting and if the people understand the strategy there is the likelihood of supporting that and ensuring that the level of success remains high. Figure 4.1 indicates that this may be due to the fact that the paper-based

reporting role is a managerial role indicative of the historical background that supported the employment of female employees into management roles.

Figure 19: PBR strategy was aligned to the business strategy

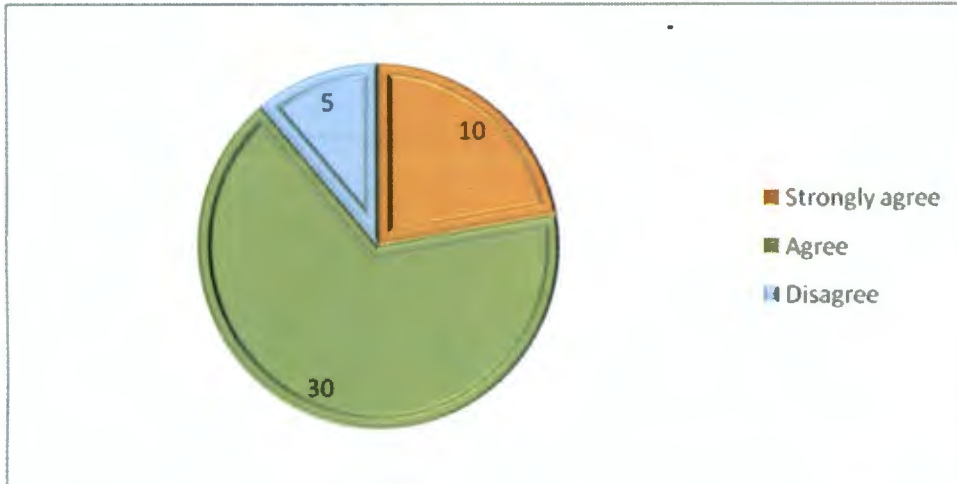


Figure 4.19 indicates that 67% of respondents agree and 22% strongly agree that the paper-based reporting strategy is aligned to the business strategy. This suggests that majority of the respondents are managers who understand the departmental strategy.

Figure 20: The concurrent restructuring and centralisation process had a negative effect on the PBR implementation.

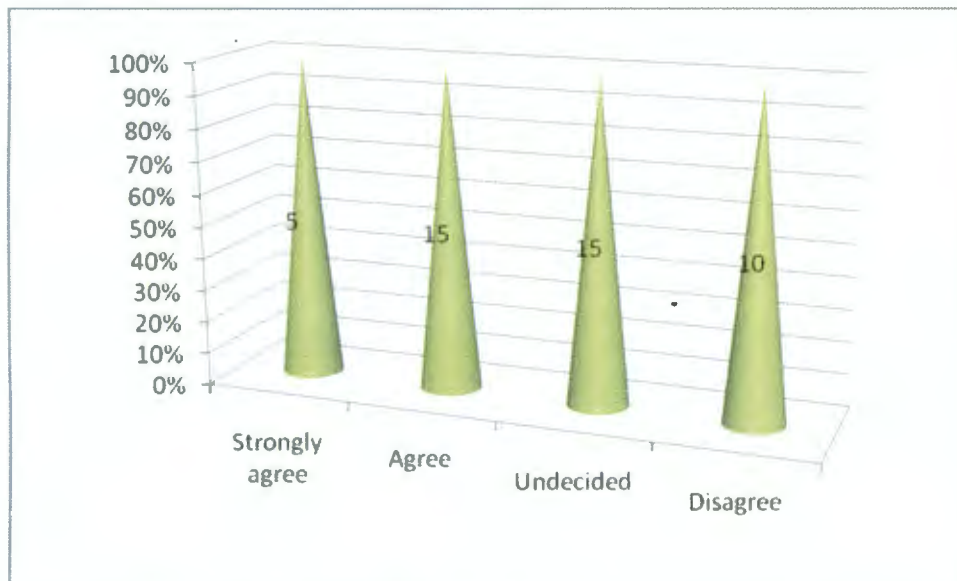


Figure 4.20 shows that 25 respondents indicated that the concurrent restructuring and centralisation process had a negative effect on the paper-based reporting implementation in the organisation. Paper-based reporting has the ability to manage

cycles in an organisation and the assumption can thus be made that the managers believe that their expertise will be required to ensure that paper-based reporting is able to function properly.

Figure 21: The reporting cycle is successful from an organisation perspective.

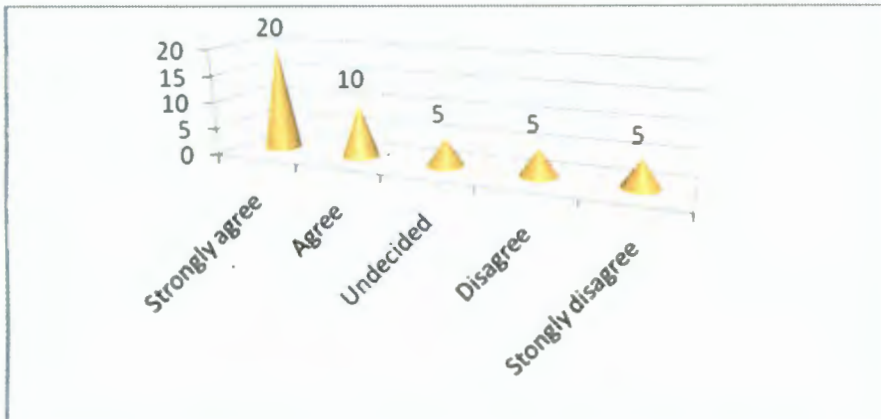


Figure 4.21 shows that paper-based reporting role is occupied by 30 (71%) of the respondents who were involved in the paper-based reporting and from an organisation perspective the paper-based reporting cycle were successful. This indicates that the majority of respondents are familiar with the effectiveness or ineffectiveness of technology including electronic reporting. The bulk of respondents are thus specialists, which can be attributed to the profile of a paper-based reporting, which is highly skilful, qualified with the ability to work without supervision.

Figure 22: The reporting cycle is successful from a business perspective.

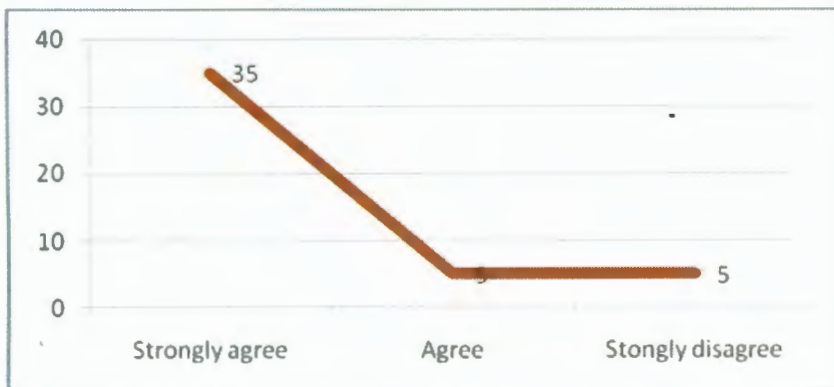


Figure 4.22 indicates that 35 (78%) of the respondents who occupy a role on the paper-based reporting from a business perspective cycle was successful. With reference to the responsibility of the municipalities with paper-based reporting, it appears as if a high premium is placed on experience (Uwe, 2007).

4.4 CORRELATIONS

Pearson correlation (hereafter called *correlation*) assumes that the two variables are measured on at least interval scales to determine the extent to which values of the two variables are proportional to each other. The value of correlation (i.e. correlation coefficient) does not depend on the specific measurement units used, for example, the correlation between height and weight will be identical regardless of whether inches and pounds, or centimetres and kilograms are used as measurement units. Proportional means linearly related, that is, the correlation is high if it can be summarised by a straight line (slopped upwards or downwards).

Furthermore the correlation often measured as a correlation coefficient indicates the strength and direction of a linear relationship. The more senior people are the lesser users of paper-based reports (-0.367). This may be because there are many forms to be completed. The younger workers are convinced that they know how to and will complete a form (0.371). This is because they are young and full of confidence.

Senior people are convinced that the paper-based reports are aligned to the business strategy (-0,318). This is not a strong correlation but shows that there is some linkage.

The older people have the notion that the present restructuring has a negative effect and the newer paper-based reports score 10.410. It shows that older people do not like change. The old people are not sure that the process helps with competence (0.3471). It is more to do with the younger people.

It shows that older people are not sure what the paper-based reporting is (0.3741). It is not a strong correlation. There are some respondents that are not sure that the budget and the strategy are aligned (0.420). Not a strong correlation.

Some of the respondents are not sure that enough people know how forms can be completed but are sure that there is some negative impact (0.419). This could be stronger. Because they reckon there are enough people assigned, there is the impression that there is a success rate (0.419). Most of the correlation is not strong and should be tested again by somebody to use the results.

The analysis in this section begins by comparing demographic variables (age; position in the organisation; paper-based involvement; years of experience and perceived impact of paper-based reporting) against variables that represent the attributes of paper-based reporting in the questionnaire, that is, usefulness of paper-based reporting,

accuracy of paper-based reporting; consistency paper-based reporting and the effectiveness of managerial decisions in order to determine the impact of these demographic variables on paper-based reporting. Further down, the analysis focuses on how paper-based reporting variables (usefulness of paper-based reporting, accuracy of paper-based reporting; and consistency of paper-based reporting) impacts on effectiveness of managerial decisions. The latter analysis will measure the extent to which the paper-based reporting impacts on managerial decisions.

4.5 CONCLUSION

In this chapter, the detailed results of the research using statistical method have been provided. Tables, graphs and stats have been used to present and analyse the results of the survey. The aim of data analysis is to understand the various elements through an inspection of a relationship between concepts, constructs or variables to establish whether there are any patterns or trends that can be identified. It is interesting to note that the literature has been confirmed by the responses from the research tools.

In general people do not use enough paper-based reporting to be comfortable. The majority of respondents do not believe that paper-based reporting administrative fees are used and the majority of respondents also believe that the paper-based reporting will have to adhere to less legislative requirements, which will in turn result in less administrative cost.

Chapter five includes recommendations of aspects that should be included in the final paper-based reporting proposal. A recommendation is also provided with reasons why the research study supports the proposed paper-based reporting.

CHAPTER 5

CONCLUSION AND RECOMMENDATION

5.1 INTRODUCTION

For decades, paper and traditional books, have been serving as useful tools in supporting knowledge intensive tasks and school learning. Although learning strategies such as selective verbatim note taking or question asking, may foster international recall or resolve comprehension difficulties in paper-based learning practice, improvement in learning may depend on the opportunity and the quality which students applying note taking. Reviewing notes for example, enhance comprehension through questioning (Denzin and Lincoln, 2005).

The purpose of this research was to evaluate the extent to which paper-based reporting addresses the concerns of compliance and the quality to reporting requirements (i.e. usefulness, reliability, etc) within the Department of Social Development, Women, Children and People with Disabilities. It further sought to evaluate if paper reporting is necessary in collecting data from any organisation and lastly, determine the mechanisms to be implemented in improving reporting in any organisation.

This chapter consolidates the findings of the research derived from the analysis and interpretation of the statistical data described in the previous sections. The issues covered in the chapter include summary of the study, discussion of the findings, implications for practice, recommendations for further research and conclusions. The purpose of the latter sections is to expand upon the concepts that were studied in an effort to provide a further understanding of their possible influence on paper-based reporting and to present suggestions for further research. Finally, a synthesising statement is offered to capture the substance and scope of what has been tested in this research.

5.2 SUMMARY OF THE STUDY

The study explained what paper-based reporting is and outlined the reporting practices in different fields as well as the metrics used in paper-based reporting. The study further explained the environmental, human and control factors associated with reporting. The quality of reporting and its social responsibility in relation to reporting is also indicated.

5.3 RESPONSE TO RESEARCH QUESTIONS

The findings of this study in relation to each question are now discussed and each question is followed by the discussion of the findings relating to that question

5.3.1 To evaluate if paper-based reporting addresses the concerns of compliance and the quality to reporting requirements (ie usefulness, reliability, etc)

According to International Society for Pharmacoeconomics and Outcomes Research: (2009), quality assessment and continuous quality improvement have long been recognised as vital processes in all societal systems and organisations. In health care, critical review of interventions and reports on the quality of outcomes can help correct deficiencies which advance efficiency and quality. Continuous quality improvement is integral to our global efforts to improve the economics and quality of life in all health care sectors and all patient population.

In the study, more than half of the participants (56%) indicated that compliance was checked throughout project implementation. The compliance issues include the quality dimensions which must be ensured during the implementation. Figure 4.16 indicates that 67% of respondents participated in the compliance management event. This indicates that most of the employees understand the compliance issues regarding paper-based reporting. In this way, they may be able to ensure the effectiveness of the process most of the time. Furthermore, Figure 4.17 indicated that most of the respondents (67%) were part of the compliance team. This is mainly because most of the respondents are the managers and are involved in paper-based reporting on regular basis. About 89% of the respondents, as illustrated in Figure 4.18, know what constitutes planning strategy for paper-based reporting. This implies that managers

understand the strategy used by the organisation in terms of paper-based reporting and if the people understand the strategy, the likelihood of supporting that point of view and ensuring success is high. Figure 4.1 indicates that this may be due to the fact that paper-based reporting is a managerial role that gives the historical background supporting the employment of female employees into management roles. Lastly, Figure 4.19 indicates that 67% of respondents agree and 22% strongly agree that the paper-based reporting strategy is aligned to the business strategy which ensures the effectiveness of the practice.

5.3.2 To establish what evaluating and effectiveness research meets paper-based reporting

As indicated in Figure 4.6 above, the paper-based reporting role is occupied by 78% of the respondents that were involved in paper-based reporting from a business perspective. This indicates that the majority of respondents are familiar with the effectiveness or ineffectiveness of technology including electronic reporting. In this instance they are able to compare the effectiveness of paper-based and electronic reporting. The analysis reveals that despite gender, majority of the employees that occupy paper-based reporting role are operating at the managerial level. Of particular importance is the impact of paper-based reporting on strategic decisions which determine the shape and direction of the organisation. Strategic decisions, like all decision making, turn a complex of paper-based reporting inputs into action (Waterson, 2005).

Most of the respondents agree that the effectiveness of paper-based reporting was within the functional time frame set for reporting. Candidates need to have acquired the required level of education to occupy paper based reporting roles. The role of paper-based reporting is critical for managerial decision as it allows decisions makers to justify their decision choices (Cormier and Magnan, 2007).

Figure 4.8 indicates that 44% of the respondents agree that the budget allocated for the project was adequate while more than 50% do not agree and few of them are not sure. This indicates that the respondents are not able to indicate the economical standing of paper-based reporting. It also shows that females who occupy this role are more

experienced than their male counterparts. This also implies that female employees are perceived to have better understanding of the impact of paper-based reporting on managerial decisions than the male employees in this sample. Highly experienced employees have the appropriate skills in terms of tracking changes to critically evaluate and validate paper-based reporting in a way that brings confidence to decision makers (Sellen, 2003).

Figure 4.9 illustrates that 44% and 11% of respondents received adequate training timeously while 33% did not receive adequate training timeously. Another 11% are not sure if the training offered was adequate and timeous. This indicates that even though training was offered, it was not offered at the same time and it was also possibly offered by different training providers. This also indicates that some employees are able to receive information or training earlier while others are trained late or not trained at all. Figure 4.2 shows that the majority of respondents were aged between 31 and 40 years, implying that the majority of paper-based reporting employees are aged between 31 and 40 years. This may also imply that the opportunity to retain knowledge and skill is high as none of these employees will be retiring anytime soon. However, the challenge may be with the rate at which this age group changes jobs. Knowledge management within paper-based reporting space plays a key role in the understanding of trends and tools utilised to manage paper-based reporting is important (Huang et al., 1999). Therefore the organisation needs to find strategies to retain this age group (31-40 yrs) as their knowledge is key for the continuous improvement of paper-based reporting with an intention to improve managerial decision making.

Figure 4.10 indicates that most of the respondents received management support during the training while 11% also strongly indicates that support from the management was adequate. This may illustrate that paper-based reporting is the supported option in the department or that paper-based reporting is the only option available in the department. Figure 4.1 indicates that 35 females and 10 males perceived the impact of quality paper-based reporting on managerial decisions as a high priority and suitable in the management buy-in to the project. The difference between perceived paper-based reporting by different genders is not significant. This implies that all respondents have the understanding that an organisation depends on paper-based reporting for effective operations and decision making, including paper-based reporting in management

decision as being vital for any organisation. Furthermore, there was adequate management support and commitment throughout the paper-based training.

About 67% and 22% of the respondents agree that the team was given accountability and responsibility along the process. Majority of the respondents believe that their skills will be required to manage paper-based reporting as a team for their function in projects. Furthermore, Figure 4.12 indicates that 89% of respondents indicate that satisfactory accountability was placed on the business for their function in paper-based reporting.

Figure 4.13 shows that 78% of respondents indicated that team leaders were monitored sufficiently to ensure that they were fulfilling their functions. This indicates the support that the department is providing to employees to ensure the achievement of their objectives in paper-based reporting. Sixty-seven percent of respondents indicated that appropriate planning measures were implemented for the project in Figure 4.14. This suggests that efforts are undertaken to ensure effective achievement of objectives in paper-based reporting.

5.3.3 To identify what can be done to improve reporting mechanisms within organisations

Figure 4.20 shows that 56% of the respondents indicated that the concurrent restructuring and centralisation process had a negative effect on the paper-based reporting implementation in the organisation. This illustrates that organisations must reconsider the practice to improve reporting mechanisms. Paper-based reporting has the ability to manage cycles in an organisation and the assumption can thus be made that the managers have the expertise that ensures that paper-based reporting is able to function properly.

Figure 4.21 shows that the paper-based reporting role is occupied by 30 (71%) of the respondents who were involved in the paper-based reporting and from the organisation perspective, the paper-based reporting cycle was successful. This indicates that the majority of respondents are familiar with the effectiveness or ineffectiveness of technology including electronic reporting. The bulk of respondents are thus Specialists, which can be attributed to the profile of a paper-based reporting, which is highly skilful, qualified and with the ability to work without supervision. Figure 4.22 indicates that 30

(71%) of the respondents who occupy an important position in the paper-based reporting, from a business perspective on the paper-based reporting cycle are successful. With the responsibility of the municipalities with paper-based reporting, it appears as if a high premium is placed on experience (Guthrie et al., 2008).

5.4 MANAGERIAL GUIDELINES

The systematic imperative for profits requires organisations to operate in certain ways that continue to gather wealth and power within a select minority of the global population. The possibility of individual organisations changing the system, appears unlikely and Harvey, (2000) argues that real political change arises out of simultaneous and loosely co-ordinated shifts in both thinking and action across several scales. This paper contributes to paper-based reporting literature by identifying and discussing the effectiveness of paper-based reporting within the organisation from a developing country context.

The following guidelines are provided to the Department of Social Development, Women, Children and People with disabilities in relation to the effective implementation of paper-based reporting.

Management of the department must ensure that everybody within the department is involved and also participate in the compliance management event so that everyone must thoroughly understand the compliance issues regarding paper-based reporting. This will ensure the effectiveness and quality of reporting. It is critical that every employee, including junior employees, participate in the compliance team

The departmental planning strategy must be introduced to all employees so that they must support and implement it. It is indicated in the study that less number of employees agree that paper-based reporting strategy is aligned to the business strategy. This indicates a weakness within the department. It is crucial that the department must align any additional strategy that they implement to the business strategy. This will ensure consistency and cohesion.

It was highlighted by some respondents that budget allocation to the project was inadequate. The department must avail adequate budget for all the projects that are being implemented to facilitate timeous completion of projects. It is also important for every employee to understand the economic implications of paper-based and electronic reporting as this will assist in facilitating effective decision making.

Management must ensure that employees are timeously trained as the study indicates that some employees were trained late and others were not trained at all. Open communication within the organisation will assist in the flow of information and better implementation of decisions. The organisation needs to find strategies to retain the middle aged employees who are between 31 and 40 yrs because their knowledge is key to continuous improvement of paper based reporting with the intention to improve managerial decision making. Paper-Based Reporting has the ability to manage cycles in the organisation and the assumption can thus be made that the managers have the expertise to ensure that paper based reporting is able to function properly.

5.5 FUTURE RESEARCH

The goal of this study was to evaluate the effectiveness of paper-based reporting within the department. Data was collected to test the three research questions relating to this goal. The information was studied and many significant findings resulted from the examinations of the data. The findings, although significant, have some limitations. The limitation of this study was that the sample was obtained from employees at service points only in Ngaka Modiri Molema out of the four district municipalities in the province, therefore it limits the generalisation of the findings. The researchers' biggest limitation is to ensure sufficiently high return rate. Furthermore the limitation was that all the variables were assessed with the same method. The returned questionnaires may not be representative of the sample originally selected for the specific discipline, which may impact on the relevance of the research findings.

5.6 CONCLUSION

From the above discussion it can be concluded that paper-based reporting role is occupied by 30 (71%) of respondents who were involved in the paper-based reporting and from an organisation perspective, the paper-based reporting cycle was successful. This indicates that the majority of respondents are familiar with the effectiveness or ineffectiveness of technology including electronic reporting. The bulk of respondents are Specialists, with the profile of paper-based reporting, highly skilled, qualified and with the ability to work without supervision.

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APPENDIX A: CORRELATION

		Age	Gender	Area	Profession	Degree	Qu1	Qu9
Age	Pearson Correlation	1	.819**	-.819**	. ^a	.841**	. ^a	.956**
	Sig. (2-tailed)		.000	.000	.	.000	.	.000
	N	40	40	40	40	40	40	40
Gender	Pearson Correlation	.819**	1	-1.000**	. ^a	.882**	. ^a	.816**
	Sig. (2-tailed)	.000		.000	.	.000	.	.000
	N	40	40	40	40	40	40	40
Area	Pearson Correlation	-.819**	-1.000**	1	. ^a	-.882**	. ^a	-.816**
	Sig. (2-tailed)	.000	.000		.	.000	.	.000
	N	40	40	40	40	40	40	40
	N	40	40	40	40	40	40	40
Degree	Pearson Correlation	.841**	.882**	-.882**	. ^a	1	. ^a	.849**
	Sig. (2-tailed)	.000	.000	.000	.		.	.000
	N	40	40	40	40	40	40	40
	N	40	40	40	40	40	40	40
Qu9	Pearson Correlation	.956**	.816**	-.816**	. ^a	.849**	. ^a	1
	Sig. (2-tailed)	.000	.000	.000	.	.000	.	
	N	40	40	40	40	40	40	40
	Sig. (2-tailed)	.	.	.	.	.	.	.
	N	40	40	40	40	40	40	40

Qu12	Pearson Correlation	.819**	1.000**	-	. ^a	.882**	. ^a	.816**
				1.000**				
	Sig. (2-tailed)	.000	.000	.000	.	.000	.	.000
	N	40	40	40	40	40	40	40

		Qu12	Qu13	Qu 14	V20	V21	V22
Age	Pearson Correlation	.819**	.a	.a	.a	.a	.a
	Sig. (2-tailed)	.000	.	.	.	.	.
	N	40	40	40	0	0	0
Gender	Pearson Correlation	1.000**	.a	.a	.a	.a	.a
	Sig. (2-tailed)	.000	.	.	.	.	.
	N	40	40	40	0	0	0
Area	Pearson Correlation	-1.000**	.a	.a	.a	.a	.a
	Sig. (2-tailed)	.000	.	.	.	.	.
	N	40	40	40	0	0	0
Degree	Pearson Correlation	.882**	.a	.a	.a	.a	.a
	Sig. (2-tailed)	.000	.	.	.	.	.
	N	40	40	40	0	0	0

APPENDIX B: MATRIX

	Definition of paper-based reporting	Reporting practices in different fields	Matrix to be used	Environmental factors and reporting	Quality and reporting	Detection and problems	Human factors	Control and human factors	Social responsibilities
Financial reporting quality and idiosyncratic return volatility 1					•			•	
Fundamentals of transcranial electric and magnetic stimulation dose: definition, selection, and reporting practices 2		•	•	•		•	•	•	
A computational model for financial reporting fraud detection 3					•	•	•		
New Zealand Logging Industry Accident Reporting Scheme: Focus for a Human Factors Research Programme 4	•	•	•	•	•	•	•		
Does the Control-based Approach to Consolidated Statements Better Reflect Market Value than the Ownership-based Approach? 5					•			•	
Financial reporting quality in international settings: A comparative study of the USA, Japan, Thailand, France and Germany 6		•	•	•	•	•		•	•
Appraisal and reporting of security assurance at operational systems level 7	•		•	•	•			•	
Building a European Portrait of Corporate Social Responsibility Reporting 8				•	•		•		•
Analysis of performance metrics reporting in papers comparing treatments or materials/devices in four important orthopaedic journals for the year 2009 9	•				•			•	
Digital reporting in Eastern Europe: An empirical study 10	•	•	•	•	•				•
A comprehensive comparison of corporate		•		•	•	•			•

	Definition of paper-based reporting	Reporting practices in different fields	Matrix to be used	Environmental factors and reporting	Quality and reporting	Detection and problems	Human factors	Control and human factors	Social responsibilities
environmental reporting and responsiveness 11									
Industry specific social and environmental reporting: The Australian Food and Beverage Industry 12		•		•	•	•		•	•
International Financial Reporting Standards and the quality of financial statement information 13		•	•		•				•
Financial reporting incentives for conservative accounting: The influence of legal and political institutions 14	•	•		•	•	•		•	•
The role of information and financial reporting in corporate governance and debt contracting 15		•		•	•	•		•	
The role of a crisis in reshaping the role of accounting 16					•	•	•	•	•
Shared interest and honesty in budget reporting 17			•		•		•	•	
Reservation price reporting mechanisms for online negotiations 18			•		•	•			
Voluntary adoption of International Financial Reporting Standards by large unlisted companies in Portugal – Institutional logics and strategic responses 19				•	•			•	•
The revisited contribution of environmental reporting to investors' valuation of a firm's earnings: An international perspective 20				•	•				
Augmenting paper-based learning with mobile phones 21	•	•			•	•	•		•
Incident reporting or storytelling? Competing schemes in a safety-critical and hazardous work setting		•			•	•	•	•	•

	Definition of paper-based reporting	Reporting practices in different fields	Matrix to be used	Environmental factors and reporting	Quality and reporting	Detection and problems	Human factors	Control and human factors	Social responsibilities
22									
Building institutions based on information disclosure: lessons from GRI's sustainability reporting 23		•		•	•	•			•
Pattern of adverse drug reactions notified by spontaneous reporting in an Indian tertiary care teaching hospital 24		•			•		•		
Assessing non-financial reports according to the Global Reporting Initiative guidelines: evidence from Greece 25		•		•	•				•
How does internal control regulation affect financial reporting? 26					•			•	
An examination of anonymous and non-anonymous fraud reporting channels 27				•	•			•	•
The financial reporting environment: Review of the recent literature 28		•		•		•		•	•
THE ROLE OF INTERNATIONAL AUDITING IN THE IMPROVEMENT OF INTERNATIONAL FINANCIAL REPORTING 29		•		•	•	•		•	
Ambiguous but tethered: An accounting basis for sustainability reporting30				•	•	•			•
Development of financial reporting environment in Malaysia 31		•		•		•		•	•
Hadfield's Ltd: its annual general meetings 1903–1939 and their relevance for contemporary corporate social reporting 32	•	•							
Differences in environmental reporting practices in the UK and the		•		•	•		•	•	•

	Definition of paper-based reporting	Reporting practices in different fields	Matrix to be used	Environmental factors and reporting	Quality and reporting	Detection and problems	Human factors	Control and human factors	Social responsibilities
US: the legal and regulatory context 33									
Reporting by radiographers: a policy and practice guide34		•			•	•	•	•	•
Assessing the effectiveness of financial reporting harmonisation for emerging market banks: The case of BancoSerfin 35		•			•	•			•
The ISPOR Good Practices for Quality Improvement of Cost-Effectiveness Research Task Force Report he 605 1086..10936	•	•	•		•	•			•
The absence of corporate social responsibility reporting in Bangladesh 37		•		•	•	•	•		•
The process and consequences of reporting child maltreatment: A brief overview for professionals in the mental health field 38		•	•	•	•	•	•	•	•
Recommendations on Evidence Needed to Support Measurement Equivalence between Electronic and Paper-Based Patient-Reported Outcome (PRO) 39	•	•				•			
Reporting systems, reporting rates and completeness of data reported from primary healthcare to a Swedish quality register – The National Diabetes Register 40		•	•		•		•		•

APPENDIX C: TABLE OF CONSTRUCTION

Research Question	Survey Question	Variable(s) and/or relationship measured	Question Type	Data type
Demographics	Please tick your age group in the appropriate block:	Demographic question	21-30, 31-40, 41-50, 51-60, 60+ (multiple choice)	Discrete
	What is your gender?	Demographic question	Male - Female (dichotomous category)	Dichotomous
	How long have you been working at the organisation?	Demographic question	1-2, 3-4, 5-6, 7-8, 9-10, 10+ (multiple choice)	Discrete
	Was your involvement in paper-based reporting from an IT or Business perspective?	Demographic question	IT, Business (dichotomous category)	Dichotomous
	How many paper-based projects have you been involved in?	Demographic question	1, 2, 3, 4, 5+ (multiple choice)	Discrete
	What business ranking do you have?	Demographic question	Managerial, Non-Managerial (dichotomous category)	Dichotomous
What are the evaluating and effectiveness research that meets paper-based reporting?	Your effectiveness was within the functional timelines originally stipulated.	Evaluating and effectiveness research	Strongly Agree - Agree- Undecided -Disagree- Strongly Disagree (Likert Scale)	Ordinal
	The budget assigned to the project was appropriate.	Evaluating and effectiveness research.	Strongly Agree - Agree- Undecided -Disagree- Strongly Disagree (Likert Scale)	Ordinal

	The paper-based reporting had enough people resources assigned to it in your functional area.	Evaluating and effectiveness research.	Strongly Agree - Agree- Undecided -Disagree- Strongly Disagree (Likert Scale)	Ordinal
	Your functional area received sufficient and timeous training.	Evaluating and effectiveness research.	Strongly Agree - Agree- Undecided -Disagree- Strongly Disagree (Likert Scale)	Ordinal
	There was adequate management support and commitment throughout the paper-based training i.e. Was the management buy-in to the project suitable.	Evaluating and effectiveness research	Strongly Agree - Agree- Undecided -Disagree- Strongly Disagree (Likert Scale)	Ordinal
	Satisfactory accountability was placed on the team for their function in the project.	Evaluating and effectiveness research.	Strongly Agree - Agree- Undecided -Disagree- Strongly Disagree (Likert Scale)	Ordinal
	Satisfactory accountability was placed on the business for their function in the project.	Evaluating and effectiveness research.	Strongly Agree - Agree- Undecided -Disagree- Strongly Disagree (Likert Scale)	Ordinal
	Team leaders were sufficiently monitored to ensure that they were fulfilling their functions.	Evaluating and effectiveness research.	Strongly Agree - Agree- Undecided -Disagree- Strongly Disagree (Likert Scale)	Ordinal
	Appropriate planning measure implemented for the project.	Evaluating and effectiveness research.	Strongly Agree - Agree- Undecided -Disagree- Strongly Disagree (Likert Scale)	Ordinal

IS paper-based reporting addressing the concerns of compliance to reporting requirements? i.e. usefulness, reliability, etc.	Sufficient compliance throughout the phases.	Concerns of compliance	Strongly Agree - Agree- Undecided -Disagree- Strongly Disagree (Likert Scale)	Ordinal
	Did you partake in any compliance management event?	Concerns of compliance	Yes - No (dichotomous category)	Dichotomous
	Were you part of a compliance team?	Concerns of compliance	Yes - No (dichotomous category)	Dichotomous
Is paper-based reporting necessary in collecting data from an organisation?	Do you know what the paper-based planning strategy was?	Necessary collecting data	Yes - No (dichotomous category)	Dichotomous
	PBR strategy was aligned to the business strategy	Necessary collecting data	Strongly Agree - Agree- Undecided -Disagree- Strongly Disagree (Likert Scale)	Ordinal
	The concurrent restructuring and centralisation process had a negative effect on the PBR implementation.	Necessary collecting data	Strongly Agree - Agree- Undecided -Disagree- Strongly Disagree (Likert Scale)	Ordinal
What can be done to improve reporting mechanisms within the organisation?	The reporting cycle is successful from an organisation perspective.	Improve reporting mechanisms	Strongly Agree - Agree-Undecided- Disagree-Strongly Disagree (Likert Scale)	Ordinal
	The reporting cycle is successful from a business perspective.	Improve reporting mechanisms	Strongly Agree - Agree-Undecided- Disagree-Strongly Disagree (Likert Scale)	Ordinal

APPENDIX D: RESEARCH QUESTIONNAIRE

VOLUNTARY QUESTIONNAIRE FOR PAPER-BASED REPORTING

Researcher : Gadifele Kepadisa

Supervisor : Professor Sam Lubbe

Note to the respondent

- The researcher needs your help to understand the evaluating and effectiveness of paper-based reporting. in organisations.
- Although the researcher would like you to help her, you do not have to take part in this survey.
- If you do not want to take part, just hand in the blank questionnaire at the end of the survey session.
- What you say in this questionnaire will remain private and confidential. No one will be able to trace your opinions back to you as a person.

The questionnaire has four parts:

Part 1 asks permission to use your responses for academic research.

Part 2 asks for general personal particulars like your age, gender and home language.

Part 3 asks about service delivery operations.

How to complete the questionnaire

1. Please answer the questions as truthfully as you can. Also, please be sure to read and follow the directions for each part. If you do not follow the directions, it will make it harder for the researcher to do her project.
2. We are only asking you about things that you and your fellow researchers should feel comfortable telling us about. If you don't feel comfortable answering a question, you can indicate that you do not want to answer it. For those questions that you do answer, your responses will be kept confidential.

3. You can mark each response by making a tick or a cross or encircling each appropriate response with a PEN (not a pencil) or by filling in the required words or numbers.

Thank you very much for filling in this questionnaire.

Part 1: Permission to use my responses for academic research

I hereby give permission that my responses may be used for research purposes provided that my identity is not revealed in the published records of the research.

Initials and surname _____

Postal address:

Postal code: _____

Contact numbers:

Home: _____ Cell: _____

No.	PART 2: GENERAL PERSONAL PARTICULARS <i>Please tell us a little about yourself</i> Please mark only ONE option per question below.	.	PART 3: WHAT EVALUATING AND EFFECTIVENESS RESEARCH MEETS PAPER-BASED REPORTING?
1.	I am _____ years old. <input type="checkbox"/> 21 – 30 year <input type="checkbox"/> 31 – 40 years <input type="checkbox"/> 41 – 50 years <input type="checkbox"/> Over 50 years	7.	Your effectiveness was within functional timelines originally stipulated <input type="checkbox"/> Strongly Agree <input type="checkbox"/> Agree <input type="checkbox"/> Undecided <input type="checkbox"/> Disagree <input type="checkbox"/> Strongly Disagree
2.	I am _____. <input type="checkbox"/> Male <input type="checkbox"/> Female	8.	The budget assigned to the project was appropriate <input type="checkbox"/> Strongly Agree <input type="checkbox"/> Agree <input type="checkbox"/> Undecided <input type="checkbox"/> Disagree <input type="checkbox"/> Strongly Disagree

3.	<p>How long have you been working at the organisation?</p> <p><input type="checkbox"/> 1 – 5 years</p> <p><input type="checkbox"/> 6 – 10 years</p> <p><input type="checkbox"/> 11 – 15 years</p> <p><input type="checkbox"/> More than 16 years</p>	9.	<p>The paper-based reporting had enough people resources assigned to it in your functional area</p> <p><input type="checkbox"/> Strongly Agree</p> <p><input type="checkbox"/> Agree</p> <p><input type="checkbox"/> Undecided</p> <p><input type="checkbox"/> Disagree</p> <p><input type="checkbox"/> Strongly Disagree</p>
4.	<p>Was your involvement in Paper-based reporting from an IT or Business perspective?</p> <p><input type="checkbox"/> Business</p> <p><input type="checkbox"/> IT</p>	10.	<p>Your functional area received sufficient and timeous training</p> <p><input type="checkbox"/> Strongly Agree</p> <p><input type="checkbox"/> Agree</p> <p><input type="checkbox"/> Undecided</p> <p><input type="checkbox"/> Disagree</p> <p><input type="checkbox"/> Strongly Disagree</p>
5.	<p>How many Paper-based projects have you been involved in?</p> <p><input type="checkbox"/> 1</p> <p><input type="checkbox"/> 2</p> <p><input type="checkbox"/> 3</p> <p><input type="checkbox"/> 4</p> <p><input type="checkbox"/> 5</p> <p><input type="checkbox"/> Over 5</p>	11.	<p>There was adequate management support and commitment throughout the paper-based training i.e. Was the management buy-in to the project suitable?</p> <p><input type="checkbox"/> Strongly Agree</p> <p><input type="checkbox"/> Agree</p> <p><input type="checkbox"/> Undecided</p> <p><input type="checkbox"/> Disagree</p> <p><input type="checkbox"/> Strongly Disagree</p>

6.	<p>What business ranking do you have?</p> <p><input type="checkbox"/> Managerial</p> <p><input type="checkbox"/> Non-Managerial</p> <p><input type="checkbox"/> Other</p>	12.	<p>Satisfactory accountability was placed on the team for their function in the project</p> <p><input type="checkbox"/> Strongly Agree</p> <p><input type="checkbox"/> Agree</p> <p><input type="checkbox"/> Undecided</p> <p><input type="checkbox"/> Disagree</p> <p><input type="checkbox"/> Strongly Disagree</p>
13.	<p>Satisfactory accountability was placed on the business for their function in the project?</p> <p><input type="checkbox"/> Strongly Agree</p> <p><input type="checkbox"/> Agree</p> <p><input type="checkbox"/> Undecided</p> <p><input type="checkbox"/> Disagree</p> <p><input type="checkbox"/> Strongly Disagree</p>		<p>PART 5: IS PAPER-BASED REPORTING NESECCARY IN COLLECTING DATA FROM AN ORGANISATION?</p>
14.	<p>Team leaders were sufficiently monitored to ensure that they were fulfilling their functions?</p> <p><input type="checkbox"/> Strongly Agree</p> <p><input type="checkbox"/> Agree</p> <p><input type="checkbox"/> Undecided</p> <p><input type="checkbox"/> Disagree</p> <p><input type="checkbox"/> Strongly Disagree</p>	19..	<p>Do you know what the paper-based planning strategy was?</p> <p><input type="checkbox"/> Yes</p> <p><input type="checkbox"/> No</p>

15.	Appropriate planning measure implemented for the project? <input type="checkbox"/> Strongly Agree <input type="checkbox"/> Agree <input type="checkbox"/> Undecided <input type="checkbox"/> Disagree <input type="checkbox"/> Strongly Disagree	20.	PBR strategy was aligned to the business strategy? <input type="checkbox"/> Strongly Agree <input type="checkbox"/> Agree <input type="checkbox"/> Undecided <input type="checkbox"/> Disagree <input type="checkbox"/> Strongly Disagree
	PART 4: IS PAPER-BASED REPORTING ADDRESSING THE CONCERNS OF COMPLIANCE TO REPORTING REQUIREMENTS? (i.e usefulness, reliability, etc.)	21.	The concurrent restructuring and centralisation process had a negative effect on the PBR implementation <input type="checkbox"/> Strongly Agree <input type="checkbox"/> Agree <input type="checkbox"/> Undecided <input type="checkbox"/> Disagree <input type="checkbox"/> Strongly Disagree
16.	Sufficient compliance throughout the phases? <input type="checkbox"/> Strongly Agree <input type="checkbox"/> Agree <input type="checkbox"/> Undecided <input type="checkbox"/> Disagree <input type="checkbox"/> Strongly Disagree		PART 6: WHAT CAN BE DONE TO IMPROVE REPORTING MECHANISMS WITHIN ORGANISATIONS?

<p>17. Did you partake in any compliance management event?</p> <p><input type="checkbox"/> Yes</p> <p><input type="checkbox"/> No</p>	<p>22. The reporting cycle is successful from an organisation perspective?</p> <p><input type="checkbox"/> Strongly Agree</p> <p><input type="checkbox"/> Agree</p> <p><input type="checkbox"/> Undecided</p> <p><input type="checkbox"/> Disagree</p> <p><input type="checkbox"/> Strongly Disagree</p>
<p>18. Were you part of a compliance team?</p> <p><input type="checkbox"/> Yes</p> <p><input type="checkbox"/> No</p>	<p>23. The reporting cycle is successful from a business perspective?</p> <p><input type="checkbox"/> Strongly Agree</p> <p><input type="checkbox"/> Agree</p> <p><input type="checkbox"/> Undecided</p> <p><input type="checkbox"/> Disagree</p> <p><input type="checkbox"/> Strongly Disagree</p>