



Administration Practices Affecting Environmental Compliance by Small and Medium-sized Enterprises in the Manufacturing Sector

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DECLARATION

I, Jabhisile R Maphumulo declare that this dissertation is my original research, I have acknowledged all sources used in this study. I have not submitted this dissertation to any other institution for the qualification Master of Management Sciences in Administration and Information Management.

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ABSTRACT

The significant role of Small and Medium-sized Enterprises (SMEs) and their contribution towards the growth and development of the countries' economies are acknowledged globally. SMEs play a crucial role in transforming socio-economic conditions and are driving the economy by availing employment opportunities and fuelling the demand for goods and services. However, regulations and legislations are the important constraints to SME growth in developing countries. One of the common causes that lead to the failure of some SMEs is that owners have limited awareness of the environmental legislations and lack managerial skills that will help with carrying out administrative practices required to comply with these legislations. The result of lack of awareness and poor entrepreneurship is shown by the high number of SMEs closing down annually in South Africa due to noncompliance. Therefore, the purpose of this study was to examine the administration practices adopted by SMEs in the manufacturing sector within Msunduzi Municipal boundary, and to establish how the environmental compliance can be enhanced by these entities.

This study adopted a quantitative research approach using a 5 point Likert scale closed-ended questionnaire as a data collection instrument. The questionnaire was distributed to managers and administrative personnel of the participating SME in the manufacturing sector. Probability sampling method was adopted to narrow down the sample size to 215 respondents. The data collected from respondents was analysed using the Statistical Package for Social Sciences (SPSS) version 25.0 and Microsoft Excel.

Results from data analysed show that there was a consensus that complying with environmental regulations is compulsory, therefore compliance is vital. Furthermore, the results indicate that among the administration practices for compliance identified, obtaining a licence to operate was paramount for the SMEs to operate legitimately. Respondents did not confirm if the compliance assessment reports were kept as a record for environmental compliance. The

results indicate that employees were uncertain as to which environmental regulations they are complying with by completing the tasks assigned to them. Of concern, they were not in agreement that environmental compliance is prioritised within the respective SMEs.

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CHAPTER 1

OVERVIEW OF THE STUDY

1.1 Introduction

This chapter discusses the research background of the study as well as the problem statement. Furthermore, the aim and objectives of the study are identified and these guided the course that the research took. In addition, the study is contextualised with particular reference to Small and Medium-sized Enterprises (SMEs) with the South African context. The chapter further summarises the research methodology employed in the study and briefly addresses the significance of the study. The dissertation structure is then mentioned to give an overview of the study's contents.

1.2 Research background

Understanding the administration of environmental legislation compliance for manufacturing SMEs is an important phenomenon that needs investigation. In developing countries there has not been a consensus as to what criteria should be used to define SMEs (Abdullah, Anumudu and Raza, 2022:138). For decades SME businesses have been contributing significantly towards the development of South Africa and now are widely recognised as major contributors to employment generation, innovators and as engines for wealth generation (Hlatshwayo, 2015:5). The Organisation for Economic Cooperation and Development (OECD) (2020) mention that SMEs are contributing about 42% towards the South African gross domestic product (GDP) and employ 47% of the workforce. Although, 38% of SMEs are operating in trade and accommodation South Africa, there is only 8% of them in the manufacturing sector (Okyere, 2016:159). Manufacturing sector ranges from manufacturing of clothing, food, metal or steel, chemicals, wood, electronics. Manufacturing sector is chosen due to that it is expected that it complies with environmental regulations. As much as the SMEs are helping the South African economy, approximately 85% of the

small businesses face survival challenges and require a development plan to promote entrepreneurship (Rungani and Potgieter, 2018:1) that will ensure proper management to avoid noncompliance of environmental legislation. Rahman, Yaacob and Radzi (2016:124) mentions that the failure of SMEs is most likely to happen during the first five years of the establishment because of regulations such as the National Environmental Acts. Regulations in South Africa are central to the government processes and the impact they have on SMEs whether negative or positive should be monitored and assessed along with compliance costs and administration (Christensen, Hegazy and Van Zyl, 2016:9). SMEs are increasingly becoming aware of their operational sustainability and environmental aspects (Jansson, Nilsson, Modig and Vall, 2015:70). Saez-Martinez, Diaz-Garcia and Gonzalez-Moreno (2016:2) mentions that there is an untrue perception that SMEs are not aware of the negative effects of their firms and they lack interest to pursue environmental practices. Delchet-Cochet, Vo and Akeb (2015:987) posits that there are conflicting opinions and evidences from researchers regarding the concern whether complying to environmental regulations causes SMEs to seek competitive advantage. According to Moos and Sambo (2018:468) there are also advantages enjoyed by SMEs which have been identified by other researchers such as growth potential, personal convenience and cost advantage.

1.3. Problem statement

The success rate of SME businesses is growing slower in terms of value and numbers because of external and internal reasons (Kalane, 2015:13). The external reasons include the economy and laws and regulations of South Africa. SMEs are likely to be poorly equipped in dealing with challenges arising from regulations, which makes complying with regulations to remain as a major obstacle to succeed (Ogujiuba, Nico, Naseer and Ogujiuba, 2020:2). The internal causes that lead to the failure of some SMEs include leadership (Mchunu, 2019:2), access to finance, inadequate workforce and that owners have limited awareness of the environmental legislations and they lack managerial skills that will help with carrying out administrative practices required (Rahman *et al.*, 2016:124). The result of limited awareness on environmental legislations and

lean entrepreneurship skills is shown by the high number of SMEs closing annually in South Africa due to noncompliance (Hlatshwayo, 2015:4). The companies discover they are in violation of a law they were not aware of, and they possibly could have avoided the problem by following the appropriate administrative practices. Noncompliance of SMEs to environmental policies is a violation of law that could result in exclusion from future tendering processes with the government (Murithi, 2017:37) which decreases their chance of survival as they will have less financial support. The introduction of different environmental regulations is an attempt to govern against environmental damaging activities by SMEs (Blundel, Monaghan and Thomas, 2013:247) and encourage firms to adopt environmentally friendly ways of operating. Therefore, this study seeks to investigate the administration practices employed by SMEs in the manufacturing sector focusing in those within the Msunduzi Municipality area and demonstrate how the practices can enhance environmental compliance.

1.4. Aim of the study

The aim is to examine the administration practices employed by SMEs in the manufacturing sector within the Msunduzi Municipal boundary and to establish how the practices can enhance environmental compliance by these entities.

1.5. Objectives of the study

To achieve the aim of this research, the following research objectives were developed:

- To identify administration practices employed by SMEs in the manufacturing sector within the Msunduzi Municipal boundary, that can enhance environmental regulatory compliance.
- To examine factors contributing to the environmental regulatory noncompliance of SMEs in the manufacturing sector within the Msunduzi Municipal boundary.
- To establish the relationship between the administration practices employed by SMEs in the manufacturing sector and the factors affecting environmental regulatory compliance.

1.6. Research questions

- What are administration practices employed by SMEs in the manufacturing sector within the Msunduzi Municipal boundary, that can enhance environmental regulatory compliance?
- What are the factors contributing to the environmental regulatory noncompliance of SMEs in the manufacturing sector within the Msunduzi Municipal boundary?
- What is the relationship between the administration practices employed by SMEs in the manufacturing sector and the factors affecting environmental regulatory compliance?

1.7. Significance of the study

The research problem statement underlined that lack of awareness and lack of managerial skills are affecting compliance to environmental regulations. It is imperative that SMEs comply with environmental regulations, since noncompliance contribute to the existing challenges confronting small businesses which in some instances result in their demise. This study intended to contribute to the body of knowledge by identifying administration practices employed by SMEs in the manufacturing sector that enhances compliance to environmental regulations. Moreover, this study aspires to illuminate the importance of SMEs compliance with environmental regulations to ensure their survival and growth.

1.8. Research methodology

This study used the quantitative research approach to gather data that was then converted to statistical results. The quantitative techniques were used to analyse the responses to the questionnaire that was distributed to participants to give accurate data analysis on the impact administrative practices have on environmental regulatory compliance.

1.8.1. Target population

Majid (2018:3) states that the study's population is an aggregate of subjects, individuals, groups, organisations, human products and events that conform to set research parameters and specifications. The Small Enterprise Development Agency (SEDA) and Msunduzi Municipality facilitated the selection of SMEs in the manufacturing sector within Msunduzi Municipal boundary through their databases. Within the SMEs, managers and administrative personnel were identified as participants because they share the administration responsibility for environmental compliance of the enterprises.

1.8.2. Sampling method

The probability sampling method was adopted to identify a representative sample and statistical reference. The sample population of this study consisting of managers and administrative personnel from different SMEs was calculated using formula on 1.8.3. The participants were randomly selected using the stratified sampling technique, with the exception that they are managers or administrative personnel from an SME in the manufacturing sector within the Msunduzi Municipality boundary.

1.8.3. Sample size

According to Memon, Ting, Cheah, Thurasamy, Chuah and Cham (2020:1) a sample is a group of individuals, objects or items taken from a large population for measurement. The sample size is based on the 90% confidence level with 50% proportion of the target population and a 5% acceptable margin error. The following formula was used to determine the sample size: $S = \frac{(Z^2 * p (1 - p) / e^2)}{1 + (Z^2 * p (1 - p) / e^2 N)}$, where S= Sample size, N = Population and e= Margin error

1.8.4. Data collection instruments

The data collection tool that was used is a questionnaire. Managers and administrative personnel from SMEs had to complete and each participant was

given one questionnaire. The questionnaire consisted of closed-ended and 5 point Likert scale questions to allow for a quantifiable result.

1.8.5. Data analysis

The analysis of data commenced after the data collection process had been fully completed. Ibrahim (2015:99) explained data analysis as the process of conducting particular calculations and evaluations in order to gather meaningful information to validate collected data. The statistical tool that was used to analyse data was the latest version of Statistical Package for the Social Sciences (SPSS) to allow for management and statistical analysis of data. The data analysed was presented in tables, graphs and pie charts.

1.8.6. Validity and reliability of the study

Taherdoost (2016:28) defined validity as the degree to which a questionnaire measures what it is intended to measure. The validity and reliability was ensured through the use of piloting the research instrument to get consistent measure and to cover most aspects of the concept being measured (Ghazali, 2016:149). Validity and reliability was measured by SPSS.

1.8.7. Ethical considerations and confidentiality

The ethical issues considered for this study were of confidentiality and transparency. The researcher applied for ethical clearance from the Faculty Research Committee at Durban University of Technology and was granted ethical clearance. Participants were informed of the aim of the study conducted and provided with a consent form and a letter of information. The identity of participants was kept anonymous in order not to harm participants personally or professionally.

1.9. Dissertation structure

1.9.1. Chapter one – Overview of the study

In this chapter there was an introduction of the topic the research is based on. The chapter also focused on the problem statement of the study and stated the aims, objectives and research questions. The chapter further discussed the significance of the study and a brief summary of the research methodology.

1.9.2. Chapter two – Literature review

The chapter provided a broad discussion about the main concepts that will be employed throughout the study, together with previous research. The chapter was guided by the objectives. A theoretical framework was also included in the discussion to support study.

1.9.3. Chapter three – Research methodology

The chapter provided an insight regarding research approach that was used, how data was collected and what methods were used in the analysis of data. The chapter also mentioned processes followed to ensure validity and reliability, and the ethical considerations that were applied by the researcher.

1.9.4. Chapter four – Results and discussion

The chapter laid out the process of analysing all data collected and findings of the study were discussed. The findings were illustrated using graphs and tables and pie charts.

1.9.5. Chapter five – Conclusion and recommendations

The chapter provided a summary on the key findings. The chapter further briefly discussed the implication and limitation of the study. The chapter also included recommendations based on findings and recommendation for future studies.

1.10. Conclusion

This chapter provided an introduction and background of the research study. The research problem was discussed outlining challenges faced by SMEs contributing to environmental noncompliance. SMEs are essential in growing the South African economy. However, the lack of awareness of environmental regulations are affecting the company lifespan. The objectives and research questions identified highlighted the goal the study is trying to achieve. Chapter 2 provides a literature review on SMEs in the manufacturing sector and the environmental regulations to be complied with. Chapter 2 also discusses the theoretical framework that supports the discussion of the study.

CHAPTER 2

LITERATURE REVIEW

2.1. Introduction

The introduction of the research was done in the first chapter where, the research problem along with the aim and objectives of the study were presented. This chapter provides a broader discussion on SMEs and the administration practices they have to implement to comply with environmental regulations. This chapter is guided by the objectives detailed in chapter 1. As a point of departure, the literature review section defines the main concepts utilised in this study which are SMEs, environmental compliance and administration practices. The sections covered in this chapter include the role of SMEs in the developing economy, environmental compliance challenges facing manufacturing sector, environmental regulations within the manufacturing sector. The chapter further discusses the administration practices employed by SMEs in the manufacturing sector, the relationship between administration practices and environmental regulation compliance, the role of governance for improved environmental compliance of SMEs, factors affecting environmental compliance of SMEs. The chapter concludes with a review on the theoretical frameworks guiding this study.

2.2. Defining of key concepts used in this study

The main concepts used throughout the study are SMEs, environmental compliance and administration practices. The concepts can have different definitions from different authors, but the definitions provided are for the purpose of this study to gain understanding on how each concept relate to the study.

2.2.1. Small and Medium-sized Enterprises

There is no agreed definition for what constitutes as SME, which can be globally used to define SMEs (Berisha and Pula, 2015:17). Chiromo (2019:653) defines SMEs as the cornerstone of economic development businesses that maintain

revenues, assets and number of employees below a certain level. On the other hand, Jayasekara, Fernando and Ranjani (2020:2) describes SMEs as non-subsidiary, independent businesses that employs less than a given number of employees. Ayandibu and Houghton (2017:134) define SMEs as establishments that have fewer than 250 employees. The authors add that small enterprises are establishments with fewer than 50 employees and medium enterprises are establishments with a minimum of 100 to a maximum of 200 employees. Table 2.1 illustrates how the National Small Business Act 102 of 1996 of South Africa, uses the number of employees, the annual turnover and assets excluding fixed property, per enterprise size to provide the definition for SMEs (Sithram and Hoque, 2016:277).

Table 2.1: Definition of SMEs provided in the National Small Business Act 102 of 1996.

Enterprise size	Number of employees	Annual turnover	Gross assets, excluding fixed property
Medium	Fewer than 100 to 200, depending on industry	Less than R4 million to R50 million, depending on industry	Less than R2 million to R18 million, depending on industry
Small	Fewer than 50	Less than R2 million to R25 million, depending on industry	Less than R2 million to R4,5 million, depending on industry

Source: Adapted from National Small Business Act as cited by Sithram and Hoque (2016:278)

The definition that this study adopted was by authors Ayandibu and Houghton, 2017 and Sithram and Hoque, 2016. This study is about SMEs in South Africa and both definitions are of South African context.

2.2.2. Environmental compliance

Environmental compliance refers to abiding to government set environmental laws, regulations and other requirements like acquiring site permits for businesses to operate. Thimm and Rasmussen (2021:649) mention that environmental compliance entails abiding by the rules set forth by laws and regulations that are intended to protect the environment. The authors continued to mention that environmental compliance involves doing your due diligence in ensuring you do not fall afoul of regulation, setting up policies, and managing programs that ensures ongoing compliance. According to the Mutuku (2021:7) the purpose of an environmental compliance is to officially institute best practice measures that would prevent, control and mitigate the environmental degradation that may arise from a project. Figure 2.1 demonstrates the requirement that have to be followed to be compliant.

Figure 2.1: Requirements for ensuring environmental compliance.



Source: Adapted from Cyber Sec Op (2018)

2.2.3. Administration practices

The diagram (figure 2.1) discussed is silent on the role of administration practices towards ensuring environmental compliance. Administration practices are formal procedures implemented by a private or government organisation to govern management and decision making (South African Government Gazette on National Environmental Management: Waste Act, 2018). To comply with regulations and by-laws, administration practices serve as guidelines and procedures for their execution (Xabier, 2018). Organisations' management are assisted in their decision-making by administrative processes. According to Kaufman (2018), there must be a goal that the administrative activity is anticipated to achieve in order to define the function of administration. In other words, the role of administration is to conduct or put into practice the policy decisions and to coordinate activities in order to accomplish a common goal.

2.3. The roles of SMEs in developing economies

A great portion of enterprises globally are SMEs and are the main potential growth and development for both the developed and developing countries (Morina and Gashi, 2016:170). Bvuma and Marnewick (2020:1) states that successful economies globally have acknowledged the significant role and contribution that SMEs have towards the growth and development of the country's economy. Alemayehu and van Vurren (2016:12) mentions that SMEs play a crucial role in transforming socio-economic conditions and are driving the economy by availing employment opportunities and fuelling the demand for goods and services. Rungani and Potgieter (2018:1) concurs that the role of SMEs is recognised for their capacity of employment creation, social development and economic growth but their full potential remains unexplored. Aside from their capacity to significantly lower the high unemployment rate and support the expansion of the economy, SMEs have other advantages. By providing productive assets to previously disadvantaged individuals, SMEs can be utilised as a tool for changing the nation and enabling other SMEs to pursue success (Sithram and Hoque, 2016:277). With the world changing and experiencing new challenges, SMEs role have now since increased based on

their ability to adapt to challenges (Cicea, Popa, Marinescu and Stefan, 2019:1603), of the constantly changing environment. Environmental compliance is never without its difficulties, and SMEs in the manufacturing industry are not an exception.

2.4. Environmental compliance challenges facing the manufacturing sector

Regulations and legislations are the major constraints to SME growth in developing countries (Nieuwenhuizen, 2019:667, Nyamwanza *et al.*, 2016). Regulations provide guidance to SMEs on how to operate their businesses on a daily basis. Herrington and Kew (2016) cited in Nieuwenhuizen (2019, 667) found that 60% of respondents identified the government regulations and policies to be an inhibiting factor for entrepreneurship, while Cant and Wild (2013) found that it was 80% of the same factor. The common causes of failure for SMEs is that there is too much “red tape” (Murithi, 2017:37) restricting SMEs to achieve set goals. The SMEs need for long-term survival and license to operate are the motivations to the firms on environmental regulation compliance (Delchet-Cochet *et al.*, 2015:987). Struwig and Lillah (2017:2) identified that improving the relationships with SMEs or stakeholders lead to efficient improved environmental performance. There are actions SMEs can take to mitigate the negative impact they may have on the environment such as water saving initiatives, reduction of pollutants of dangerous waste production (Okyere, 2016:160). Mwanza and Mbohwa (2017:123) highlighted that the challenges facing the manufacturing industry especially with the plastic manufactures is the collection, sorting, lack of incentives by manufacturers to use recycled plastics and weak environmental control. The authors continued to indicate that with the absence of additional legislative directive and the progress of recycling is slower. With the progress being slow, compliance to currently existing environmental regulations proves to be a challenge for SMEs in the manufacturing sector.

2.5. Environmental regulations within the manufacturing sector

For every business there are rules and regulations that govern how the firm should operate. Christensen *et al.*, (2016:9) points out that regulations are a necessity in order to enable growth in SMEs but identified that the regulatory compliance is challenging for firms. Delchet-Cochet *et al.*, (2015:988) adds that environmental regulation compliance motivates SMEs to develop protection agenda for competitive advantages. Blundel *et al.*, (2013:247) elaborated that the environmental policies have often been enforced mostly on larger businesses to promote environmental compliance, however smaller enterprises are also affected by the enforced laws as they have become stricter (Mutuku, 2021:7). The local government and municipalities have enforced legislations known as Municipal by-laws which businesses must follow. The local municipalities are responsible to check whether the firms are following the environmental regulations. Municipalities have a responsibility to make sure SMEs take full use of opportunities for shared economic development. (Christensen *et al.*, 2016:8). Municipality's by-laws also have an impact on SMEs and businesses in the manufacturing sector as they would need permission to operate noisy operations (Du Toit, 2016:14). It is essential that SMEs are aware of municipal environmental by-laws or legislations and together with the administration practices associated with each legislation in order to be in compliance. For instance, the South African Government Gazette on National Environmental Management Act (2014) highlighted that the National Environmental Management Act (NEMA) 107 of 1998, provides guidance to people on protecting the environment.

There are other environmental legislations that form part of NEMA such as:

- National Environmental Management: Waste Act No 59 of 2008,
- National Environmental Management: Air Quality Act 39 of 2004.
- Spatial Planning and Land Use Management Act (SPLUMA), No. 16 of 2013,
- National Water Act 36 of 1997,
- Occupational Health and Safety (OHS) Act 85 of 1993,

2.5.1. National Environmental Management: Waste Act No 59 of 2008

The National Environmental Management Act 107 of 1998, of South Africa mentions that there are different processes and practices to be followed when disposing waste. The South African Government Gazette on National Environmental Management: Waste Act (2018) speak briefly on the few administration practices for the Waste Act which includes obtaining a license to dispose of waste especially if it hazardous, following the Acts objectives, guidelines, systems and procedures relating to the environmental laws. According to Jaeger, Amos, Bigelow, Chang, Conklin, Haggerty, Langpap, Moore, Mote, Nolin, Plantinga, Schwartz, Tullos and Turner (2017:11887), the Act strives to improve the law regulating waste management to protect health and the environment by providing reasonable measures into the prevention of pollution. SMEs in the manufacturing sector are most likely to have waste to dispose of and that should be managed in a way that provides an acceptable level of protection to the environment. The local municipalities provide different services to the public and collecting waste is one of them. According to the South African Gazette White paper (2000) the efficient use of natural resources and waste management within the framework of integrated pollution, will help protect the environment, the people of South Africa as well as ensure environmental compliance of SMEs.

2.5.2. National Environmental Management: Air Quality Act 39 of 2004 (NEMAQA)

The establishment of the National Environmental Management: Air Quality Act 39 of 2004 (NEMAQA) made interested South Africans to contribute towards the first national plan to clear skies of pollution and ensure air that is not harmful (South African Government Gazette on Department of Environmental Affairs: Air Quality, 2018:117). Tshehla and Wright (2019:1) raises a point that the effective management of air quality in South Africa requires enforcement of legislation and standards, sound policy implementation, and air quality monitoring. The cooperation amongst government departments, research institution, economic sectors and the public is important in fighting against air pollution.

Tshehla and Wright (2019:1) mentions that to reduce and manage air quality, NEMAQA stipulates that the following be considered;

- Decentralisation of air quality management among all spheres of government.
- Identification and quantification of all sources.
- Compliance monitoring and enforcement.
- Development of Air Quality Management Plans (AQMPs) by all spheres of government and emissions reductions and management plans by all source emitters;
- Access to information and public consultation regarding air quality.
- Norms and standards for air quality monitoring and management.

2.5.3. Spatial Planning and Land Use Management Act (SPLUMA), No. 16 of 2013

Nel (2015:2) defined SPLUMA as an Act enacted to improve framework on the spatial planning and land use management in South Africa and provide framework for policies principles and standards for spatial development planning and land use management. Any land or space that a person or an organisation wants to vacant this legislation states that a permission has to be granted by the local municipality by means of buying the land to get ownership or lease an office space from authorised officials (De Fisser and Poswa, 2019:10). The key issues that all levels of government battle with regarding management of the land is prevention of illegal occupants, pollution and invasion of the land (National Council of Provinces, 2018:57). Municipalities have different agreements on how SMEs can make use of the land and the costs associated with it, therefore it is important to follow the right protocol.

The Rural Development and land reform White paper (2015) mentioned the following administration practices for SPLUMA.

- Application for land use and land use rights through use of schemes and land development procedures,

- Intergovernmental participation process for each type of land development and land use application,
- Procedures for site inspections, procedures for an amendment to a land development and land use application; and
- To determine the location where land use application must be submitted by the applicant.

2.5.4. National Water Act 36 of 1997 (NWA)

Couzens, Maduramuthu and Bellengere (2017:2) states that the environmental constraint that Southern African countries face is having insufficient water supply to meet the needs of all users. Water is an essential to companies especially in the manufacturing industry to ensure that the work environment is sanitary and employees are provided with clean water to drink. The NWA was established to ensure that the right of access to basic water supply and basic sanitation which is necessary in securing sufficient water and an environment is not harmful to human health and well-being (South African, Department of Trade and Industry 1997:10). This Act was established to ensure that anyone that requires water has access to it. Couzens *et al.*, (2017:3) add that when the Act was established users had virtually free and unrestricted access to water, however, now that is not the case. It is now expected that individuals or organisations must be permitted to use water and must provide payment. In accordance with the NWA policy, no user may obtain water for industrial use from any source other than the water service provider designated by the water service authority having control over the area in question, without the water service authority approval (South African, Department of Trade and Industry 1997:14). For establishments to have access to water supply an application has to be made to the right water service provider and after application has been approved, the establishment will have to provide payment. The Departments' responsibility to prepare and implement legislation and policy governing the water sector (South African Law Reform Commission, 2016:14).

2.5.5. Occupational Health and Safety (OHS) Act 85 of 1993

In the manufacturing sector environmental hazards such as fumes, poor ventilation and extreme temperatures may lead to occupational illnesses and injuries. Pilusa and Mogotlane (2018:1) comments that the occupational legislation was promulgated by government for implementation in work settings to protect the employees from potential occupational health risks. Employees working in the manufacturing industries are exposed to different chemicals and hazardous work environment. Bansah, Yalley and Dumakaor-Dupey (2016:8) adds that although manufacturing and mining industries are important, they can be a source of ill-health among employees due to unsafe working environments. The OHS act assist to ensure that employers provide safe working environment for their employees and monitors organisations' adherence to the OHS guidelines to be compliance with regulations.

2.6. ISO 14000

ISO 14000 is a system of environmental management which includes, specifications for achieving and upholding environmentally sound business standards. The overall business processes are considered, from product manufacturing to product performance and finally to product disposal. ISO 14000 was founded in 1947 to promote the international manufacturing business and communication standards (Farok and Searcy, 2015:483) for complying with environmental laws. The authors continue to define ISO 14000 as a specification standard which provides requirements that can be objectively audited for certification purposes and guidance standards, including guidance on the development and implementation of Environmental Management Systems (EMS). ISO 14000 is an internationally agreed term for the set of standards that have been written in response to the need for EMS. The ISO 14000 standards offer assurance to enterprises looking to build an environmental management system into their framework through the environmental management policies (Kiatkulthorn and Sundstedt, 2016:14). Vermeulen (2018:14) communicate that the EMS is a process whereby its focus is specifically on the interactions of organisations and their activities that may have an impact on the natural

environment. According to Kiatkulthorn and Sundstedt (2016:13), EMS is a structured framework designed for eliminating the organisations negative impacts on the environment and assist in integrating the environmental initiatives into company's operations. The EMS assist organisations in identifying, managing, monitoring and controlling the environmental issues in a holistic approach (Mas-Machuca and Marimon, 2018:120). In accordance with ISO 14000 standards, the fundamental standard that prescribes good practice in environmental management is ISO 14001. It can be said that the ISO 14000 guides SMEs in the manufacturing sector with methods of how to ensure compliance with environmental regulations.

2.7. Administration practices employed by SMEs in the manufacturing sector

Administration practices are defined as succession of acts and operations performed by administrative personnel upon request (Dragos, 2016:1). The administrative personnel are in charge of the administration of internal or external flow of information and the safeguarding of confidential corporate information (Hollis-Turner, 2017:89). Depending on the task that needs to be completed, several administration practises are adopted. Departments perform various administrative procedures as part of the day-to-day operation of the company. Finance, human resources and managerial administration departments all have specific practices that they follow to comply with established policies or regulations. The administration practices performed at different company departments may be linked to various environmental regulations to which the organisation has to follow (Suarez, 2016:42). In its broadest sense, administration can be summed up as the actions taken by businesses when they work together to achieve a common objective (Xabier, 2018). There are a few administration practices identified that are utilised by SMEs in the manufacturing sector.

2.7.1. Administration of communication

Communication is a key skill that administrative personnel should possess. Hargie (2016:16) mentions that organisations that have efficient communication procedures are more likely to have happy employees and be more successful in meeting their company goals. In this approach, communication helps an organisation's bottom line by improving employee job satisfaction and employee productivity (Pratiwi and Juniel, 2019:2). In the administration of communication, there are a number of requirements that must be followed to complete the necessary paperwork needed to perform an action or fulfil an obligation (Lubis and Aslami, 2022:65). There are different forms of communication tools that are used in organisations such as, letter correspondence, emailing and telephonic communication.

2.7.1.1. Letter correspondence

A letter is a form of written communication that consists of various written statements that are sent to the recipient conveying some data or information (Cortini, Galanti and Barattucci, 2019:1). Business executives are required to write numerous letters for a wide range of company enquiries, purchase orders, money collection, complaints, and modifications, as well as for keeping good business relationships with other companies (Insley, 2016:293). Writing must be practical, factual, precise, compelling, and clear in order to be effective (Pratiwi and Juniel, 2019:1). Businesses often utilise letters to communicate with their customers and other stakeholders. The writing and mailing of business letters are done for a number of purposes. For companies to communicate with their clients or business partners, they frequently create sales letters, business proposals, and invites to professional gatherings (Butt, 2021). The most affordable and comprehensive method of communication used globally is the business letter. Furthermore, business letters are now more well-known and widely accepted due to the way they are formatted and written.

These are the common known type of letters that are written in a company (Insley, 2016:297):

- Sales promotion letter – aimed at generating interest in a service or product. SMEs use this type of letter to promote the product they are manufacturing.
- Letter of instructions – letter describing a process that the recipient of the letter should follow.
- Letter of transmittal (cover letters) – letter to be sent all together with reports and other documentation.
- Letter of recommendations – letter written to friends, co-workers, or former colleagues outlining the reasons for endorsing a candidate for a position.
- General business letters – includes explaining the status of a project, asking for assistance, buying supplies or equipment, confirming the dates and times of meetings.
- Complaint letters – written to express dissatisfaction with unsatisfactory service or faulty products and to demand rectification.

2.7.1.2. Emailing communication

Within enterprises, email is the most used type of computer-mediated communication (Derks and Bakker, 2010). In fact, the experience of using e-mail has taken on a new dimension because of the growing use of mobile devices in businesses (Russell, 2017:30). Since the primary function of an email is to transmit messages, a successful email is one in which the message sent and the message received are identical (Summerfield and Feemster, 2015:684). Confusion can be caused within a corporation because of poorly worded emails, and the inaccurate information may be communicated (Konuk, 2021:29). According to Vdovin (2020) these are following the benefits of using emails for communication in an organisation.

Benefits of communicating through email

- Email is a cost-free tool, once an organisation is online sending and receiving messages will not require any more expenses.

- Email is quick, sending a message is as simple as clicking a button once the sender is done writing it. An email is sent, delivered, and read almost instantly, especially when an email system is connected into the network.
- Email is paperless and therefore more beneficial to the environment. Not only can SMEs cut expenses, but they can also lessen the harm that paper usage causes to the environment.
- Email is accessible from anywhere, an individual can access their inbox and read their messages regardless of whether they are in the office or on the field.

2.7.1.3. Telephonic communication

One of the most important methods of communication within the firm is telephone communication. Telephone use is one of the most popular ways to materialise both internal and external communications, even though it is currently being substituted by other communication methods like email (Preston and Moore, 2019:1529). The telephone is still the most widely used method for oral communication. Despite the distance, the telephone connects individuals together and improves communication wherever a person is and regardless of the location (Alhadlaq, 2016:960). Individuals throughout the organisation can connect via teleconferencing calls and share information for a fraction of the expense of travel and meeting space (Balbi and Berth, 2019:109). Participants can join a virtual conference room and communicate with the moderator and other participants by dialling or using a toll-free number and access code. Information as well as instructions can therefore be shared quickly and can reach numerous individuals at once.

2.7.2. Compiling of reports

Initiatives to create voluntary reporting standards to guide companies in the management and compiling of reports were formed in response to the development of independent social and environmental reporting practices (Kilic and Kuzey, 2018:306). Organisations are being held increasingly accountable for their impact on society and the environment, as evidenced by the increase in

regulations, policies and sanctions in the sector (Supratiwi, Agustia, Dianawati and Panggabean, 2022:11). According to Dissanayake, Tilt and Xydias-Lobo (2016:169) shareholders look for evidence of a sound business strategy and effective risk management reports and employees want to work for companies that clearly acknowledges their social and environmental obligations. Therefore, the adoption of corporate integrated reporting has increased as a result of all of these factors. An integrated reporting framework provides a chance to highlight the connections between the financial, social, and environmental elements of corporate performance in an effort to provide a more comprehensive reporting style (Kilic and Kuzey, 2018:308).

Written records offer a record of a correspondence, which is essential in circumstances where legal issues could surface (Hoque, 2017:242). Pratiwi and Juniel, (2019:1) insists that in business, every document irrespective of the size represents the organisation, as business choices are recorded in writing. Reports communicate what the organisation has been doing in terms of productivity and compliance (Karlsson and Rytberg, 2016:3). An effective filing system is necessary because the reports that have been generated must be kept on file as proof that the organisations are operating efficiently and complying with environmental regulations.

2.7.3. Filing system

The efficient operation of every organisation, whether private or governmental, depends on an adequate file and document control system. A good filing system makes sure that documents and information are securely stored and preserved for future use (Ukpong and Adetunji, 2020:2809). Small enterprises are among the sites where efficient document control and filing are essential (Obeng-Amoako, 2016:25). The attainment of organisational goals in offices is facilitated by a good filing system. The filing and storage of data, whether it be in the form of paper documents, letters, invoices, or memos, or computerised electronic files, is sometimes seen as a daunting task in some offices (Putri and Azwar, 2022:3). However, a recent survey by Aaron, (2017) found that one out of every ten documents or files stored is lost for good due to poor and careless filing

techniques and practices. Therefore, a solid filing and indexing system, accompanied by experienced professionals skilled in document control and filing, is a valuable for businesses (Touray, 2021:5).

Putri and Azwar (2022:4) asserts that businesses should practise excellent file systems in order to:

- Facilitate efficient decision-making.
- Maintain consistency and integrity despite personnel changes.
- Facilitate record protection and preservation.
- Ensure affordable and effective record-keeping.
- Reduce the likelihood of misfiling and duplication.

2.7.4. Compiling of financial reports and bookkeeping

Lack of effective bookkeeping and accounting processes has an impact on how well a business makes decisions. Owusu, Assabil and Asare-Kyire (2015:85) adds that the lack of proper record keeping is the main cause of SMEs' failure to obtain financing to grow their businesses and enhance their financial performance. The ineffective bookkeeping has an impact on the application process for obtaining financial assistance to increase SMEs' long-term sustainability. For investors to assess past performance and evaluate future prospects, companies must consistently offer them with relevant and sufficient information (Dube, 2017:1). Businesses do this through the distribution of annual financial reports. The interaction between businesses and investors in the economy is facilitated by these financial reports in each case. There is a demand for brief reports that summarises the main financial factors affecting an organisation's performance and sustainability (Kilic and Kuzey, 2018:305, Villiers, 2014). Current reporting methods are frequently criticised for being overly lengthy and complicated while only paying attention to the financial aspects of a company's performance (Supratiwi *et al.*, 2022:5). In addition, financial reports from corporations are crucial to all other stakeholders who are concerned with how the business is conduct. Osadchy, Akhmetshin, Amirova and Bochkareva (2018: 339) concur that financial statements are the most

comprehensive, impartial, and accurate information source available today that can be used to develop an opinion about the assets and financial position of a business. It could also be concluded that SMEs' ability to survive is dependent on their capacity to adopt adequate bookkeeping, financial reporting, and management accounting practices.

2.7.5. Updating company policy documents

The company policy documents need to be updated as regulations are amended for SMEs to be compliant. Although regulations are revised, the modifications are typically not significant making it simple for small businesses to adapt to the amended requirements (Ghenta and Matei, 2018:297). Administrative creativity is determined by a combination of organisational qualities and administrative supervisor management abilities such as, the characteristics of impartiality, objectivity, justice, ability to plan ahead, and appropriate task allocation (Yossef and Rakha, 2017:114, Scott and Bruce (2015). Managers have the authority to order policy documents at the company to be revised. Managers provide administrative staff with guidelines on how they should revise company policy documents, after which the organisation can implement those amended policy documents into practice. These administration processes do not, however, happen on their own. For company administration to be successful, they need trained personnel in this area (Ukpong and Adetunji, 2020:2809).

2.7.6. Organising training

An employee must receive the necessary training to perform the duties that have been allocated to them effectively. Thye and Mei (2014:252) insists that for any organisation to have efficient filing administration, proper documentation circulation and regulatory compliance, it is necessary to train staff in information management abilities. Karlsson and Rytberg (2016:3) points out that organisations are employing more graduates to fill positions within companies as administrators, managers, and specialists, due to their academic training to perform their jobs in accordance with certain standards, in which these employees serve as the bearers of standards and ideas. However, the academic training and work experience are not the same and therefore the administering

of training to employees is still required. The administration of training allows the company to have workforce who are knowledgeable with the administrative processes of the business, ensuring for the company's smooth operation.

2.8. Relationship between administration practices and environmental regulation compliance

There is an increasing external pressure on businesses to lessen their adverse environmental impact and contribute to sustainable value creation, such as value that will benefit the environment and organisations beyond company boundaries (Schaltegger, Horisch and Freeman, 2019:193). It is fundamental to have a good understanding about the processes on environmental policies to facilitate conditions under which effective environmental management approach can be successfully enacted (Kulin and Seva, 2019:111). Business practices are essential to a company's sustainable development because they can both directly and indirectly create environmental degradation (Rode, Heinz, Cornelissen and Le Menestrel, 2021:1). The most effective environmental management approaches are those that administration can use to reduce their direct and indirect environmental impacts. According to Andersson, Svensson, Molina-Castillo, Otero-Neira, Lindgren, Karlsson and Laurell (2022:1159), direct environmental aspects comprises activities, products and service that are directly under the jurisdiction of the public administration, such as the municipality. The above-mentioned authors further stated that the municipal administration operations that are not entirely within its complete control but has some degree of influence over, are related to indirect environmental factors. The effective environmental management approaches include making office buildings more environmentally friendly, reducing the effects of planned meetings and activities, encouraging sustainable business travel, or implementing green public procurement (Cranfora, Antonopoulos, Dri, Gaudillat and Schonberger, 2019:7). It can be concluded that effective management of environment requires administration practises to facilitate the implementation of environmental regulatory compliance.

2.9. Role of governance for improved environmental compliance of SMEs

The concept of governance refers to a function of public administration which uses managerial, political, and legal theories and processes to carry out legislative, executive, and judicial mandates for the provision of regulatory and service functions for the society at large or for some of its segments (Asongu and Odhiambo, 2021:445). A good environmental regulation and policy framework that ensures compliance and execution foster good governance, and compliance is possible when good governance prospers. Governance does not only include selecting, monitoring and replacing the government, but also encompasses the ability to formulate and implement sound policies effectively by the government (Gok and Sodhi, 2021:32996). The authors state that the role of environmental governance assist governments with obtaining environmental information for decision making and advancing national and regional implementation of environmental regulations to ensure compliance. Therefore, environmental governance should uphold principles like openness, accountability, public involvement in decision-making, and freedom of association. According to Horne, Strengers and Stempel (2016:112), these are principles that are essential to practice and uphold substantive environmental law because they guarantee that SMEs are informed about and participate in the aforementioned decision-making processes and are able to fight for environmental protection. Good governance relies on how the decision making is executed. Regulation was thought to be a two-part process that includes the government as a regulator and business as the regulated community and the government regulations may take a direct or indirect approach when it comes to the regulated community (Smit, 2020:10).

According to Theil (2019:108) in the South African context, section 24 of the Constitution, which addresses environmental rights, provides the most explicit mandate for environmental governance. Section 24 stipulates that:

Everyone has the right –

- a) To an environment that is not harmful to their health or well-being.
- b) To have the environment protected, for the benefit of present and future generations, through reasonable legislative and other measures that –
 - I. Prevent pollution and ecological degradation.
 - II. Promote conservation.
 - III. Secure ecologically sustainable development and use of natural resources while promoting justifiable economic and social development.

Theil (2019:109) continue to state that while subsection (a) has general application, subsection (b) requires the state to take specific actions in order to implement the assurance stated in the first part of the section. Furthermore, the state is required by subsection (b) to promote sustainable development by, among other things, (i) protecting the environment for the benefit of current and future generations, and (ii) doing so by adopting actions that "guarantee ecologically sustainable development".

2.10. Factors affecting environmental compliance of SMEs

Leboea (2017:1) established that SMEs face a number of difficulties, including difficulty obtaining financing or credit to cover compliance costs, poor infrastructure that makes it difficult to comply with environmental regulations. Furthermore, an SME workforce that is not sufficiently educated means they are likely unaware of the administrative practices required to be compliance with environmental regulations.

2.10.1. Internal factors affecting environmental noncompliance

This section covers the internal factors that affect noncompliance of SME to environmental regulations.

2.10.1.1. Access to finance and credit

A high number of SMEs are not able to meet their set business goals and require financial assistance and resources from stakeholders whether internal or external (Rungani and Potgieter, 2018:1). Acquiring the finances may involve

administration processes like application for finance and undergoing screening processes, where in the end the application may be declined. Due to the lack of access to funding from South African banks because they view SMEs as having a high risk level and weak expected return (Rahman *et al.*, 2016:127), businesses avoid paying compliance expenses resulting to environmental noncompliance. Compliance costs refer to the expenses associated to conforming with the government regulations, which includes planning and administration (Nanziri and Wamalwa, 2021:452). The compliance costs may also affect the company profits which could result in the organisations slow progress to production. Having little access to finance does not improve SMEs growth but delays it, which decreases the chances of the companies to survive (Leboea, 2017:1). The success of any company is usually measured by its financial performance or stability. According to Wolmarans and Meintjies (2015:89) one of the skill sets needed by managers and employees to contribute to the success of SMEs is financial management to better manage the company finances. The authors went on to state that SMEs must be managed well from a financial management perspective in order to survive, however it is unclear which financial management strategy is more crucial to the success of the SME. A more effective financial management strategy will guarantee that SMEs are informed about the administration practices needed for paying compliance costs to comply with environmental regulations.

2.10.1.2. An inadequately educated workforce

For a business to be successfully operational the workforce should possess the set of skills and knowledge required to make a success of a company. Rahman *et al.*, (2016:127) adds that for continued growth of SMEs more managerial and administrative competencies are required. The lack of skills development, knowledge and competencies among employees in the company lead to the company being unsuccessful. The inadequately educated workforce may not be aware of environmental regulations they have to comply with (Smith, Ikoma and Baker, 2016:2) and the necessary administration practices they would have to execute which then leads to noncompliance that results to the unsuccessful running of the enterprise.

2.10.1.3. Poor infrastructure

According to Obokoh and Goldman (2016:2) the SME sector that is most affected by the poor infrastructure provision is the manufacturing sector. Leboea (2017:74) defines infrastructure as the physical and organisational structure that is required for the operation of an enterprise or the service and facilities. The challenge of poor infrastructure that some SMEs face is already a violation to the Occupational Health and Safety (OHS) Act 85 of 1993. The OHS Act speaks of ensuring the efficiency of safety in the work environment (South African Government gazette on Occupational Health and Safety Act, 1993:2) and experiencing poor infrastructure causes a major constraint for SMEs development. Dealing with poor infrastructure can limit the company operations which then restricts employees to carry out particular tasks assigned that will ensure compliance (Gaal, 2017:49). Infrastructure plays a role in the development of the company, the change in the quality of the infrastructure impacts the production processes and performance of an organisation (Obokoh and Goldman, 2016:1). Poor working conditions limit the amount of work you can complete which leaves other jobs undone and eventually resulting in regulatory noncompliance.

2.10.2. External factors affecting environmental noncompliance

This portion discusses some of the external factors contributing to the noncompliance of environmental regulations by SMEs.

2.10.2.1. Regulatory Issues

In South Africa there are numerous laws (as discussed in 2.5), policies and acts that govern how an organisation should operate in order to be in compliance and on the right side of the law. Sithram and Hoque (2016:278) mentions that the success of SMEs is threatened by over-regulation, and the regulations that governs SMEs are complicated and conflicting. The published legislations or policies are sometimes not clear on the requirements for compliance and the consequences of noncompliance. Sithram and Hoque (2016:278) also mentioned that some SMEs do not comply to regulations as they perceive some

to be time consuming and expensive, some SMEs do not understand the laws that governs them which makes it difficult to be compliant.

2.10.2.2. Macro-economic factors

According to Sherman (2019) high interest rate discourages consumers from spending and since businesses cannot control the economy, understanding it can help an establishment to recognise any threats and opportunities as they arise. Sithram and Hoque (2016:278) mentions that a study done by Van Eeden, Viviers and Venter, (2003) found that macro-economic are issues like interest rate and unemployment are the main factors that are negatively affecting success of SMEs in South African urban areas. As inflation results in the increase of expenses and reduces profits for SMEs. The macro-economic factor does not only affect SMEs but their customers also, as it increases cost of goods but decreases their income.

2.11. Theoretical Frameworks

2.11.1. Administrative Theory

According to the Business Jargon (2015) the administrative theory was established by Henri Fayol (1841–1925) based on the concept of departmentalisation, which means there are different activities that have to be performed in achieving common purpose of the organisation, that is then categorised onto different groups or departments. The administrative theory emphasises on improving the efficiency of management first so that the processes can be standardised and then moves to the operational level where the individual workers are made to learn the changes and implement those in their routine jobs. The administrative theory requires that each individual in an organisation must be aware of the administrative functions they must complete in order to achieve a specific objective. Henri Fayol identified five functions that managers and administrative personnel use to accomplish their administrative duties which are planning, organising, commanding, coordinating and controlling. The administrative theory five function can assist companies with regulatory compliance.

- **Planning**

Planning consists of creating a plan of action that outlines the activities that must be completed in order to achieve a goal (Boateng, Amponsah, Akafo and Yamoah, 2015:1). The planning process is essential for businesses to be compliant since it allows companies to determine the administrative practices that must be taken to complete a specific task.

- **Organising**

Organising entails the management of the information, authorisation, and resources that will be required to perform the duties given (Lloyd and Aho, 2020:111). As part of the organising process, administrative staff must acquire information about the techniques which can be implemented to finish a task or comply with regulations.

- **Commanding**

As part of commanding, management issues directives regarding who is responsible for carrying out what duties and how they should be carried out (Lloyd and Aho, 2020:131). The commanding stage of administrative theory includes an individual who occupies a position of power to assign employees with task which they have to perform in order for the business to achieve its objectives or comply with regulations.

- **Coordinating**

Coordinating entails determining the timing and order of duties to ensure proper synchronisation (Christensen, Laegreid and Laegreid, 2019: 239). This function includes executing the planning, organising, and commanding phases to ensure that the business achieves its objectives and complies with regulations.

- **Controlling**

Controlling involves management assuming control and checks if tasks are completed to ensure compliance and smooth operation of an organisation (Lloyd

and Aho, 2020:145). The controlling step, which begins after a work is finished, enables the person in charge to confirm whether it was executed correctly and that it complied with all compliance requirements.

2.11.2. Theory of Regulatory Compliance

Fiene (2016:1) explains that the Theory of Regulatory Compliance (TRC) deals with the importance and significance of complying with rules or regulations, and the significance of TRC is the emphases it has on selecting the rules and the nature of these rules as being significantly predictive to the positive outcomes by being in compliance with the said rules. The TRC was first proposed in the 1970's when the relationship between compliance with rules was compared to best practices standards and outcome data. Jureta, Siena, Mylopoulos, Perini and Susi (2010:3) add that the TRC entails a relationship between the actions of the individuals in administration of the practices and a set of applicable legal norms, where the norms outline the requirements that must be met. The theory implies that complying with the regulations brings the best outcome for the organisation. The TRC also speaks of having potential various solutions depending on the goal that is to be reached, and all the solutions must be checked whether they comply with the legal norms. Jureta *et al.*, (2010:3) explains that the way TRC functions is that there should be a relationship between the specification of the proposed system and the set of pertinent regulations. The specification, in turn, defines the activities that must be fulfilled and communicates those work activities to officials who have been assigned those tasks, and they are to make sure they are satisfied with the set goal.

The two theories both correspond with the study as TRC emphases on complying with regulations and how it has a positive outcome for the business. The administrative theory provides procedures that support the operation of the business and can help when implementing TRC to ensure compliance.

2.12. Conclusion

Previous studies conducted by other researchers were used to discuss literature that was based on the objectives. The chapter discussed the main concepts employed by the study which were SMEs, administration practices and environmental compliance. The chapter also reviewed existing research on the administrative practices employed by SMEs that have an impact on their ability to comply with environmental regulations. The chapter also discussed the environmental regulations that SMEs in the manufacturing sector must follow and the associated administration procedures. In addition, the chapter also reviewed factors affecting noncompliance of SMEs with environmental regulations. The chapter was concluded with the discussion of the theoretical frameworks guiding the study. The next chapter will discuss research methods that were used for the study.

CHAPTER 3

RESEARCH METHODOLOGY

3.1. Introduction

The previous broadly discussed literature that is in line with the objectives, which were identified in chapter 1. This chapter discusses the various research methodologies and research designs that were employed to gather data from respondents. This chapter is designed to answer the research questions and achieve the objectives. Further, this chapter provides a discussion on the research methodologies as well as the purpose for using that methods. An explanation of how data gathered for the study will be analysed is provided. The chapter lastly provides a brief discussion on measuring validity, reliability and the ethical considerations.

3.2. Research methodology and research design

Goundar (2012:8) mentions that research methodology is defined as a systematic way to solve a problem and studying how research will be carried out. The aforesaid author went on to state that research methodology includes identifying techniques which can be used when conducting research. Research methodology clarifies how the research process will be executed and managed by researcher. Asenahabi (2019:77) defines research design as an overall plan of connecting research problems to the appropriate and achievable empirical research and provides specific direction for procedures in research. The research design provides for a broad assumption to detailed methods which includes data collection, validity and reliability, data analysis and interpretation. The purpose of the research design is to provide a structure of the research process leading to the validation of a phenomenon as a researchable problem (Creswell and Creswell, 2018:49). For the research design to address the research problem in a logical manner, the study adopted the quantitative research approach and used the descriptive and correlation research design.

Figure 3.1 illustrate which objective of the study each research designs helped to address.

3.2.1. Quantitative research approach

This study used the quantitative research approach to gather data that was converted to statistical results. Adedoyin (2020:1) defined quantitative research approach as an organised inquiry about a phenomenon through the collection of numerical data and execution on statistical or mathematical techniques. The purpose of adopting the quantitative research approach was based on the approach's ability to produce statistical results that was gathered from a large population which allows the researcher to make generalised findings.

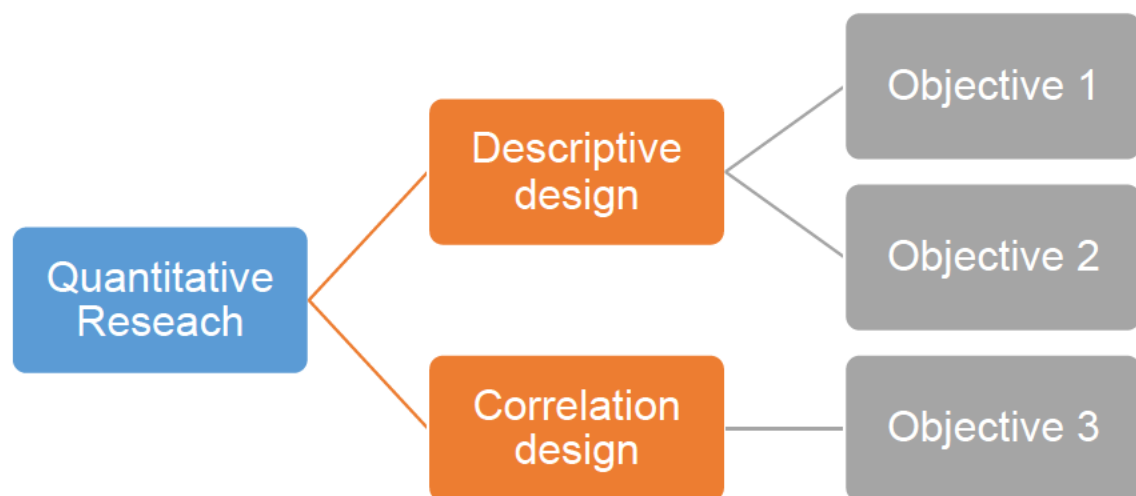
3.2.2. Descriptive research design

A descriptive research design is a style of study that seeks to gather data in order to systematically describe a subject, situation or population (Ansari, Rahim, Bhoje and Bhosale, 2022:1133). It is undoubtedly more helpful when responding to queries like what, when, where and how about a research problem rather than the why queries. Although, qualitative data is occasionally employed for descriptive purposes, quantitative data is primarily used in descriptive research designs (Atmowardoyo, 2018:198). Arnold (2019:86) adds that it is imperative to emphasise that the researcher through descriptive research makes not controls or modifications when using the descriptive technique, the variables are merely identified, monitored and evaluated instead. The information gathered from descriptive research serves as a foundation for further study since it helps in gaining a thorough understanding of the research topic in order for it to be answered effectively. Objectives one and two of the study were addressed using a descriptive research design as the study aimed to analyse and discuss the administration practices and environmental regulations employed by SMEs in the manufacturing sector. .

3.2.3. Correlation research design

Asenahabi (2019:81) state that a correlation research is a type of quantitative research design in which the researcher uses correlational statistics to quantify and describe the degree of relationship between variables. The aim of correlation research design is to find variables that have a particular kind of relationship that results in a change in one leading to a particular change in the other (Ansari *et al.*, 2022:1134). According to (Lillykutty and Samson, 2018:20574) there are three categories of correlation research positive, negative and no correlation. The first is positive correlation which is a technique that uses two mathematically coherent variables, in which a change in one variable causes a corresponding change in the other. The second study technique known as negative correlation research involves two statistically opposite variables, where a rise in one variety results in an effect or a drop in the other variability. Lastly, the zero or no correlation research uses two variables that are not really statistically related to each other. The conversion of one of the variables might not result in a corresponding or obvious change in the other variables. Objective three of the study adopted the correlation research design, to establish a relationship between administration practices utilised by SMEs in the manufacturing sector and factors affecting environmental regulation compliance.

Figure 3.1. Research designs linked to objectives of study



3.3. Target population

According to Majid (2018:3), the population of the study is a collection of participants, subjects, individuals, groups, organisations, human products, and events that fit with predetermined research requirements and specifications. The target population are SMEs in the manufacturing sector within the Msunduzi Municipal boundary and managers and administrative personnel were sampled as participants. The reason for choosing to use both managers and administrative personnel is to avoid getting bias responses. The response bias describes the tendency for responses to be altered in order to conform to contextual demands and offer socially desirable responses (Wetzel, Bohnke and Brown, 2016:2). As a result, managers may be biased in their responses and choose to endorse their company to appear compliant, while administrative staff may not be as biased. The other reason for choosing both managers and administrative personnel was that both may have had a chance of enforcing administration practices that comply with the environmental regulations. The Small Enterprise Development Agency (SEDA) database and the Msunduzi Municipality database were both used as the sources of data to identify 460 SMEs in the manufacturing sector. Within the 460 SMEs half were managers and the other half were administrative personnel, therefore the sample for managers and administrative personnel was 230.

3.4. Sampling method

Sampling is often necessary as it is not always easy to collect data from every unit of the population. Sampling includes the selection of participants whether an individual or groups, on the account of their representative characteristics and qualities to make inferences on the larger population (Showkat and Parveen, 2017). Sampling makes the research study to be more precise. Sampling refers to the process of selecting a sufficient number of participants from the entire population, and the sample then assists with the generalisation (Mchunu, 2019:39; Sekaran and Bougie, 2013). Probability sampling method was employed to draw a representative sample and statistical reference.

3.4.1. Probability sampling

With probability sampling every participant in the population has an equal chance of being selected. According to Mohohoma (2017:40), the probability sampling method is based on the random selection of respondents and is defined as a likelihood where a member or element from a population being selected is known. Probability sampling techniques allows a researcher to choose samples from a large population (Datta, 2018:1) and breakdown the actual required respondents for the study. In addition, probability sampling has the greatest freedom from bias (Taherdoost, 2016:20). The respondents were randomly selected from adopting the stratified sampling technique to provide members with an equal opportunity to be selected (Datta, 2018:3).

3.4.2. Stratified sampling

The stratified sampling technique allowed for the population to be divided into heterogeneous subpopulations called strata based on whether they were managers or administrative personnel. Alvi (2016) states that the heterogeneous population provides a representative sample, as it captures the diversity of the population. The sample was further drawn from each stratum randomly to allow for better representative sample. This sampling technique was adopted as it has a higher statistical precision and has better coverage of the population compared to other sampling techniques (Taherdoost, 2016:21). Table 3.1 presents how the subpopulation was divided to get the sample size.

Table 3.1: Sample divided into strata

Subpopulation	Strata
Administrative Personnel	115
Managers	115
Total	230

Section 3.5 shows how the sample size was calculated.

3.5. Sample size

There are factors that have to be considered when estimating the sample size, research approach and population (Memon *et al.*, 2020:3). According to Konietzschke, Schwab and Pauly (2021:687) a bigger sample size increases the chance of a strong and especially accurate data analysis. The sample size was based on 90% confidence level with 50% proportion of the target population and a 5% acceptable margin error. The following formula was used to determine the sample size: $S = (Z^2 * p (1 - p) / e^2) / 1 + (Z^2 * p (1 - p) / e^2 N)$, where S= Sample size, N = Population and e= Margin error. The sample size was 115 managers and 115 administrative personnel making a total of 230 combined.

3.6. Data collection

Data collection is the process of gathering and measuring information on variables of interest in an established systematic fashion that enables a person to test hypotheses, answer research questions and evaluate results (Kabir, 2016:202). Data collection process plays a crucial role in gathering data for the statistical analysis. The different methods used for data collection falls into two categories, which are primary and secondary data (Taherdoost, 2021:12). The literature in chapter 2 provided secondary data which enhanced the researcher's understanding on the administration practices, environmental regulations and environmental compliance. The primary data was achieved through closed ended questionnaire (attached as appendix A). The researcher used the questionnaire as it was an appropriate instrument since there was a large, targeted sample that was to be reached and using the questionnaire made the process less time consuming.

3.6.1. Questionnaire

A questionnaire is a research instrument consisting of a series of questions for the purpose of gathering data from respondents. Roopa and Rani (2012:273) defined questionnaire as a simple list of printed questions that are completed by or for a respondent to provide opinion. The questionnaire had three sections,

where section A had demographic questions and section B and C questions were structured to answer the research questions. To ensure that the instrument provided the study with efficient information required by the researcher, the instrument was first piloted.

3.6.2. Pilot study

Devisakti and Ramayah (2019:150) defined the pilot study as a study conducted on a smaller scale or a trial to assure that the real study will be conducted successfully. Leon, Davis and Kraemer (2011:627) concurs that the purpose of conducting a pilot study is to establish the feasibility, reliability and validity of the instrument and address any problems that may occur with the research instrument that will be used in a larger scale study. The importance of the pilot study is to help identify if there are flaws or limitations in the question design which provides opportunity to be addressed before an actual study can be conducted (Majid, Othman, Mohamad, Lim and Yusof, 2017:1074). The pilot study was conducted with the same requirements as those of the targeted group which were administrative personnel and managers of SMEs in the manufacturing sector within the Msunduzi Municipal boundary. The pilot sample consisted of 5 administrative personnel and 2 managers and in total were 7 respondents from 2 different SMEs in the manufacturing sector within Msunduzi municipal boundary. The pilot study data indicated that further clarification and simplification of the research instrument questions was required to assure that data required for the actual study will be possible to acquire. Piloting the instrument also indicated that the instrument was well efficient and main data collecting thereafter followed.

3.6.3. Administration of questionnaire

The questionnaire was self-administered and was distributed personally by the researcher to respondents who had agreed to participate. The questionnaires were distributed and collected within a period of five months which was from October 2021 to February 2022. Questionnaires were collected from respondents to commence with the data analysis process.

3.7. Data analysis

Data analysis is the act of performing particular calculations and evaluations to gather useful information to validate data collected (Ibrahim, 2015:99). With the assistance of a statistician the statistical tool that was used to analyse the quantitative data was the Statistical Package for the Social Sciences (SPSS) software. The data analysed was represented in tables, graphs and pie charts. The tables, graphs and pie charts were interpreted for clear indication of the results and findings the graphs and pie charts represented. The analysis of responses to the closed ended questions and 5 point Likert scale questions contributed in providing answers to the research questions and meeting the objectives of the study that were previously identified in the first chapter.

3.8. Validity and reliability of the study

Surucu and Maslakci (2020:2696) defined validity as the degree to which a measuring instrument measures what it is intended to measure and measures how well the instrument performs its function. Taherdoost (2016:28) adds that validity provides a demonstration on how well the collected data measures the actual area being investigated or researched. The instrument was checked for validity through piloting the research instrument to get consistent measure and to cover most aspects of the concept being measured (Middleton, 2020). Piloting the research instrument indicated to the researcher that the information gathered answered the research questions set for the study. Reliability is defined as the ability to measure instrument to provide similar results when applied different times (Surucu and Maslakci, 2020:2707). A respondent's completion of a data collection instrument should have the similar results each time the instrument is given. Heale and Twycross (2015:66) concur by referring to reliability as the consistency of a measure. To test for the reliability of the instrument a McDonald Omega reliability technique was used.

3.9. Reliability test

The reliability test was conducted using McDonald Omega. McDonald Omega has the advantage to take to account the strength of association between values. Cronbach Alpha is commonly used to check reliability can be biased and inefficient as it was designed to look for internal consistency which is limiting (Trizano-Hermosilla and Alvarado, 2016:1). Zhang and Yuan (2015:3) mention that McDonald Omega coefficient takes missing and non-normal data into account when reliability testing is conducted. Furthermore, ignoring missing or non-normal data in the sample can lead to biased and less accurate estimate of coefficient. Table 3.2 shows the reliability results for McDonald Omega coefficient for the questionnaire section B and C to be above 0.7. The results indicate that the data collected is reliable. Ravinder and Saraswathi (2020:2944) state that the McDonald Omega reliability coefficient ranges between 0 and 1.

Table 3.2: Reliability for section B and C of the questionnaire

Reliability Statistics		
	McDonald Omega	N of items
Section B	0.702	8
Section C – Internal factors	0.772	5
Section C – External factors	0.785	4

3.10. Ethical considerations and confidentiality

It is essential to protect the participants of the study by applying appropriate ethical principles. The ethical considerations uncover the importance for the researcher to be fair and have humane treatment towards the selected participants (Shilumani, 2020:7). The ethical issues considered for were of confidentiality and transparency. Achieving the principle of confidentiality required the researcher to possess personal and professional attributes, such as honesty and respectfulness to respondents (Petrova, Dewig and Camilleri, 2015:3). The researcher applied for ethical clearance at the Faculty Research

Office and was granted the ethical clearance (appendix D) to commence the visitation of research sites. Respondents were informed of the aim of the study. A letter of information (appendix B) and consent form (appendix C) were issued to respondents to familiarise them with the purpose of the study. The respondents were not asked to disclose their identities therefore they remained anonymous to not harm them personally or professionally.

3.11. Conclusion

This chapter began by discussing the research methodology and research designs which indicated the approach that was appropriate for the type of study conducted. The sample of managers and administrative personnel was appropriate for the study since the study was about identifying the administration practices that the sample is working with on daily basis. Sampling provided a breakdown on how a large population can be narrowed down using sampling techniques and still have sufficient data to work with. Additionally, the chapter discussed the data collection process as well as the instrument that was used to gather data. The discussion on how the research instrument was piloted, shed some light on how validity and reliability of the study was ensured. An explanation on the data analysis process was briefly discussed which provided a clear picture on how the researcher got the statistical results appropriate for the study. The findings of the data analysed are discussed in the next chapter.

CHAPTER 4

RESULTS AND DISCUSSION

4.1. Introduction

Whilst chapter 3 focused on the methodology. This chapter presents results from the data collection process and the outcomes of the statistical analysis. Data was analysed and interpreted with the aim of addressing the research questions of the study. The statistical results presented were analysed using the latest Statistical Package for Social Sciences (SPSS) version 25. This chapter commences by discussing response rate and then presents biographical information which is then followed by data analysis according to the research objectives.

4.2. Response rate

Pedersen and Nielson (2016:229) stipulates that a high questionnaire response rate is crucial because it reduces issues about sample bias and strengthens the validity of the findings collected from the questionnaire. A total of 230 people participated and 215 fully completed questionnaires were returned to the researcher. As a result, the study had an excellent response rate of 93%. According to Harrison, Henderson, Alderdice and Quigley (2019:2) a questionnaire response rate of 50% or higher is considered excellent in most circumstances.

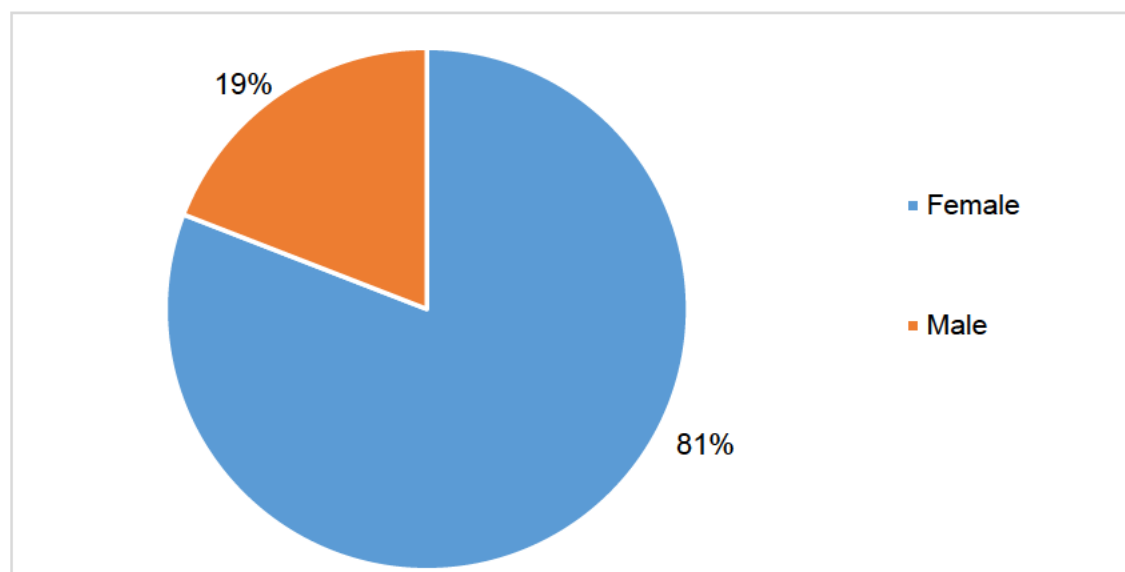
4.3. Biographical information of respondents

The questions in section A of the research instrument probed the background characteristics of the respondents who are involved in administrative tasks SMEs. The respondent's biographical information is analysed in terms of gender, ethnicity, age, highest qualification, occupation, and work experience.

4.3.1. Gender of respondents

Figure 4.1 shows that the sample was made up of 81% females and 19% males. The findings indicate that there were more females participating in the study than males. This shows that more females were easily accessible for the study due to the level of their occupation. Although manufacturing sectors are male dominated, women tend to occupy the office management positions (Van Antwerpen and Ferreira, 2020:364).

Figure 4.1: Gender of respondents



4.3.2. Ethnicity of respondents

More Africans participated, as illustrated in Table 4.1 where 68.8% were Africans, 13.5% were Coloureds, 10.7% were Indians, and 7% were Whites. The results show that more Africans participated in the study. According to Statistic South Africa (2011) African ethnic group in Msunduzi Municipal area make up 81% of the population, followed by Indians and Asians combined at 10%, Whites at 6% and Coloureds at 3%. Msunduzi Municipal area is dominated by African population, hence there were more Africans participating in the study than other races. Furthermore, it is mentioned by (Garza, Quinn, Li, Assini-Meytin, Casper, Fryer, Butler, Brown, Kim and Thomas, 2017: 57) that Africans, Indians and

Coloureds generally have a positive attitude towards research and are as willing to participate in research across different study types.

Table 4.1: Ethnicity of respondents

Ethnic groups	Number of respondents	%
African	148	68.8%
Coloured	29	13.5%
Indian	23	10.7%
White	15	7.0%
Total	215	100%

4.3.3. Age of respondents

Table 4.2 illustrates the age percentages of respondents where 46.5% were between 26 and 35 years of age, 41.9% were between 36 and 45 years. Further 8.3% of respondents were between 18 and 25 years of age, 3.3% were between 46 and 55 years. The results indicate that SMEs have a dominance of office based employees between the ages of 18 and 35 years, which accounts for 55% of the respondents who participated in this research. According to Sandberg, Kleist, Falk and Enthoven (2016:1245), age has an impact on study willingness for participation, with younger audiences being more receptive to taking surveys.

Table 4.2: Age of respondents

Age	Number of respondents	%
18 – 25 years	18	8.3%
26 – 35 years	100	46.5%
36 – 45 years	90	41.9%
46 – 55 years	7	3.3%
Total	215	100%

4.3.4. Highest qualification obtained

Table 4.3 shows that many respondents at 33% hold degree qualifications followed by 27.4% which hold a diploma/advance diploma and 21.4% which hold a national diploma. Furthermore, the results show 15.3% of the respondents hold a matric or grade 12 certificate while 1.9% hold honours degrees with only 1.0% of the respondents holding a higher certificate. The findings indicate that most SMEs are dominated by employees who hold degree qualification. Literature by Allen, Asmal, Borat, Hill, Monnakgotla, Oosthuizen and Rooney (2021:5) contradicts the finding by stating that, degree qualification holders in South Africa have a lower unemployment rate than the general population, and their rate is actually declining with time. However, the results were for SMEs in the manufacturing sector and therefore cannot be generalised or concluded that degree holders are the most employed throughout South Africa.

Table 4.3: Highest qualification obtained by respondents

Highest Qualification	Number of respondents	%
Matric/Grade 12	33	15.3%
Higher Certificate	2	1.0%
Diploma/ Advanced Diploma	59	27.4%
National Diploma	46	21.4%
Degree	71	33.0%
Honours Degree	4	1.9%
Total	215	100%

4.3.5. Occupation of respondents

Respondents were asked to disclose their occupation status. Table 4.4 shows that 46.0% hold positions as administration clerks, 40.5% of respondent chose other option as their occupation. The occupation listed as other consisted of occupations such as registry clerks, accounts manager, sales managers, operation manager, plant manager, quality manager, dispatch supervisor,

supervisors and interns. A further 7.9% of the respondents were assistant managers, 4.2% were in human resources and 1.4% were managers. The results indicate that SMEs are dominated by administration clerks which are one of the main focus of the study, as they have an obligation to enact administrative practices towards environmental compliance.

Table 4.4: Respondents occupations

Occupation	Number of respondents	%
Manager	3	1.4%
Assistant Manager	17	7.9%
Administration Clerk	99	46.0%
Human Resources	9	4.2%
Other	87	40.5%
Total	215	100%

4.3.6. Work Experience

In terms of work experience, Table 4.5 depicts that most of the respondents at 40.9% have 4 to 5 years of work experience, followed by 34.0% with 2 to 3 years and 13.5% with 6 to 7 years. In addition, 7.9% of the respondents have 0 to 1-year experience and 3.7% has 8 to 9 years of work experience. The results indicate that majority of employees working at SMEs have 4 to 5 years of experience, which indicates that employees have necessary expertise as very well experienced in occupations.

Table 4.5: Work experience of respondents

Work Experience	Number of respondents	%
0 - 1 year	17	7.9%
2 - 3 years	73	34.0%
4 - 5 years	88	40.9%
6 - 7 years	29	13.5%
8 - 9 years	8	3.7%
Total	215	100%

4.4 Data analysis according to the research objectives

Section B and C of the questionnaire addressed the research objectives. This section provides an analysis and discussion of findings according to the study's objectives.

4.4.1 Objective 1: To identify administration practices employed by SMEs in the manufacturing sector within the Msunduzi Municipal boundary, that can enhance environmental regulatory compliance.

Section B of the questionnaire probed the administration practices employed by SMEs to ensure compliance with environmental regulations. The section was designed to address the first research objective.

The results to the inquiry about whether environmental regulatory compliance is mandatory in SMEs under study are displayed in Table 4.6. The results indicate that 100% of respondents concur that complying with environmental regulations is compulsory. Aragon-Correa, Marcus and Vogel (2020:3) argue that mandatory compliance has been often criticised for being overly rigid, inefficient and harmful to firms' competitiveness. However, many scholars such as Aragon-Correa *et al.*, 2020, Davids, 2020 and Dwarika, 2015, have concluded that mandatory compliance has a powerful impact on the environmental performance of SMEs.

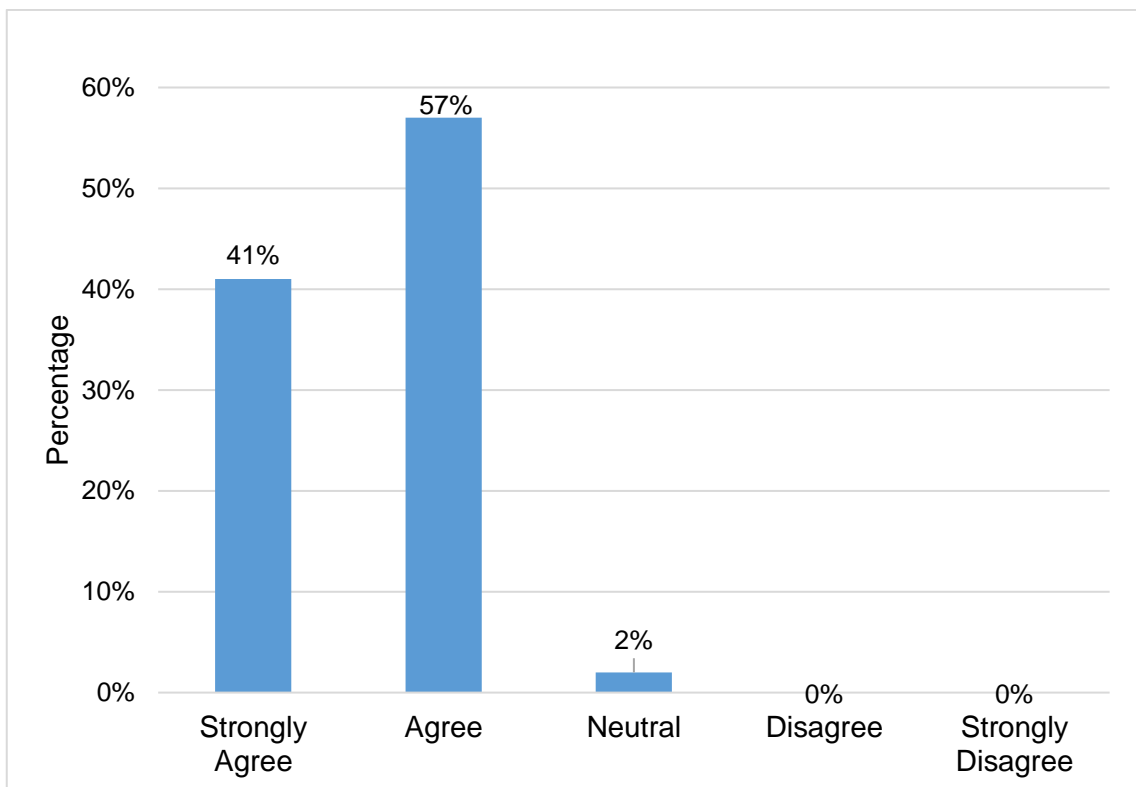
Table 4.6: Compulsory complying with environmental regulations

Response	Number of respondents	Percentage
Yes	215	100%
No	0	0%

4.4.1.1. Obtaining Operating License

The respondents were in agreement with the statement that obtaining a license to operate is a requirement for their organisation. This is reflected in the results shown in Figure 4.2, where 57% of the respondents agreed with the statement and 41% strongly agreed. Only 2% remained neutral with the response. Gongxeka (2020:34) indicate that the administration practice of applying to obtain an operating license has an impact on SMEs' chances of survival since without a license, a business is operating unlawfully, and as a result, results that obtaining a license is a requirement supports the literature.

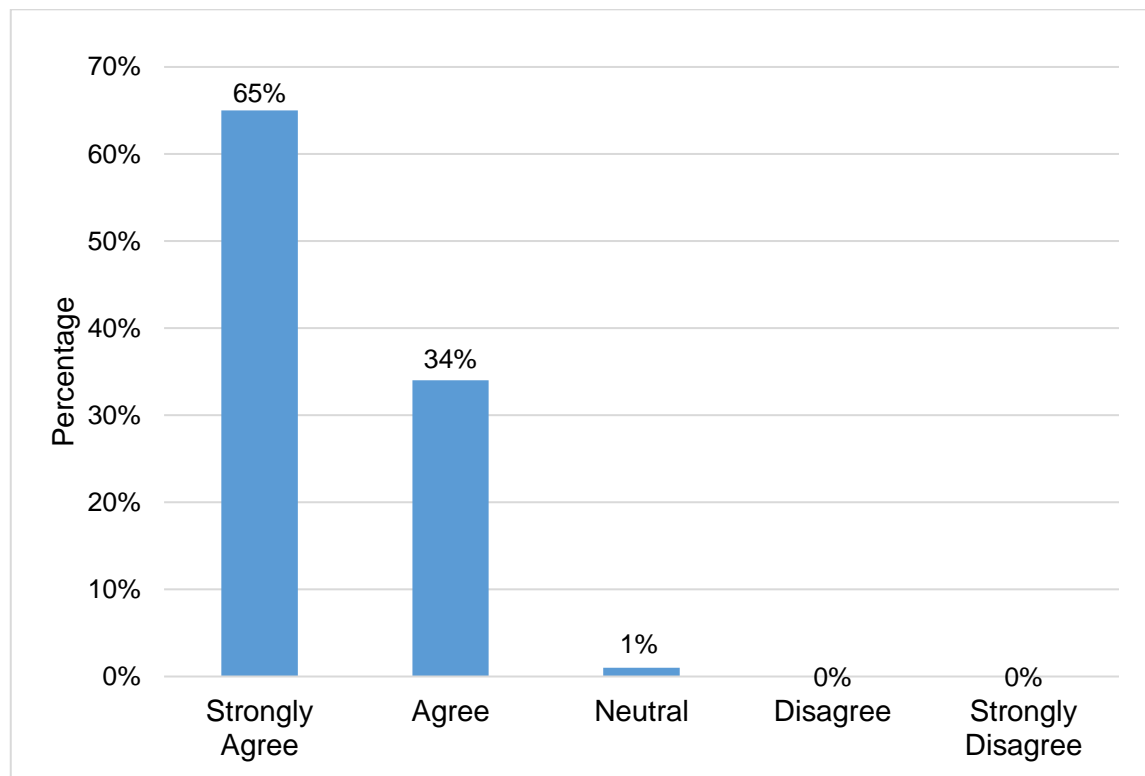
Figure 4.2: Obtaining an operating license is a requirement



4.4.1.2. Acquiring rights to utilise space or land

Figure 4.3 show that 65% of respondents strongly agreed that obtaining rights to utilise land or space for the organisation to operate is a requirement. Further 34% of respondents also agreed with the statement and only 1% of respondents were neutral in the response. The findings indicates that for SMEs to operate properly having rights to occupy land or space is essential. Akinyemi and Mushunje (2019:3) adds that getting access to the land or facility where business operate, is an important administrative practice because it not only gives the company legitimacy but also makes production easier by providing a workspace. In addition, the SPLUMA act discussed in chapter 2, stipulate that organisation have to be granted permission to utilise any land or space for operation from the local authority. The results confirm that SMEs are aware of the administration practice to implement to comply with the SPLUMA act.

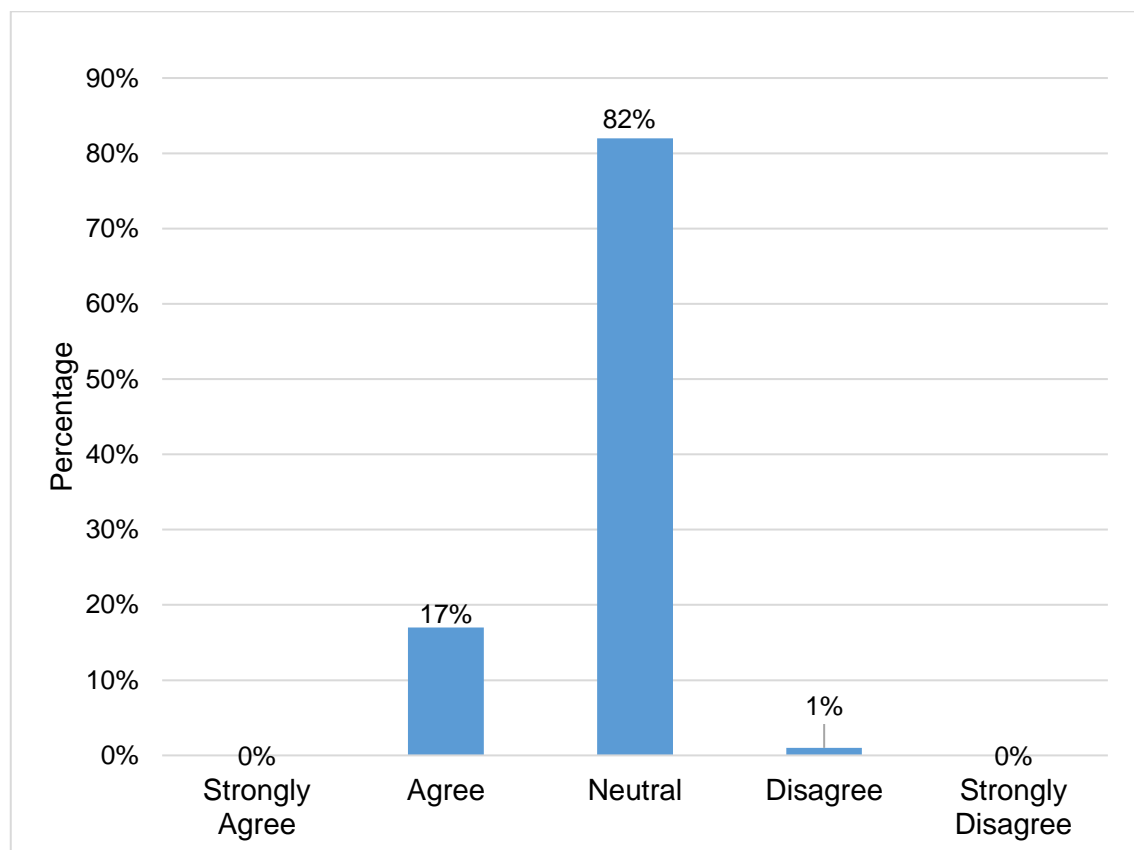
Figure 4.3: Obtaining rights to utilise land or space or operation is a requirement



4.4.1.3. Compiling and storing assessment reports

The analysis of whether organisations retain compliance assessment reports is reflected in Figure 4.4. The results show that 82% of the respondents had a neutral response, only 17% agreed with statement and 1% disagreed. The findings show that there is a disregard when it comes to organising and filing of documents. Obeng-Amoako (2016:25) states that poor management of documentation has been one of the major challenges faced by SMEs. The results are comparable to the literature that proper filing of documentation is an administration practice that may affect compliance to environmental regulations. Assessment reports provide evidence of whether SMEs met the environmental regulatory compliance standards or not. It would be challenging for SMEs to identify areas of improvement in terms of compliance due to lack of reports to refer to as a result of poor report storage.

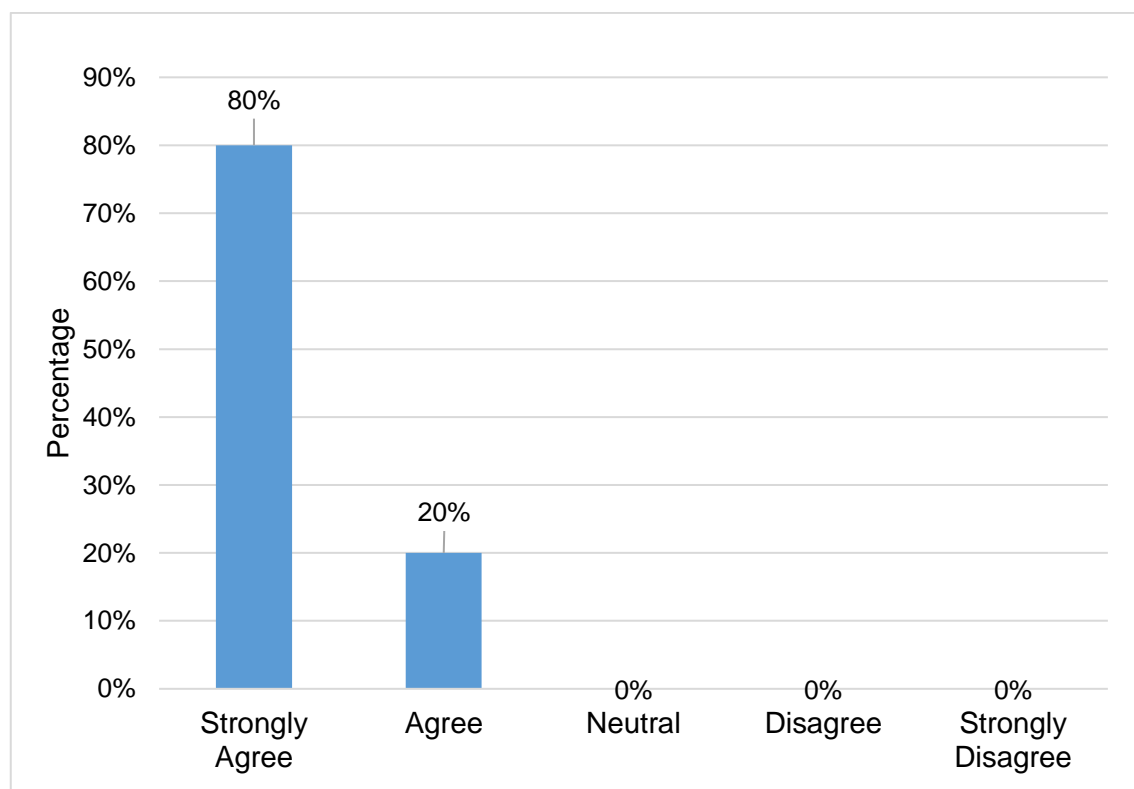
Figure 4.4: Organisation keeps compliance assessment reports



4.4.1.4. Managing filing system

Figure 4.5 show that 80% of respondents strongly agree that organisation maintains a filing system to manage records for daily basis, and 20% also agree. The results show that respondents agree it is essential to implement the administration practice of managing and maintaining a filing system for day-to-day management of records. According to Obeng-Amoako (2016:24) the efficiency and effectiveness of every organisation depends on the type of filing system and indexing that has been adopted. With proper filing and maintaining of records, organisations may easily identify areas that need to be addressed to be in compliance with environmental regulations.

Figure 4.5: Organisation maintains filing system for day to day management of records

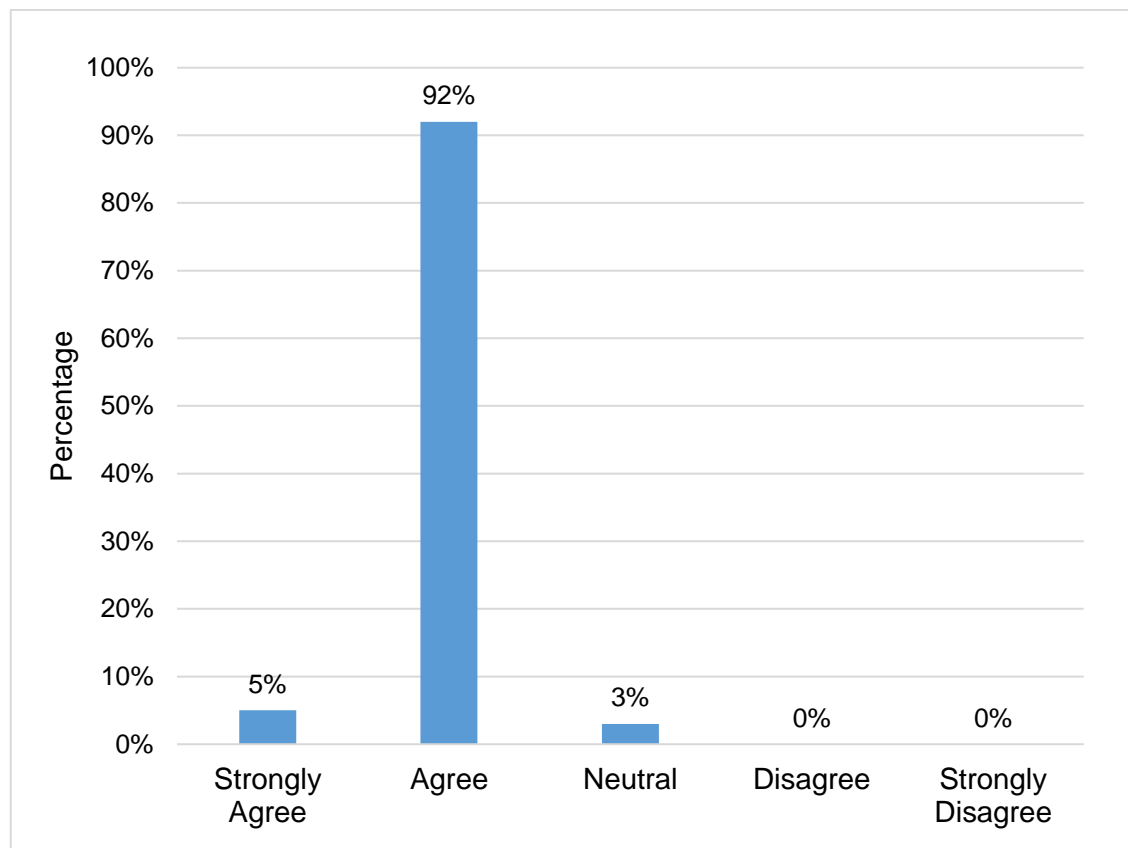


4.4.1.5. Communication at the workplace

The analysis of whether SMEs use effective communication to ensure that everyone is aware of what is expected of them and to enhance compliance is depicted in Figure 4.6. The results indicate 92% of the respondents agreed with

the statement, 5% strongly agreed and 3% remained neutral. The findings indicate that SMEs concur that the practice of effective communication which is essential to guaranteeing efficiency and compliance. According to Robertsson (2019:2), effective communication is one of the most important administrative skills to possess because it helps to convey the proper steps that must be taken for compliance.

Figure 4.6: Organisation practice good communication

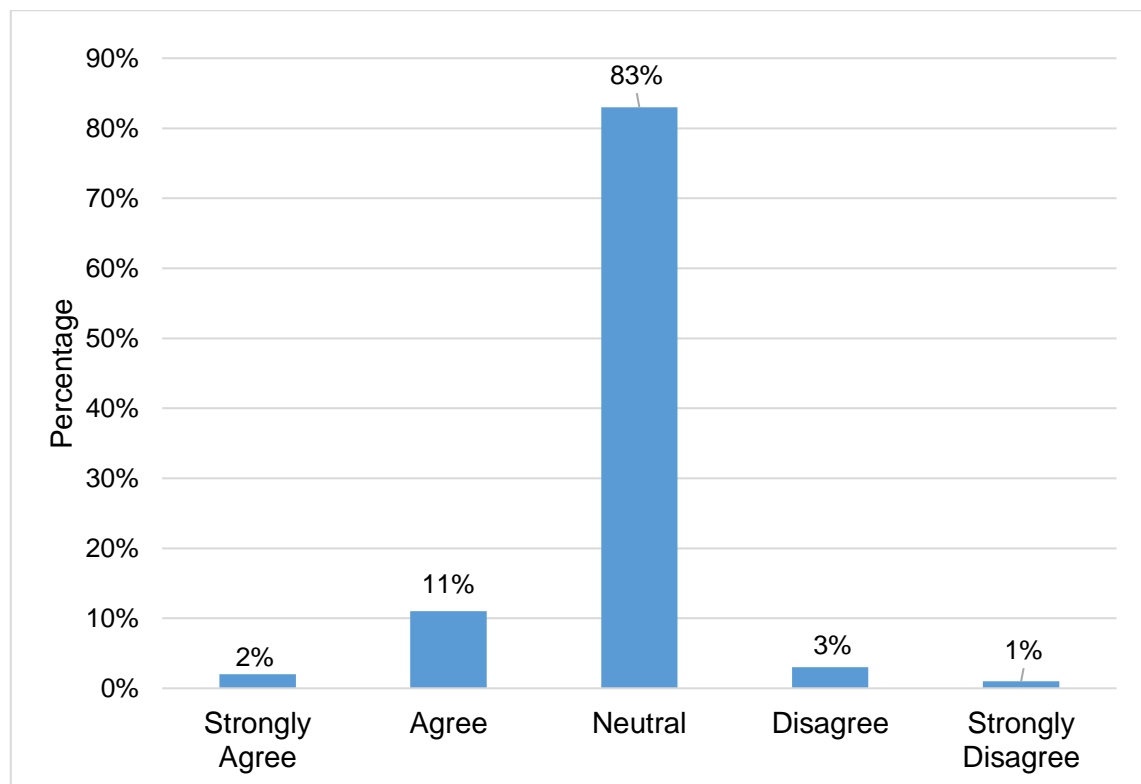


4.4.1.6. Training employees to ensure compliance

The question of whether employees in SMEs receive training to ensure adherence to environmental standards is shown in Figure 4.7. Results show that 83% of respondents were neutral in their response which means they neither agree nor disagree with the statement, 2% strongly agreed, 11% agreed, 3% disagreed and 1% strongly disagreed with the statement. Contrary to a widely held belief, organisations must recognise the value of training and developing their employees because improved capabilities, knowledge, and skills promote

employee performance (Rodriguez and Walters, 2017:206). As a result, employees that have received training are aware of the administration practices that have to be implemented to guarantee that environmental regulations are followed. One of the administrative theory functions of coordinating, will be more easily met with the administration of training. This function involves executing a plan to accomplish a goal, and training is provided to staff members to better equip them with the knowledge needed to comply with environmental regulations.

Figure 4.7: Employees are trained to ensure compliance with environmental regulations

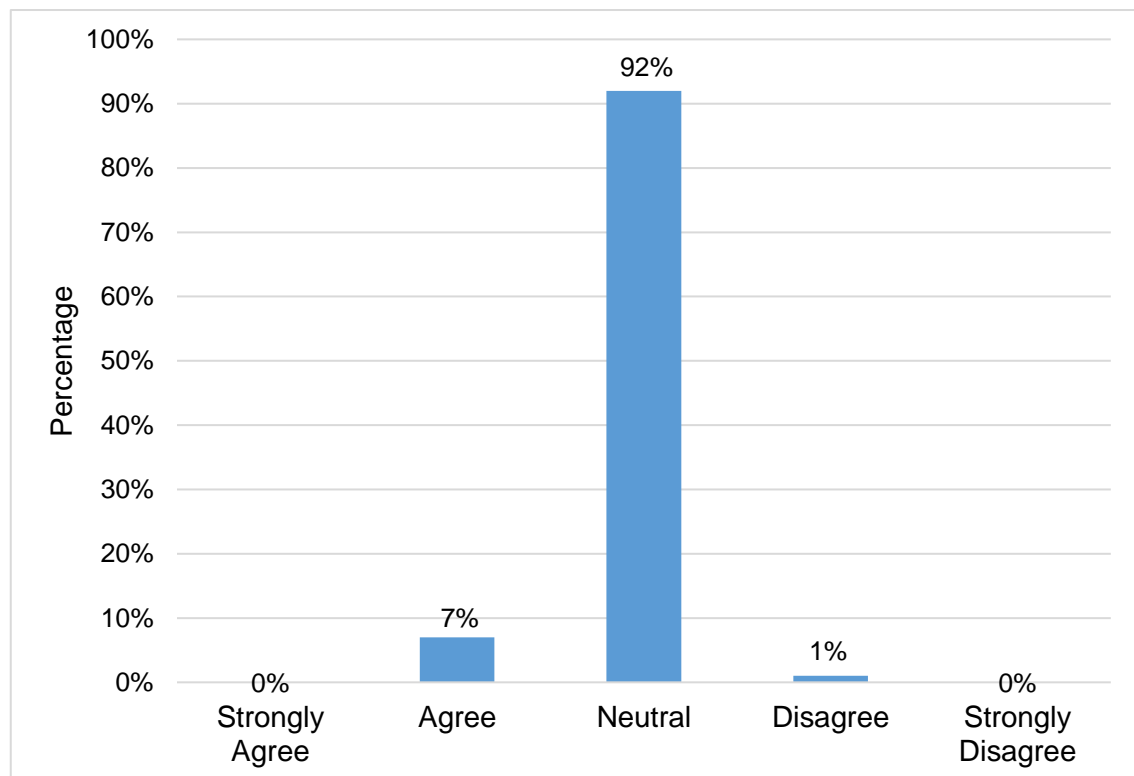


4.4.1.7. Equipment maintenance reports

In response to whether organisations conduct regular reports on the maintenance of equipment. Figure 4.8 presents that 92% of respondents neither agreed nor disagreed with the statement by choosing to remain neutral, while 7% agreed and 1% disagreed with the statement. The findings show that there is an uncertainty in the responses as respondents remained neutral. According to Lundgren, Bonkrantz and Skoogh (2021:144) equipment maintenance plays a

significant role in environmental compliance; however, it is difficult to measure the effects to the value of maintenance in the manufacturing sector. Keeping maintenance records is crucial for future reference, as the results of maintenance do not typically manifest right away which makes it challenging to confirm the advantages beforehand and justify maintenance spending. Pratiwi and Juniel (2019:1) asserts that company documentation irrespective of the size is crucial since business decisions are documented in writing.

Figure 4.8: Reports on the maintenance of equipment are conducted regularly

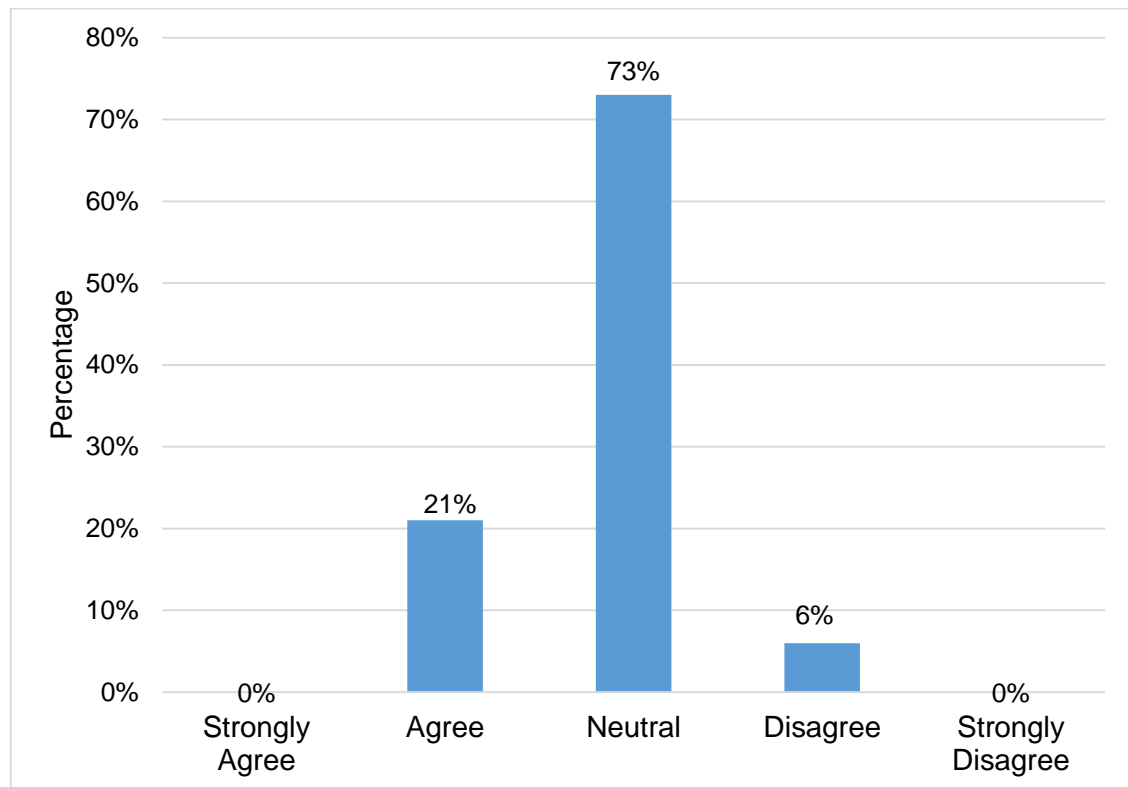


4.4.1.8. Green initiative projects

Figure 4.9 reveals that 73% of respondents chose to remain neutral on the statement concerning how organisations administer projects related to green initiatives to minimise pollutants. Additional 21% agreed with the statement and 6% disagreed. The results indicate that there is a gap with conducting the green initiative projects as the response was neither positive nor negative. Green concept administrations were created as tools to encourage people and businesses to comply with environmental regulations (Ghebrehiwet, 2019:6).

Mwanza and Mbohwa (2017:123) state that the recycling progress is slower in the absence of further legislative directives. As a result of the slow progress, it is difficult to comply with the law as it stands now regarding environmental protection.

Figure 4.9: Organisation administers projects related to green initiatives



4.4.2. Conclusion for objective 1

Based on the findings obtained from objective 1, it can be concluded that the administration practices identified can help enhance environmental compliance. Most respondent identified that obtaining an operating license is an administration practice that SMEs are required to adopt. The application process for obtaining rights to utilise space or land where the organisation operates was recognised as an essential administration procedure that SMEs are required to comply with. Furthermore, there was neutral responses regarding the SMEs compiling and storing compliance assessment reports which indicate uncertainty that there is compliance within the organisations. Many respondents agreed that the administration practice of managing and maintaining a filing system is crucial

for day-to-day records management. This is in opposition to the earlier finding of compiling and storing assessment reports with neutral responses. In addition, the respondents confirmed that effective communication at the workplace is essential to ensure that correct procedures are communicated. However, respondents neither accepted nor rejected the notion that there is administering of training for employees on environmental regulations. The neutral response regarding conducting reports on the maintenance of equipment being done regularly and administering green projects, indicates uncertainty and creates suspicion to noncompliance. It can be concluded that employees are not fully informed on what happens when SMEs are assessed to ensure compliance with environmental regulations.

4.4.3. Objective 2: To examine factors contributing to the environmental noncompliance of SMEs in the manufacturing sector within the Msunduzi Municipal boundary.

Section C of the questionnaire investigated the internal and external factors contributing to the environmental noncompliance of SMEs. The section was designed to address the second objective of the study.

4.4.3.1. Internal factors contributing to environmental noncompliance

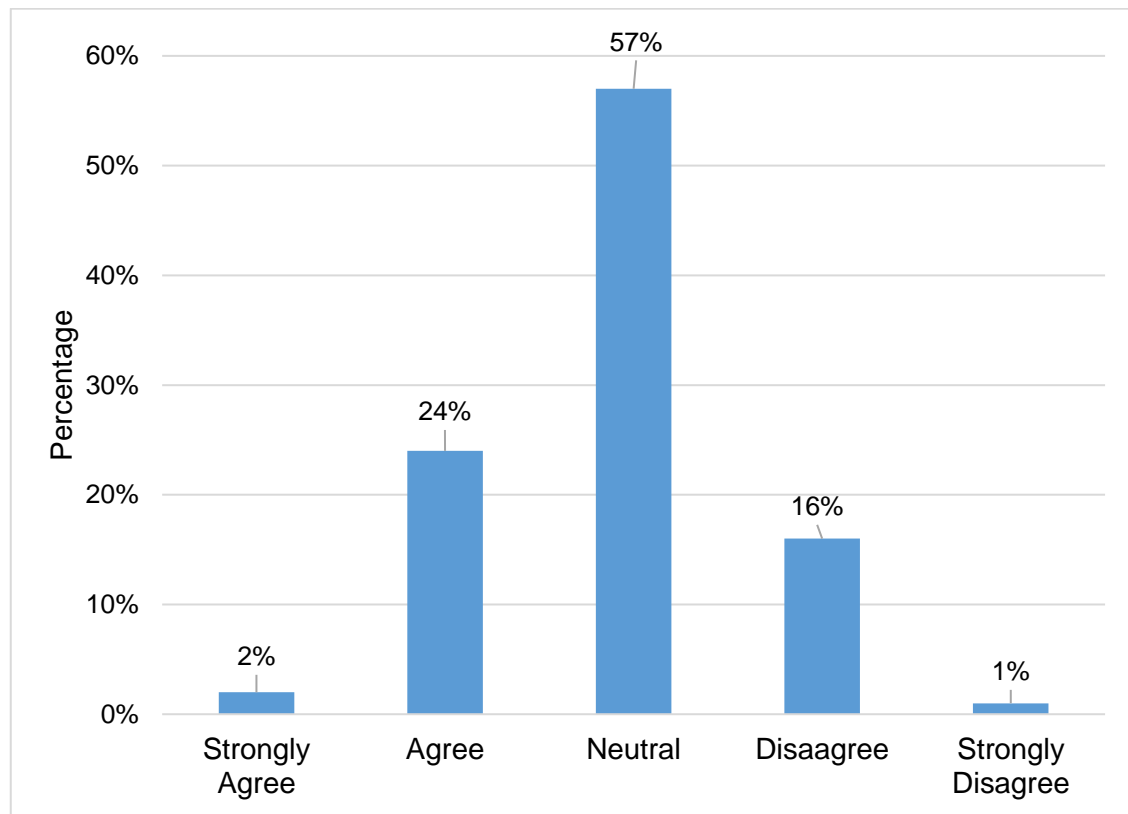
A number of statements concerning internal factors were listed in the questionnaire. Respondents were asked to read and then rate them on a scale of SA = strongly agree to SD = strongly disagree. The results are individually discussed below as follows:

4.4.3.1.1. Lack of employee training on environmental regulations

The respondents were questioned about whether employees in their organisations lacked knowledge of environmental regulations because they had not received adequate training. Figure 4.10 presents that 57% of respondents had a neutral response to the statement, 24% agreed and 16% disagreed with the statement. Further 2% strongly agreed with the statement and 1% strongly disagreed. The results indicate that employees have neither a positive nor a

negative response to whether their lack of knowledge derives from the lack of training by organisations. Some business believe comprehensive training is unnecessary and rely on new employees to pick up skills from experienced workers and supervisors while working (Pilusa and Mogotlane, 2018:4). This kind of training is frequently insufficient and causes issues for organisation when complying. Martinelli (2018) mentions that the lack of proper employee training can negatively affect performance of an organisation, team morale, turnover costs, compliance, and the organisations' ability to recruit and keep talented workers.

Figure 4.10: Employees are not trained on environmental regulations to comply with

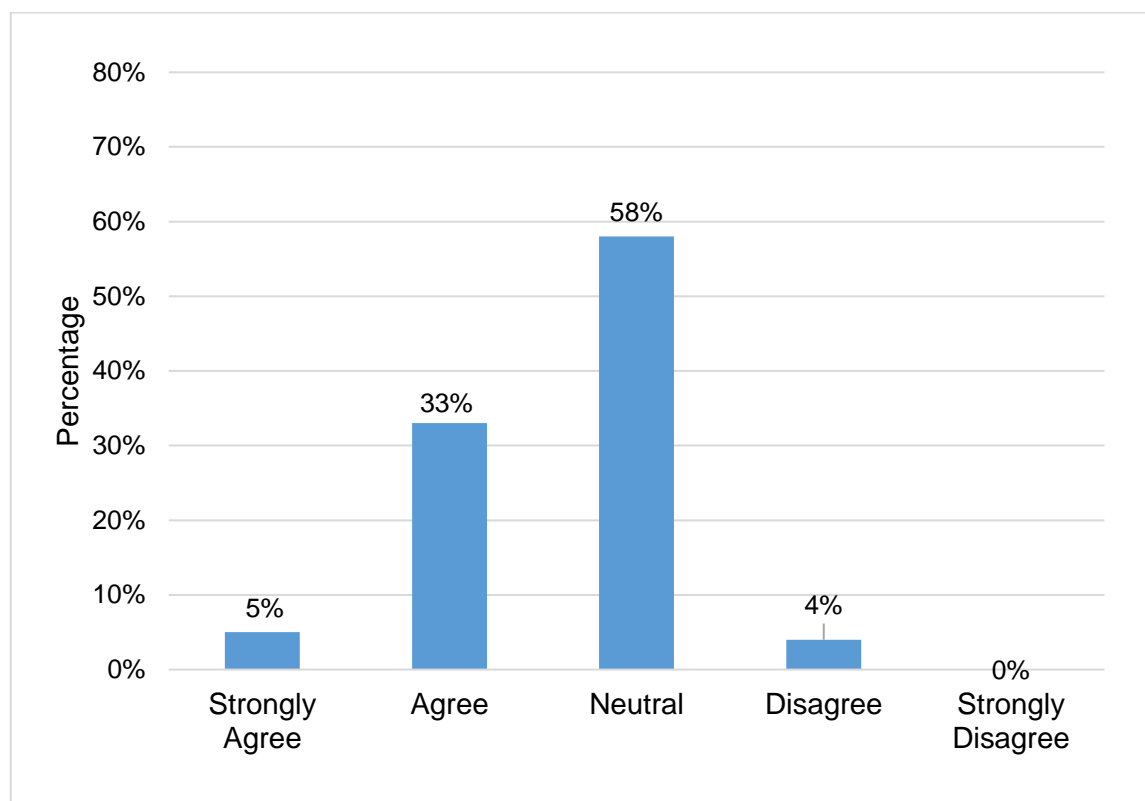


4.4.3.1.2. Employee awareness of environmental regulations

The results for the analysis on the statement that employees are aware of environmental regulations to follow, is reflected in Figure 4.11, where 58% of respondents were neutral. Further 33% of respondents agreed with the statement, 5% strongly agreed and 4% disagreed. The findings indicate that

majority of employees are neither in agreement nor disagreement with the statement, which is an indication that they are uncertain on which environmental regulations to comply with. Goranczewski (2020:8) highlights that awareness is a component of what is referred to as support, the guideline suggests that those working for an organisation should be aware of its environmental policies, its goals, and their involvement in carrying out various tasks. The requirement of the administrative theory which is used for the study is that individuals in an organisation must be aware of the administrative functions they must complete to achieve an objective and be compliant.

Figure 4.11: Employees are aware of environmental regulations to comply with

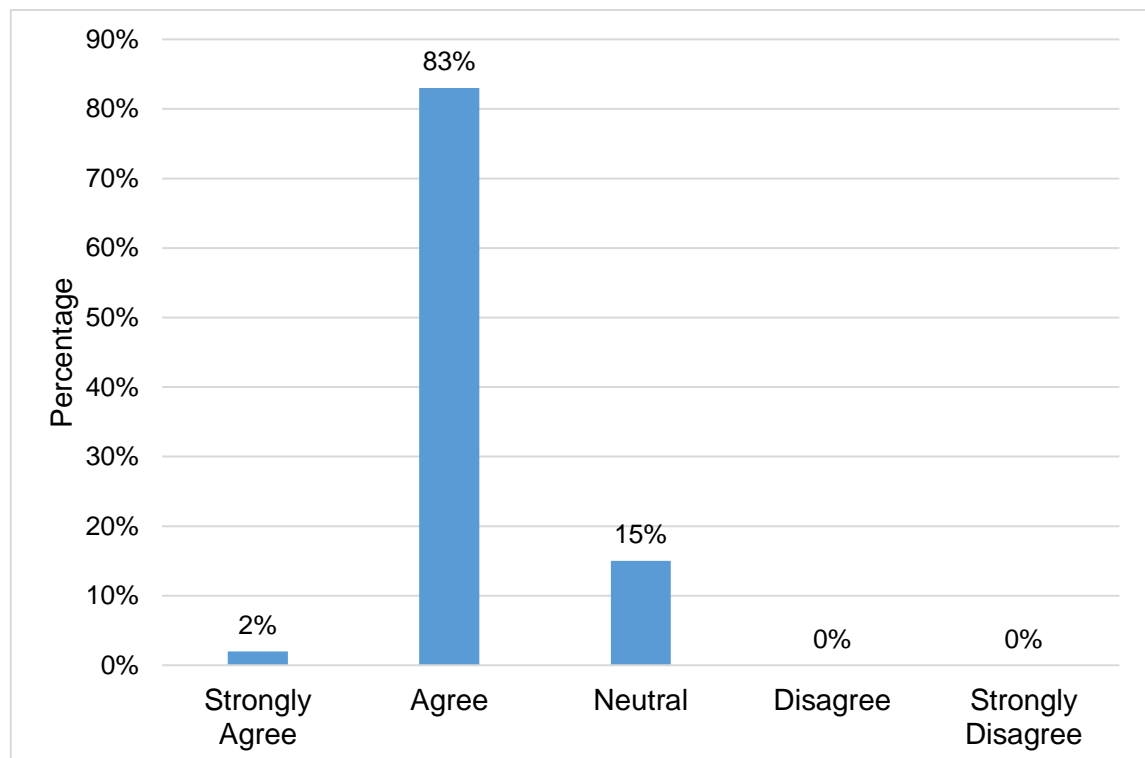


4.4.3.1.3. Employee awareness of process for ensuring compliance

The respondents were positive on the statement whether they are aware of the processes to be followed in order to ensure compliance. Figure 4.12 shows that 2% of the respondents strongly agreed, 83% agreed and 15% had a neutral response. The results indicate that most respondents are aware of the processes they have to follow to comply with environmental regulations. According to

Osborne and Hammoud (2017:51) the use of skilled labour and education helps to increase the efficiency for many SMEs, therefore can be argued that employees are mostly aware of the procedures due to the level of study in the field and work experience. However, prior findings (4.4.3.1.2) revealed that employees are uncertain of environmental regulation which they should follow. It can be concluded that employees adhere to compliance procedures without being aware of the environmental regulation they are following.

Figure 4.12: Employee is aware of process to follow to ensure compliance

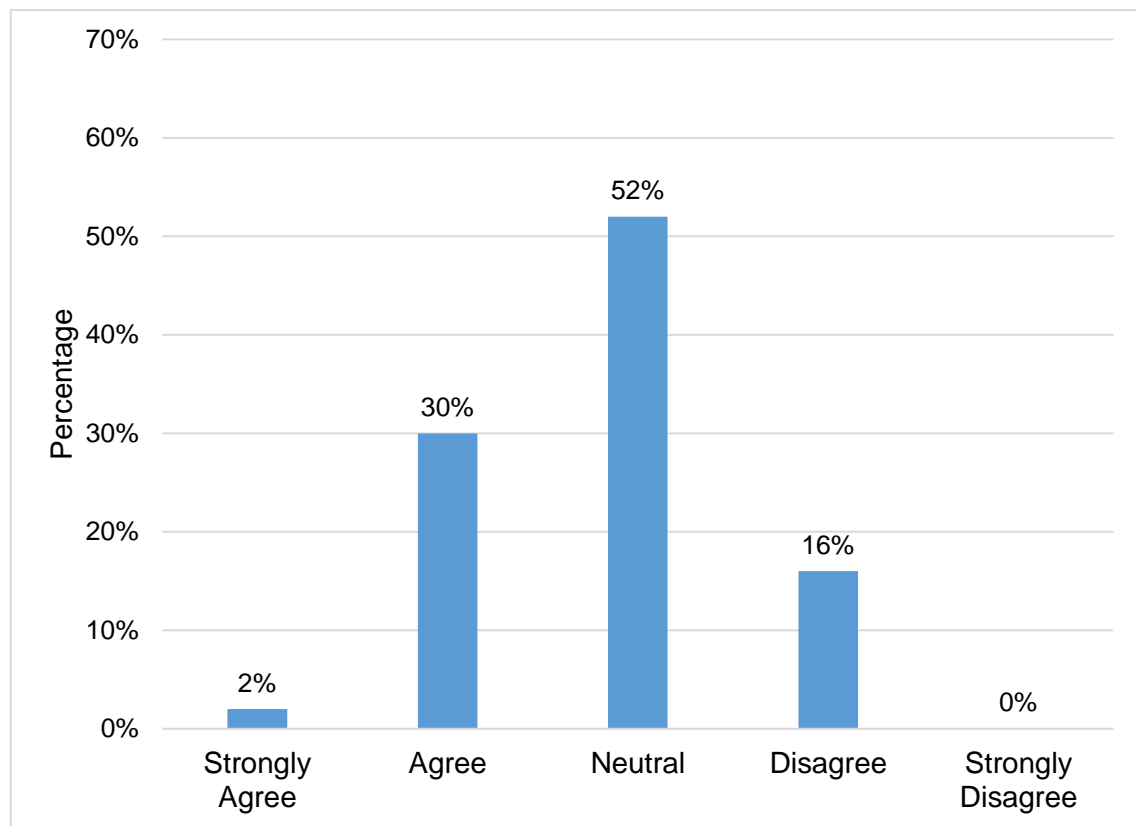


4.4.3.1.4. Employee responsible for ensuring environmental compliance

The majority of respondents were neutral on the question of whether the organisations have a person responsible for ensuring environmental compliance. Figure 4.13 shows that majority of respondents at 52% chose to remain neutral with responses, 30% agreed, 16% disagreed and 2% strongly agreed. The results indicate that most respondents are unclear on whether there is an individual within the organisation responsible for compliance. It has been standard practice for organisations to hire compliance officers only after they have run into legal difficulties (Martin, 2015:173). Businesses should commit to

effective compliance so that violations are reduced and fines are lessened. Akhigbe, Amyot and Richards (2016:21) mention that some sectors of the economy, like mining and manufacturing, are subject to stricter regulations than others, and in some regions of the nation are more strictly regulated than others. Therefore, hiring a compliance officer to assist the organisation with understanding and implementing the regulations that are relevant to the company is an excellent option.

Figure 4.13: Employee responsible for ensuring environmental compliance

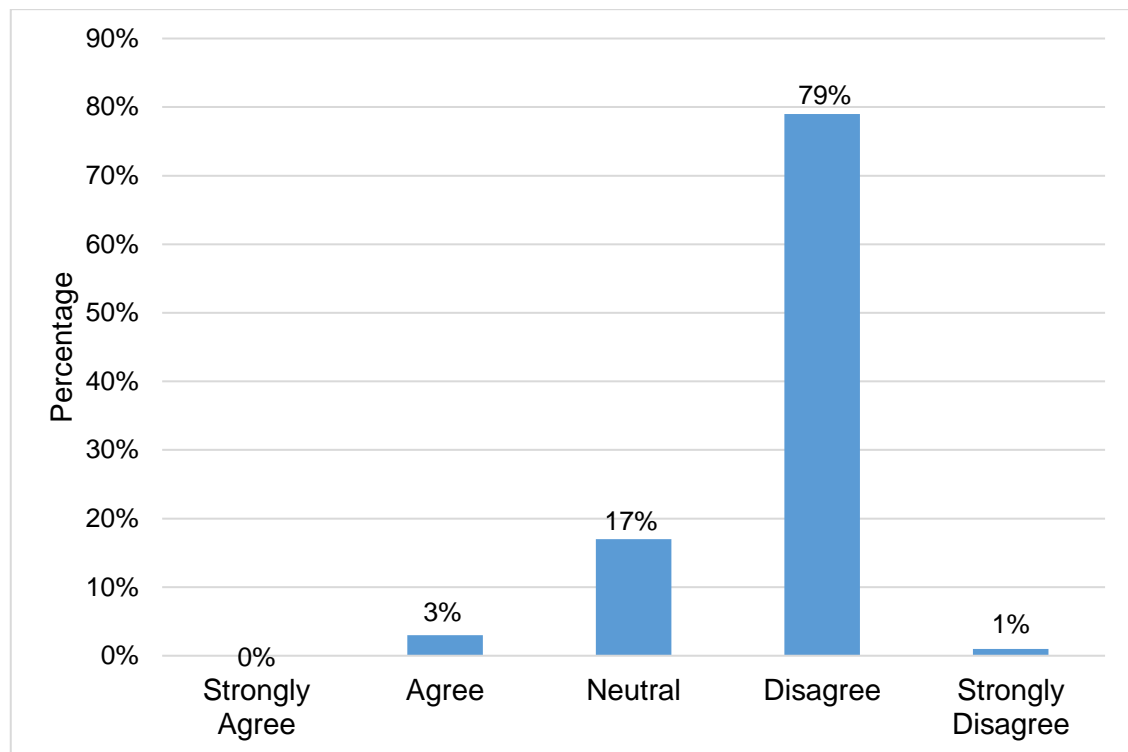


4.4.3.1.5. Prioritising compliance to environmental regulations

An investigation explored whether organisations gave compliance with environmental regulations a low priority. Figure 4.14 shows that majority (79%) of the respondents disagreed with the statement, 17% had a neutral response, 3% agreed and 1% strongly disagreed with the statement. The findings show that SMEs agree environmental compliance should be prioritised. Martin (2020:9) mentions that SMEs should assume responsibility for environmental

stewardship because SMEs rely on nature and must thus protect it and incorporate environmental issues into their operations.

Figure 4.14: Organisation does not prioritise compliance to environmental regulations



4.4.3.2. External factors contributing to environmental noncompliance

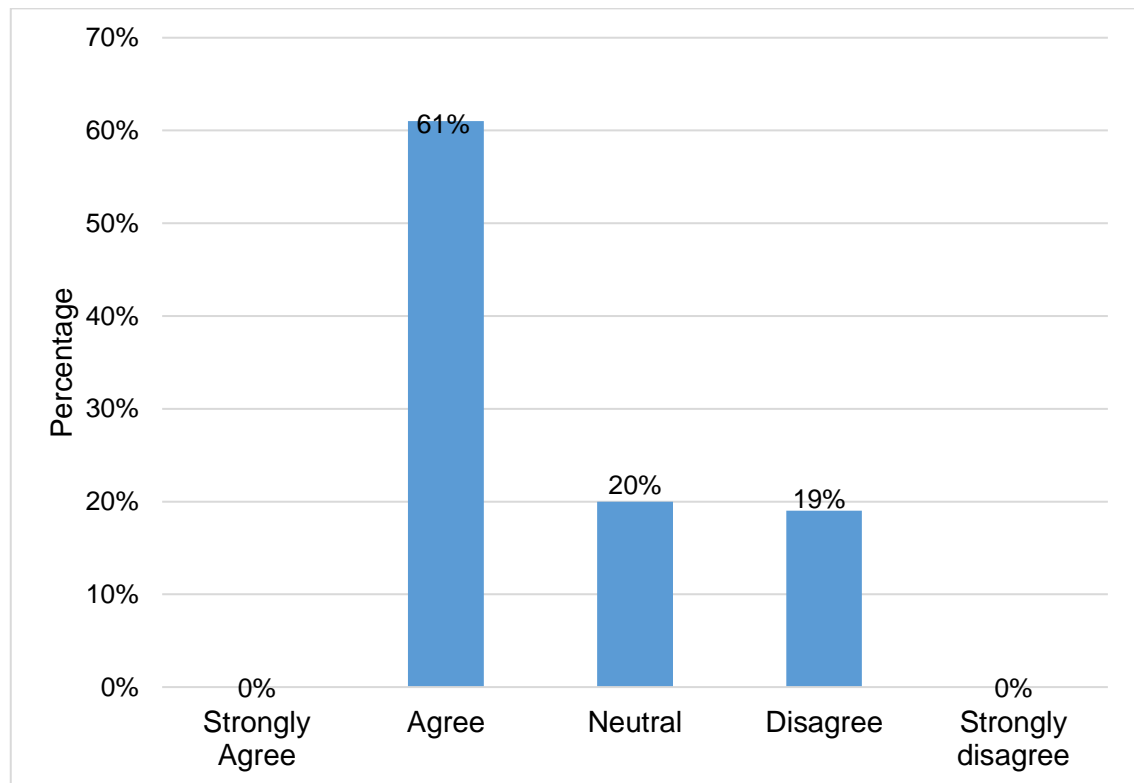
A number of statements concerning external factors were listed in section C of the questionnaire. Respondents were asked to read and then rate them on a scale of SA = strongly agree to SD = strongly disagree. All statement results are individually discussed below.

4.4.3.2.1. Environmental compliance costs

The results of the analysis on whether the expenses associated with environmental compliance are high for the organisation are shown in Figure 4.15. According to the results, 61% of respondents agreed that it is costly for SMEs to comply with environmental regulations. Further 20% of respondents had a neutral response and 19% disagreed. The findings are in correspondence with

the literature that compliance costs are a factor that contributes to the noncompliance of SMEs. Lesejane (2021:24) found that compliance costs among SMEs are high and are therefore a considerable burden and contribute to the noncompliance to environmental regulations.

Figure 4.15: Environmental compliance costs are expensive for organisation

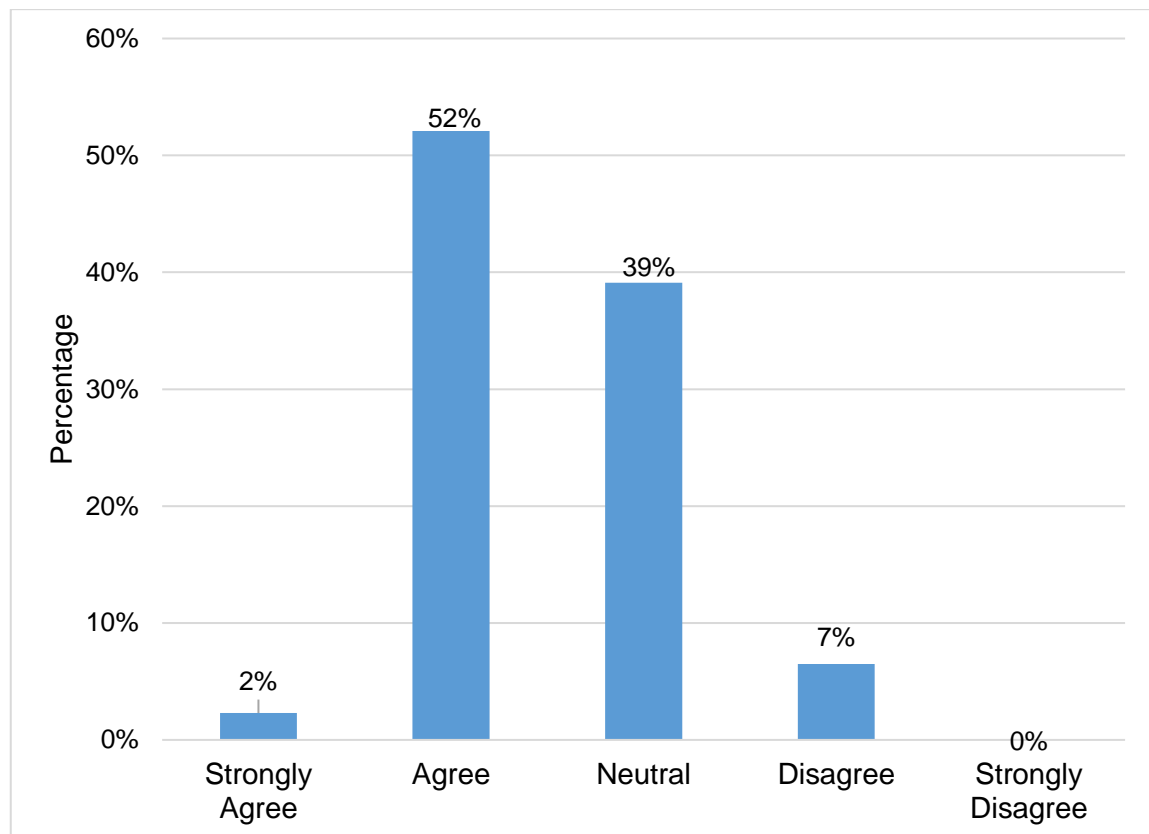


4.4.3.2.2. Vague administration practices of environmental regulations

Results for the claim that administration practices for adhering to environmental standards are not made explicit are shown in Figure 4.16. About 52% of respondents agreed with the statement and 39% chose a neutral response. Further 7% disagreed with the statement and 2% strongly agreed. The findings indicate that SME employees agree that the administration practices for compliance are inexplicit, hence the difficulty to adhere to. According to Yee, Tang and Lo (2016:96) businesses are less likely to adhere to both basic and proactive environmental practices if they find it challenging to understand the regulations that are being enforced against them. The theory of regulatory compliance stipulates that there must be a link between a person's administrative

actions and the relevant compliance requirements. With clear administration procedures individuals working in administration will be assisted in complying with environmental compliance requirements.

Figure 4.16: Administration practices for complying are not made clear

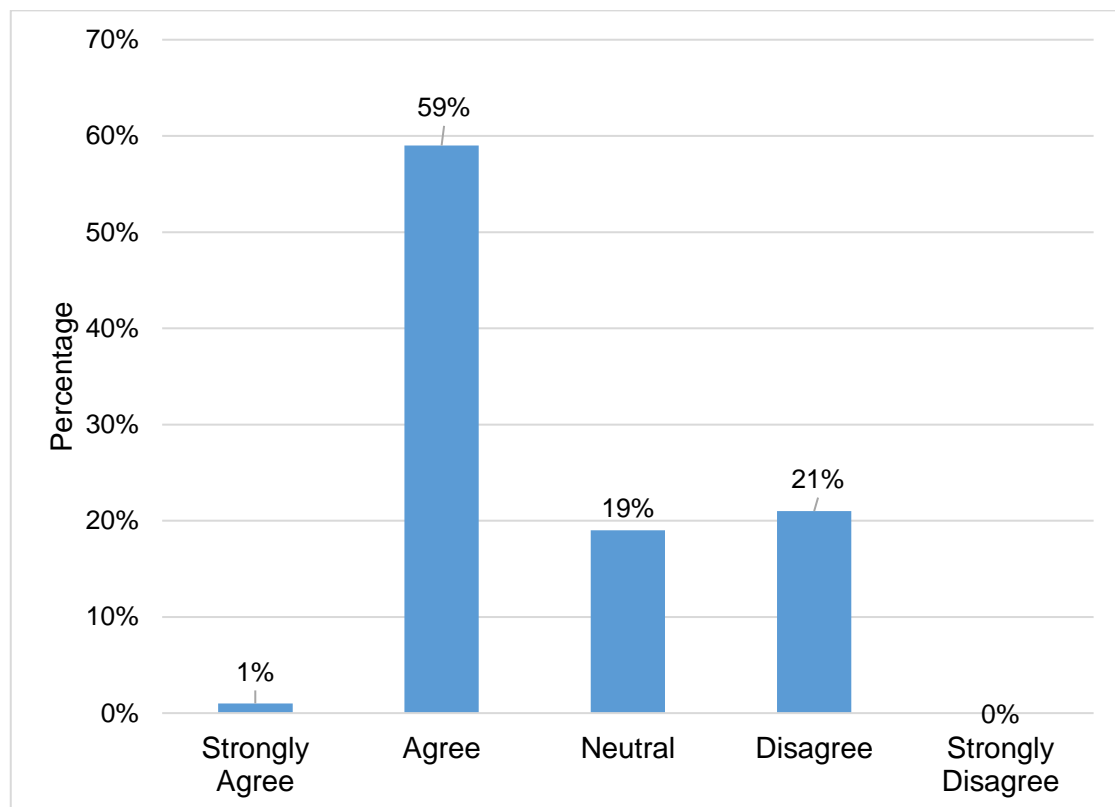


4.4.3.2.3. Administration practices not easily carried out for compliance

Figure 4.17 exhibits the results for the statement whether administration practices of environmental regulations are not easy to carry out ensuring compliance. The results show that 59% agreed with the statement followed by 29% with neutral response. A further 21% disagreed with the statement and 1% strongly agreed. The findings suggest that most SME employees agree that administration practices are not easy to implement which makes it difficult to comply with environmental regulations. Muzan, (2019:206) literature support, that environmental legislation has not always been effective due to a lack of effective tools and institutional backing, and regulations that are impractical in some areas. Some environmental regulations have not been successful because they do not

correspond with the technological demands and economic realities of the nation or region, or because they do not consider the institutional capacities of the society that must administer them.

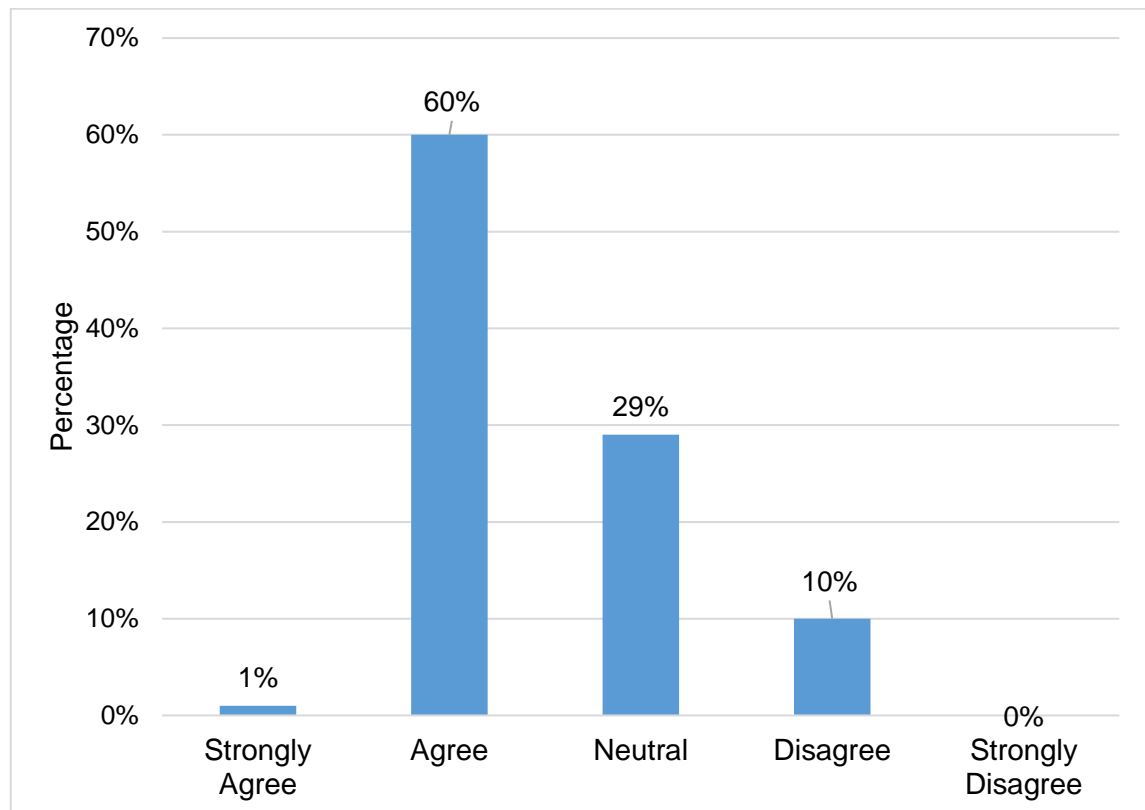
Figure 4.17: Administration practices of environmental regulations are not easy to carry out



4.4.3.2.4. Time consuming application process

The results presented in Figure 4.18 indicate that 60% of the respondents agreed with the statement that the application process towards complying with environmental regulations is time consuming for the organisation. A further 29% of respondents remained neutral with the response, 10% disagreed and 1% strongly agreed. Compliance is difficult as there are factors that prevent an organisation from fulfilling the requirements for environmental compliance, which makes the process time consuming (Barr, Roberts, Peplinski, West, Kramer and Jones, 2021:8), but as the digital revolution takes hold, every area of a business- including the time efficiency and environmental compliance- will be positively affected.

Figure 4.18: Application process for compliance is time consuming for the organisation



4.4.3.3. Conclusion for objective 2

The analysis for objective 2 reveals the various internal and external factors that affect the SMEs compliance to environmental regulations. There were neutral responses for most of the internal factor questions, suggesting that employees view those factors to be affecting compliance neither positively nor negatively. It was unclear whether the employees' lack of knowledge on environmental regulations is due to the lack of training to ensure environmental compliance. This is indicated by their neutral responses to the internal factor that speaks of employees' lack of training and consequently lack knowledge of environmental regulations. It is possible that employees are uncertain about the environmental regulations that must be followed to maintain compliance given the neutral responses to the internal factor that speaks of employees being aware of the environmental compliance requirements. Although employees concur that they are aware of the procedures that must be followed to comply with environmental

regulations indicated by their agreement to being aware. Prior results of neutral responses to being aware of environmental regulations to be followed indicate that employees may be performing tasks without knowing they are complying with which environmental law. Employees' responses to the question of whether the organisation has a designated person to ensure environmental compliance were neutral, implying that employees are not aware of who should oversee compliance. Employees also expressed disagreement with the claim that organisations do not prioritise compliance to environmental regulations.

Employees agreed that the external factor of compliance expenses are costly for the organisation, making it a challenge to comply with environmental laws. The employees concur that the vague administration practices are a factor contributing to the noncompliance with environmental regulations. Furthermore, employees agree that SMEs failure to comply with environmental regulations is a result of administration procedures being difficult to implement. In conclusion, employees also concur that it is challenging for SMEs to be compliant because the application processes for environmental compliance are time consuming.

4.4.4. Objective 3: To establish the relationship between the administration practices employed by SMEs in the manufacturing sector and factors affecting environmental regulation compliance

A Spearman's rank-order correlation was utilised to determine the relationship between the administrative practices implemented by SMEs and the factors influencing environmental regulation compliance. According to Daniulaityte (2016:22) the Spearman correlation test (represented by r_s) measures the strength and direction of a monotonic association between two ranked variables, while the Pearson correlation coefficient measures the strength and direction of a linear association between two variables. Schober, Boer and Schwarte (2018:1764) add that the Spearman correlation coefficient ranges between -1 and 1, which indicates whether there is a positive or negative relationship between variables. A negative relationship means that the correlation ranges between -1 and 0 and a positive relationship means the correlation is between 0 and 1 (Wonu, Victor-Edema and Ndimele, 2021:56). A positive relationship

means that as one variable increases the other one also tends to increase and negative relationship means that as one variable increases the other decreases. Spearman correlation test is calculated using the following formula;

$$r_s = 1 - \frac{6\sum D^2}{N(N^2 - 1)}$$

As it has already been mentioned, the correlation coefficient is denoted by r_s , whilst the difference between paired ranks is represented by D and N is the number of the participants in the study. The statistical significance is considered at 5% (0.05) level of significant. According to Wonu *et al.*, (2021:57), the significance test is a statistical analysis used to determine whether differences between two or more groups' observed characteristics indicate that those characteristics are similar or dissimilar, or whether there is a correlation between the observed differences and those characteristics. The correlation coefficient is considered significant when the corresponding p -value has less than 0.05 level of significance.

4.4.4.1 Spearman's correlation between administration practices and internal factors

Statements from section B of the questionnaire regarding administration practices employed by SMEs and statements from section C regarding internal factors contributing to environmental noncompliance were analysed to determine the relationship.

- Correlation test between obtaining operating license statement and internal factors**

The administration practice of SMEs obtaining an operating license (B1) was tested to check for relationships with internal factors. Table 4.7 illustrates that statements C-I2 and C-I5 have a weak and positive relationship ($r_s = 0.038$ and $r_s = 0.027$) with B1, meaning when respondents strongly agree or agree with B1 they also strongly agree or agree with statements C-I2 and C-I5. Further,

statements C-I1 ($r_s = -0.092$), C-I3 ($r_s = -0.047$) and C-I4 ($r_s = -0.135$) have a weak and negative relationship with B1 which means that when respondents strongly agree or agree with statement B1 they strongly disagree or disagree with statements C-I1, C-I3 and C-I4. Wonu *et al.*, (2021:56) point out that a weak and negative relationship does not imply impossibility of relationship but presenting that between the two various the correlation is weak. Only statement C-I4 showed a significant relationship with statement B1 since its p value = 0.048 < 0.05.

Table 4.7: Correlation test between obtaining operating license statement and internal factors

	Internal Factors	r_s	p-value
C-I1	Employee awareness on process for ensuring compliance	-0.092	0.179
C-I2	Employee responsible for ensuring environmental compliance	0.038	0.581
C-I3	Prioritising compliance to environmental regulations	-0.047	0.497
C-I4	Employee awareness of environmental regulations	-0.135	0.048
C-I5	Lack of training for employees on environmental compliance	0.027	0.691

- **Correlation test between obtaining rights to utilise space or land statement and internal factors**

An analysis of the correlation test was conducted between the administration practice statement of obtaining rights to utilise land or space where an organisation operates (B2) and internal factors, statements C-I1 to C-I5. Table 4.8 results show that statements C-I1, C-I2, C-I4 and C-I5 have a weak and negative relationship ($r_s = -0.031$, -0.061 , -0.152 and -0.081) with statement B2, meaning that respondents who are strongly agreeing or agreeing to statement B2 are strongly disagreeing or disagreeing with statements C-I1, C-I2, C-I4 and

C-I5. However, only statement C-I4 is significantly correlating with statement B2 (p value = $0.026 < 0.05$). Furthermore, statement C-I3 have a weak but positive relationship ($r_s = 0.019$) with statement B2. This means that respondents that are strongly agreeing or agreeing with statement B2 are also strongly agreeing or agreeing with statement C-I3.

Table 4.8: Correlation test between obtaining rights to utilise space or land statement and internal factors

	Internal Factors	r_s	p-value
C-I1	Employee awareness on process for ensuring compliance	-0.031	0.653
C-I2	Employee responsible for ensuring environmental compliance	-0.061	0.373
C-I3	Prioritising compliance to environmental regulations	0.019	0.784
C-I4	Employee awareness of environmental regulations	-0.152	0.026
C-I5	Lack of training for employees on environmental compliance	-0.081	0.236

- **Correlation test between statement employees are trained to ensure compliance with environmental regulations and internal factors**

A correlation test was conducted for the statement concerning whether employees are trained in order to ensure compliance with environmental regulation (B3) and internal factors. The results reflected in table 4.9 show that statements C-I1 and C-I4 have a weak but positive ($r_s = 0.017$ and $r_s = 0.025$) relationship with statement B3, which means that the respondents who strongly agree or agree with B3 also strongly agree or agree with internal factors denoted by C-I1 and C-I4. However, there is a highly significant relationship (p value = $0.000 < 0.01$) between statements C-I4 and B3. Statements C-I2 and C-I5 have a highly significant, negative and moderate relationship with statement B3 (p values < 0.01 , $r_s = -0.327$ and $r_s = -0.322$). This means that respondents who strongly agree or agree to statement C-I2 and C-I5 also strongly disagree or

disagree with statement B3. Furthermore, statement C-I3 shows a non-significant, weak and negative relationship (p value > 0.05 and $r_s = -0.084$) with statement B3.

Table 4.9: Correlation test between statement employees are trained in order to ensure compliance to environmental regulations and internal factors

	Internal Factors	r_s	p-value
C-I1	Employee awareness on process for ensuring compliance	0.017	0.809
C-I2	Employee responsible for ensuring environmental compliance	-0.327	0.000
C-I3	Prioritising compliance to environmental regulations	-0.084	0.221
C-I4	Employee awareness of environmental regulations	0.025	0.000
C-I5	Lack of training for employees on environmental compliance	-0.322	0.000

- **Correlation test between organisation keeping compliance assessment reports statement and internal factors**

The statement pertaining to whether organisations keeps compliance assessment reports (B4) was analysed to check for correlation with internal factors. Table 4.10 shows that there is a positive yet weak relationships between statement B4 and internal factors C-I1, C-I2, C-I3, C-I4 and C-I5 ($r_s = 0.045, 0.186, 0.059, 0.000$ and 0.104). The positive relationships indicate that the respondents who are strongly agreeing or agreeing to statement B4 are also strongly agreeing or agreeing with internal factors C-I1, C-I2, C-I3, C-I4 and C-I5. However, only statement C-I2 is highly significantly and correlating with statement B4 (p value $= 0.006 < 0.01$).

Table 4.10: Correlation test between organisation keeping compliance assessment reports statement and internal factors

	Internal Factors	r_s	p-value
C-I1	Employee awareness on process for ensuring compliance	0.045	0.515
C-I2	Employee responsible for ensuring environmental compliance	0.186	0.006
C-I3	Prioritising compliance to environmental regulations	0.059	0.388
C-I4	Employee awareness of environmental regulations	0.000	0.996
C-I5	Lack of training for employees on environmental compliance	0.104	0.129

- **Correlation test between statement organisation reports on maintenance of equipment are done regularly and internal factors**

A correlation test was conducted between internal factors (denoted by C-I1 to C-I5) and the statement regarding reports about the maintenance of equipment are being conducted regularly in organisations (B5). The results are reflected in table 4.11, where statements C-I3, C-I4 and C-I5 have a weak and positive relationship ($r_s = 0.096, 0.117$ and 0.045) with statement B5. This means that respondents who strongly agree or agree with statement B5 also strongly agree or agree with statements C-I3, C-I4 and C-I5. Furthermore, statements C-I1 and C-I2 have a weak and negative ($r_s = -0.093$ and -0.054) relationship with statement B5, meaning that respondents that are strongly agreeing or agreeing to B5 they are strongly disagreeing or disagreeing to statements C-I1 and C-I2. There is a non-significant correlation identified as all internal factors p values > 0.05 .

Table 4.11: Correlation test between statement organisation reports on maintenance of equipment are done regularly statement and internal factors

	Internal Factors	r_s	p-value
C-I1	Employee awareness on process for ensuring compliance	-0.093	0.175
C-I2	Employee responsible for ensuring environmental compliance	-0.054	0.431
C-I3	Prioritising compliance to environmental regulations	0.096	0.161
C-I4	Employee awareness of environmental regulations	0.117	0.086
C-I5	Lack of training for employees on environmental compliance	0.045	0.516

- **Correlation test between organisation practices good communication for employees to be aware of what is expected statement and internal factors**

A correlation test comparison was conducted between the internal factors, represented as C-I1 to C-I5, and the administration practice statement concerning organisations practicing good communication for everyone to be aware of what is expected of them (B6). Table 4.12 illustrates that there is a weak but positive relationship between statement B6 and internal factors C-I1 and C-I4 ($r_s = 0.146$ and 0.058). The results indicate that respondents who strongly agree or agree with statement B6 will strongly agree or agree with statements C-I1 and C-I4. However, C-I1 is significantly correlating with statement B6, p value = $0.033 < 0.05$. Moreover, there is a negative and weak relationship between statement B6 and internal factors C-I2 and C-I5 ($r_s = -0.016$ and $r_s = -0.059$), meanwhile statement C-I3 and B6 shows a significant, weak and negative relationship (p value = 0.029 , $r_s = -0.016$). This means that respondents who strongly agree or agree to statement B6 also strongly disagree or disagree with statements C-I2, C-I3 and C-I5.

Table 4.12: Correlation test between organisation practices good communication for employees to be aware of what is expected statement and internal factors

	Internal Factors	r_s	p-value
C-I1	Employee awareness on process for ensuring compliance	0.146	0.033
C-I2	Employee responsible for ensuring environmental compliance	-0.016	0.813
C-I3	Prioritising compliance to environmental regulations	-0.149	0.029
C-I4	Employee awareness of environmental regulations	0.058	0.399
C-I5	Lack of training for employees on environmental compliance	-0.059	0.389

- **Correlation test between administering green initiative projects statement and internal factors.**

To determine a relationship between the administration practice statement of whether organisations administer projects related to the green initiative to reduce pollutants (B7) and internal factors, a correlation test was conducted. The results are reflected in table 4.13, where statements C-I1, C-I2, C-I4 and C-I5 have a non-significant, weak but positive relationship (p values > 0.05 , $r_s = 0.046, 0.012, 0.043$ and 0.092) with statement B7. The results indicate that when respondents are strongly agreeing or agreeing to statement B7 they are strongly agreeing or agreeing with internal factors C-I1, C-I2, C-I4 and C-I5. In addition, C-I3 presents a weak and negative ($r_s = -0.070$) relationship with statement B7, meaning respondents that are strongly agreeing or agreeing to B7 are strongly disagreeing or disagreeing with statement C-I3.

Table 4.13: Correlation test between administering green initiative projects statement and internal factors

	Internal Factors	r_s	p-value
C-I1	Employee awareness on process for ensuring compliance	0.046	0.502
C-I2	Employee responsible for ensuring environmental compliance	0.012	0.864
C-I3	Prioritising compliance to environmental regulations	-0.070	0.310
C-I4	Employee awareness of environmental regulations	0.043	0.529
C-I5	Lack of training for employees on environmental compliance	0.092	0.179

- **Correlation test between managing and maintaining filing System statement and internal factors**

A correlation test was conducted to determine a relationship between an administration practice statement of organisations managing and maintaining a filing system for day-to-day management records (B8) and the internal factors represented as C-I1 to C-I5. Results are shown in table 4.14, statements C-I2 and C-I4 present a positive and weak relationship ($r_s = 0.011$ and 0.016) with statement B8, which means that respondents who strongly agree or agree to B8 will strongly agree or agree to internal factors denoted by C-I2 and C-I4. Statements C-I1, C-I3 and C-I5 show a non-significant, negative and weak relationship (p values > 0.05 , $r_s = -0.102$, -0.038 and -0.035) with statement B8. This indicates that respondents who strongly agree or agree to statement B8 will strongly disagree or disagree to internal factors C-I1, C-I3 and C-I5.

Table 4.14: Correlation test between managing and maintaining filing system and internal factors

	Internal Factors	r_s	p-value
C-I1	Employee awareness on process for ensuring compliance	-0.102	0.137
C-I2	Employee responsible for ensuring environmental compliance	0.011	0.872
C-I3	Prioritising compliance to environmental regulations	-0.038	0.582
C-I4	Employee awareness of environmental regulations	0.016	0.819
C-I5	Lack of training for employees on environmental compliance	-0.035	0.607

4.4.3.2. Spearman's correlation between administration practices and external factors

An analysis was conducted to determine the relationships between statements from the section B of the questionnaire concerning administration practices employed by SMEs and statements from section C regarding external factors contributing to environmental noncompliance.

- Correlation test between obtaining operating license statement and external factors**

The administration practice of SMEs obtaining an operating license (B1) was analysed to check for relationships with external factors denoted by C-E1 to C-E4. The results are shown in table 4.15, where statements C-E1 and C-E3 present a non-significant correlation, weak and positive (p values > 0.05 , $r_s = 0.061$ and 0.115) relationship with statement B1. This means that when respondents are strongly agreeing or agreeing to statement B1 they are also strongly agreeing or agreeing to statements C-E1 and C-E3. Furthermore, statements C-E2 and C-E4 show a non-significant correlation, weak and negative relationship ($r_s = -0.075$ and -0.104) with statement B1, meaning that

respondents who are strongly agreeing or agreeing to B1 are strongly disagreeing or disagreeing to statements C-E2 and C-E4.

Table 4.15: Correlation test between obtaining operating license statement and external factors

	External Factors	r_s	p-value
C-E1	Compliance costs involved are expensive for the organisation	0.061	0.370
C-E2	Administration practices for complying with environmental regulations are not made clear	-0.075	0.276
C-E3	Administration practices of environmental regulations are not easy to carry out ensuring compliance	0.115	0.094
C-E4	The application process to complying with environmental regulations is time consuming for organisation	-0.104	0.128

- **Correlation test between organisations obtaining rights to utilise space or land statement and external factors**

A correlation test between the statement of obtaining rights to utilise land or space where organisation operates (B2) and external factors was conducted to determine relationship. The results shown in table 4.16 indicate that statements C-E1, C-E2 and C-E3 have a positive but weak correlation ($r_s = 0.140, 0.031$ and 0.155) with statement B2, indicating that respondents that strongly agree or agree to B2 will strongly agree or agree to external factors C-E1, C-E2 and C-E3. However, statements C-E1 and C-E3 are significantly correlating with statement B2 (p values < 0.05). Furthermore, statement C-E4 has a non-significant, negative and weak correlation (p value > 0.05 and $r_s = -0.031$) with statement B2. The results indicate that respondents who strongly agree or agree to statement B2, strongly disagree or disagree to external factor C-E4.

Table 4.16: Correlation test between obtaining rights to utilise space or land statement and external factors

	External Factors	r_s	p-value
C-E1	Compliance costs involved are expensive for the organisation	0.140	0.041
C-E2	Administration practices for complying with environmental regulations are not made clear	0.031	0.654
C-E3	Administration practices of environmental regulations are not easy to carry out ensuring compliance	0.155	0.023
C-E4	The application process to complying with environmental regulations is time consuming for organisation	-0.031	0.648

- **Correlation test between statement employees are trained in order to ensure compliance to environmental regulations and external factors**

In determining a relationship, a correlation test was conducted for the administration practice statement where organisation offer employees training in order to ensure compliance to environmental regulation (B3) and external factors denoted by C-E1 to C-E4. The results reflected in table 4.17 indicate that external factors C-E1, C-E2, C-E3 and C-E4 have a non-significant, negative and weak relationship (p values > 0.05 , $r_s = -0.095, -0.001, -0.137$ and -0.110) with statement B3. However, only the correlation between statement C-E3 and B3 is significant (p value = $0.046 < 0.05$). The results indicate that when respondents are strongly agreeing or agreeing to statement B3, they are strongly disagreeing or disagreeing to statements C-E1, C-E2, C-E3 and C-E4.

Table 4.17: Correlation test between statement employees are trained in order to ensure compliance to environmental regulations and external factors

	External Factors	r_s	p-value
C-E1	Compliance costs involved are expensive for the organisation	-0.095	0.167
C-E2	Administration practices for complying with environmental regulations are not made clear	-0.001	0.985
C-E3	Administration practices of environmental regulations are not easy to carry out ensuring compliance	-0.137	0.046
C-E4	The application process to complying with environmental regulations is time consuming for organisation	-0.110	0.109

- **Correlation test between organisation keeping compliance assessment reports statement and external factors**

The administration practice statement regarding organisations keeping compliance assessment reports (B4) was analysed to check for the correlation with external factors. Table 4.18 illustrates that statements C-E2, C-E3 and C-E4 have a weak but positive correlation ($r_s = 0.027$, 0.028 and $= 0.067$) with statement B4, meaning that respondents who strongly agree or agree to B4 also strongly agree or agree to external factors C-E2, C-E3 and C-E4. In addition, statement C-E1 has a non-significant, weak and negative relationship (p value = 0.671 and $r_s = -0.029$) with statement B4. The results indicate that respondents that strongly agree or agree with statement B4 also strongly disagree or disagree with statement C-E1.

Table 4.18: Correlation test between organisation keeping compliance assessment reports statement and external factors

	External Factors	r_s	p-value
C-E1	Compliance costs involved are expensive for the organisation	-0.029	0.671
C-E2	Administration practices for complying with environmental regulations are not made clear	0.027	0.696
C-E3	Administration practices of environmental regulations are not easy to carry out ensuring compliance	0.028	0.687
C-E4	The application process to complying with environmental regulations is time consuming for organisation	0.067	0.330

- **Correlation test between statement organisation reports on maintenance of equipment are done regularly and external factors**

A correlation test was conducted for external factors (represented as C-E1 to C-E4) and the administration practice statement pertaining to reports regarding the maintenance of equipment being done regularly in an organisation (B5) to determine relationship. Table 4.19 shows that statements C-E2 ($r_s = 0.116$) and C-E3 ($r_s = 0.004$) have a non-significant (p value > 0.05) correlation, weak and positive relationship with statement B5, indicating that respondents who are strongly agreeing or agreeing to B5 are strongly agreeing or agreeing to external factors C-E2 and C-E3. Furthermore, the results indicate that there is a non-significant correlation (p value > 0.05), negative and weak relationship between statement B5 and external factors C-E1 ($r_s = -0.085$) and C-E4 ($r_s = -0.073$), meaning that respondents who are strongly agreeing or agreeing to B5 are also strongly disagreeing or disagreeing with external factors C-E1 and C-E4.

Table 4.19: Correlation test between statement organisation reports on maintenance of equipment are done regularly and external factors

	External Factors	r_s	p value
C-E1	Compliance costs involved are expensive for the organisation	-0.085	0.213
C-E2	Administration practices for complying with environmental regulations are not made clear	0.116	0.089
C-E3	Administration practices of environmental regulations are not easy to carry out ensuring compliance	0.004	0.948
C-E4	The application process to complying with environmental regulations is time consuming for organisation	-0.073	0.290

- **Correlation test between organisation practices good communication for employees to be aware of what is expected statement and external factors**

The correlation test was conducted to determine relationship between administration practice statement concerning organisations practicing good communication for everyone to be aware of what is expected of them (B6) and external factors (denoted by C-E1 to C-E4). The results are reflected in table 4.20, where statements C-E1 ($r_s = -0.193$), C-E2 ($r_s = -0.024$) and C-E3 ($r_s = -0.053$) show a negative and weak relationship with statement B6, suggesting that respondents who strongly agree or agree to B6 also strongly disagree or disagree to external factors C-E1, C-E2 and C-E3. However, only statement C-E1 is significantly correlating with statement B6 (p value = 0.004). Meanwhile, statement C-E4 is presenting a non-significant, weak and positive relationship (p value > 0.05, and $r_s = 0.015$) with statement B6, meaning that respondents that strongly agree or agree to B6 also strongly agree or agree to C-E4.

Table 4.20: Correlation test between organisation practices good communication for employees to be aware of what is expected statement and external factors

	External Factors	r_s	p value
C-E1	Compliance costs involved are expensive for the organisation	-0.193	0.004
C-E2	Administration practices for complying with environmental regulations are not made clear	-0.024	0.722
C-E3	Administration practices of environmental regulations are not easy to carry out ensuring compliance	-0.053	0.440
C-E4	The application process to complying with environmental regulations is time consuming for organisation	0.015	0.828

- **Correlation test between administering green initiative projects statement and external factors.**

To determine a relationship between the administration practice statement regarding organisation administering projects related to the green initiative to reduce pollutants (B7) and external factors, a correlation test was conducted. Table 4.21 results illustrates that statements C-E1, C-E2 and C-E4 have a weak and positive relationship ($r_s = 0.145, 0.005$ and 0.044) with statement B7, meaning respondents who are strongly agreeing or agreeing to B7 are also strongly agreeing or agreeing to C-E1, C-E2 and C-E4. However, only statement C-E1 showed a significant relationship with statement B7 since the p value = $0.033 < 0.05$. The statement C-E3 has a non-significant, weak and negative relationship (p value > 0.05 and $r_s = -0.041$) with statement B7, indicating that respondents who are strongly agreeing or agreeing to B7 are strongly disagreeing or disagreeing to C-E3.

Table 4.21: Correlation test between administering green initiative projects statement and external factors

	External Factors	r_s	p value
C-E1	Compliance costs involved are expensive for the organisation	0.145	0.033
C-E2	Administration practices for complying with environmental regulations are not made clear	0.005	0.941
C-E3	Administration practices of environmental regulations are not easy to carry out ensuring compliance	-0.041	0.550
C-E4	The application process to complying with environmental regulations is time consuming for organisation	0.044	0.519

- **Correlation test between organisation manages and maintain filing system for day-to-day management records statement and external factors**

A correlation test was conducted to determine a relationship between an administration practice statement where organisations manage and maintain a filing system for day-to-day management records (B8) and external factors. Table 4.22 illustrates that statements C-E1, C-E2, C-E3 and C-E4 have a non-significant correlation (p values > 0.05), negative and weak relationship ($r_s = -0.022, -0.006, -0.097$ and -0.064) with statement B8. The results suggests that when respondents are strongly agreeing or agreeing to statement B8, they are strongly disagreeing or disagreeing to external factors C-E1, C-E2, C-E3 and C-E4.

Table 4.22: Correlation test between organisation managing and maintaining filing system for day-to-day management records statement and external factors

	External Factors	r_s	p value
C-E1	Compliance costs involved are expensive for the organisation	-0.022	0.749
C-E2	Administration practices for complying with environmental regulations are not made clear	-0.006	0.931
C-E3	Administration practices of environmental regulations are not easy to carry out ensuring compliance	-0.097	0.155
C-E4	The application process to complying with environmental regulations is time consuming for organisation	-0.064	0.349

4.4.3.3. Conclusion for objective 3

The Spearman correlation test was appropriate in determining the relationship between administration practices and the factors affecting environmental compliance by SMEs. The relationships were found to be mostly negative and weak when comparing administrative practices and factors affecting environmental compliance. There were a few significant correlations identified when the correlation test was conducted between administration practices statements with internal and external factors. The statements B1, B4 and B7 demonstrated to have little significant when compared to both internal and external factors. Where statement B1 was only significant with internal factor C-I4. Statement B4 significantly correlated with internal factor C-I2, and statement B7 displayed a significant correlation with external factor C-E1. Statements B5 and B8 showed a non-significant correlation to internal and external factors. Whereas statement B2 significantly correlated to both internal (C-I4) and external factors (C-E1 and C-E3). Administration practices statements B3 and B6 demonstrated high significant correlation with both internal factors and external factors. Statement B3 is highly significantly correlating to internal factors (C-I2, C-I4 and C-I5) and external factor (C-E3), and statement B6 is significantly

correlating to internal factors (C-I1 and C-I3) and external factors (C-E1 and C-E2).

4.5. Conclusion

The chapter provided an analysis on the data collected and an interpretation based on the statistical analysis was included. The data collected was able to answer the study's research questions which were based on the objectives. The study sought to identify administration practices employed by SMEs to enhance compliance on environmental regulation. The responses confirm that the administration practices identified have an impact in enhancing environmental compliance by SMEs. There were various internal and external factors identified affecting environmental compliance by SMEs. Results revealed that as much as organisations prioritise environmental compliance some factors make it a challenge for SMEs to comply especially with the vague administration practices that have to be implemented to ensure compliance. In establishing the relationship between administration practices employed by SMEs and factors affecting environmental compliance, responses revealed that there was a weak and high significant correlation between administration practices and factors.

The next chapter provides a conclusion for the study and recommendations for SMEs to enhance environmental compliance.

CHAPTER 5

CONCLUSION AND RECOMMENDATIONS

5.1. Introduction

The previous chapter provided the analysis on the data collected. This final chapter presents a brief summary of the study followed by the key findings and conclusive summaries which are discussed based on each objective. This chapter then presents the implications and limitation of the study. The chapter also provides recommendations which are possible interventions that can be implemented based on the findings and recommendation for future research are also incorporated. To end the chapter a conclusion of the study is provided.

5.2. Summary of the study

This study assessed environmental regulations that SMEs in the manufacturing sector within the Msunduzi Municipal boundary, must comply with to establish the administration practices to be followed to ensure environmental compliance. The objectives were designed to examine the administration practices utilised by SMEs in the manufacturing sector and establish how these organisations can enhance environmental compliance. A quantitative research method was adopted to assist with data collection and questions in the questionnaire were structured to address objectives. The target sample approached were administrative personnel and managers of SMEs in the manufacturing sector within Msunduzi Municipal boundary, the sample was the appropriate choice as they share responsibility for the administration processes to complying with environmental regulations. The data was collected through distribution of questionnaires and findings were presented in chapter 4 of the study.

5.3. Key findings and conclusions

The following section provides a brief summary on the main findings identified in chapter 4. Further, conclusions on what the results indicate are incorporated in the section.

5.3.1. Findings of objective 1

The study identified administration practices employed by SMEs in the manufacturing sector. The identified practices could assist SMEs with adhering to environmental regulations. The administration practices utilised by SMEs in the manufacturing sector were briefly discussed in Chapter 2. From the findings in chapter 4, there was a consensus that complying with environmental regulations is compulsory, therefore compliance is vital for SMEs survival. The results revealed that it is a required practice for organisations to obtain an operating license to operate legitimately. In addition, it was established that obtaining rights to utilise space or land for SMEs in the manufacturing sector is an essential administration practice requirement. This practice is a requirement for the SPLUMA act and for SMEs to be compliant this practice must be adhered too. There is neutrality of the responses that compliance assessment reports are being kept as a record for environmental compliance. However, the results indicated that majority of employees agreed that managing and maintaining a good filing system is essential in the organisation. Although, it is indicated that there is good communication within the organisations, there is uncertainty amongst employees on the environmental regulations that are to be complied with and whether SMEs administers projects related to green initiatives. The administrative theory mentions departmentalisation in an organisation, that there are various activities that must be performed by different departments to reach a common goal of the organisation. However, there seem to be lack of communication between departments on whether SMEs are conducting regular reports on the maintenance of equipment as employees are not clear on the compliance in this issue as shown by the neutral responses.

5.3.2. Findings of objective 2

This study examined factors that are contributing to the environmental noncompliance of SMEs. There were internal and external factors identified that contribute to the noncompliance of the environmental regulations by SMEs. In respect to internal factors, the findings presented that there is uncertainty that

employees lacking knowledge on the environmental regulations that SMEs have to comply with, is due to training not being offered as this is shown by the neutrality in the responses. One of the factors identified in the problem statement is that the lack of awareness of environmental regulations to comply with leads to the high number of SMEs closing down annually in South Africa. It was established in the findings that employees are aware of the processes to follow to complete their assigned tasks to ensure environmental compliance. Results indicate that there is uncertainty amongst employees on the environmental regulations they are complying with while performing their day-to-day tasks. This confirms the literature discussed in chapter 2 by Rahman *et al.*, (2016:127) that the lack of awareness of inadequately educated employees on the environmental regulations and the relevant administration practices that must be utilised to ensure compliance, leads to environmental noncompliance. The positive outcome is that some SMEs actually understands the importance of compliance with environmental regulation, although employees are unclear about the individual assigned to be responsible for ensuring environment compliance. In respect to the external factors, majority of employees of SMEs agreed that the compliance expenses involved for ensuring environmental compliance are expensive. The costly compliance costs have an impact on the success of organisation or the willingness to comply with environmental regulations. Leboea (2017:1) concur that lack of access to finance delays the SMEs growth, which also decreases the company's chance of survival. The administration practices for complying with environmental regulation are not made clear, consequently it is not easy for employees to implement them to ensure environmental compliance. It is challenging to start a process where direction is unclear. The process can also be time consuming and employees agreed that the application process for complying with environmental regulation is time consuming. Processes that are thought to be time consuming have less chances of being completed which opens up for environmental noncompliance of SMEs. As stated by Sithram and Hoque (2016:278) that SMEs are not motivated to comply with environmental regulations that they perceive to be time consuming.

5.3.3. Findings of objective 3

The Spearman correlation coefficient was adopted to determine the relationship between administration practices employed by SMEs and environmental regulation compliance. The Spearman correlation test was first conducted between administration practices employed by SMEs and the internal factors to determine relationships. The findings presented that majority of the relationships were are weak, however there were administration practices significantly correlating with internal factors. The significant of relationships was calculated at p value <0.05 . The significantly correlating results highlighted on the importance of the relationship between administration practice and internal factors. The closer the p -value is to 0 the more significant the relationship is. The Spearman correlation test was then conducted between administration practices employed by SMEs and external factors to determine the relationship. The findings obtained were similar to those of internal factors. There were significant relationships between administration practices employed by SMEs and external factors. Although, relationships may have been identified as weak that does not mean they are not as important for the study as the significant values proved otherwise. Weak relationships indicate that there is no correlation between administration practices and internal and external factors affecting environmental noncompliance of SMEs. However, the significant identified suggest that the administration practices employed by SMEs influence internal and external factors that affect environmental compliance.

5.4. Implications of the study

Many studies conducted on the failure of SMEs have focused on the managerial skills. There is limited research on the administration practices affecting compliance with environmental regulation. The study provides an opportunity for a comprehensive research on administration practices required to enhance compliance. The internal and external factors of SMEs that contribute to the noncompliance with environmental regulations were also investigated. Therefore, this study adds value as it highlights the importance of environmental compliance of SMEs as it can affect the company survival.

5.5. Limitations of the study

The primary data was limited to SMEs only in the manufacturing sector within Msunduzi Municipal boundary. Therefore, the findings of this study cannot be generalised on a broader scale to mentioning environmental compliance of SMEs in all sectors and across the province or country. The study was also limited to a population consisting of administration personnel and managers.

5.6. Recommendations for SMEs

The following recommendations are proposed based on the findings of the study and are made to improve environmental compliance of SMEs.

- SMEs could have one environmental compliance officer who will oversee that the company is complying with environmental regulations and the company assessment reports are kept by the individual. In doing so, it will help SMEs with having an up to date filing of assessment reports and will ensure environmental compliance as there will be an individual making sure that the organisation is meeting the requirements for environmental compliance.
- SMEs should offer more training to employees to ensure environmental compliance. The neutral responses suggested that the organisation offers little training to employees to ensure compliance and therefore results in noncompliance with environmental regulations.
- SMEs could have a system in place when conducting the maintenance of equipment and the proposed compliance officer can keep maintenance reports to assist with complying with environmental regulations. This will also ensure that there is a safe working environment for the employees and the smooth operation of the organisation.
- SMEs should conduct more green initiative projects which can save company money and encourage employees in participating. The participation ensures that the company fully complies with environmental regulations.
- SMEs could find new innovated techniques that works for their company, which the organisation can adopt in response to green initiative projects and still be able to operate at full capacity.

- SMEs could have a guidebook that informs employees on the environmental regulations that the company has to comply with. This will allow SMEs to be able to prioritise regulations that have adverse effects on their operations. Although, some of the employees agreed that they are aware of the processes to follow for compliance but the neutral responses to whether employees are aware of environmental regulations to comply with suggested that more training on which environmental regulations the organisation is required to comply with.
- It is recommended that SMEs request for policies to be amended and administration practices to be made clear for environmental compliance. This will assist SMEs to have clear understanding on the procedures to comply with environmental regulations and will also limit the time spent on the processes. Additionally, the clarity will help with one of the functions of the administrative theory which is commanding. The laws prescribed by regulations that SMEs must abide by are commanding.

5.7. Recommendations for future research

There are limited research studies on the compliance of environmental regulation. The future research studies must consider the following focus areas;

- The investigation on what impact noncompliance with environmental regulations by SMEs has on the economy.
- The study should be extended to other SMEs across South Africa to allow for generalisation on the compliance or noncompliance with environmental regulations.
- Future studies must include the impact of environmental regulatory compliance for SME on long term survival.
- Interview the owners of SMEs to establish whether complying with environmental regulations helps with the growth of the business or they are not benefitting in anyway.

5.8. Conclusion

This study sought to identify the administration practices of SMEs, affecting environmental compliance. The study focused on SMEs in the manufacturing sector, within the Msunduzi Municipal. The findings highlighted that there is lack of awareness on environmental regulations and the administration practices associated with them. However, the recommendations proposed offers an opportunity for SMEs a chance to make changes in their organisations to ensure environmental compliance. Complying with environmental regulations will improve survival of SMEs and eliminate exclusion from the government in terms of support.

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APPENDIX A – Questionnaire

QUESTIONNAIRE

Topic:

Administration Practices Affecting Environmental Compliance by Small and Medium Enterprises in the Manufacturing Sector.

Section A – Biographical information of respondent

1. Please indicate your gender

	Gender	Tick
1.1.	Female	
1.2.	Male	

2. Please indicate your race

	Race	Tick
2.1.	African	
2.2.	White	
2.3.	Indian	
2.4.	Coloured	
2.5.	Other	

3. Please indicate your age category

	Age	Tick
3.1.	18 – 25	
3.2.	26 – 35	
3.3.	36 – 45	
3.4.	46 – 55	
3.5.	56 and older	

4. Please indicate your highest qualification

	Qualifications	Tick
4.1.	Lower than matric	
4.2.	Matric / Grade 12	
4.3.	Higher Certificate	
4.4.	Diploma/ Advanced Diploma	
4.5.	National Diploma	
4.6.	Degree	
4.7.	Honours Degree	
4.8.	Master's Degree	
4.9.	Doctoral Degree	
4.10.	Other	

5. Please indicate your occupation

	Occupation	Tick
5.1.	Owner	
5.2.	Manager	
5.3.	Assistant Manager	
5.4.	Administration Clerk	
5.5.	Human Resources	
5.6.	Other (state)	

6. Please indicate your work experience

	Experience	Tick
6.1.	0 – 1 year	
6.2.	2 – 3 years	
6.3.	4 – 5 years	
6.4.	6 – 7 years	
6.5.	8 – 9 years	
6.6.	10 years and more	

Section B – Administration practices employed by SMEs to ensure compliance with environmental regulations

7. Please tick one option for each statement

7.1. Complying with environmental regulations is compulsory for my organisation.

Yes ☐

No ☐

7.2. Complying with environmental regulations is voluntary for my organisation.

Yes ☐

No ☐

8. Please tick one option for each statement

		Strongly Agree	Agree	Neutral	Disagree	Strongly disagree
8.1.	Obtaining an operating license is a requirement in my industry.					
8.2.	Obtaining rights to utilise space where organisation operates is a requirement.					
8.3.	ISO 14000 series standards are implemented in my organisation					
8.4.	ISO 14000 series standards are integrated to the environmental management systems (EMS) in my organisation.					
8.5.	In my organisation employees are trained in order to ensure compliance with the environmental regulations.					

8.6.	My organisation keeps compliance assessment reports.					
8.7.	In my organisation reports regarding the maintenance of equipment are done regularly.					
8.8.	My organisation practises good communication for everyone to be aware of what is expected of them.					
8.9.	In my organisation we administer projects related to the green initiatives to reduce pollutants.					
8.10.	In my organisation we manage and maintain a filing system for day-to-day management records					

Section C – Factors contributing to the environmental noncompliance of SMEs

9.1. Internal Factors

		Strongly Agree	Agree	Neutral	Disagree	Strongly disagree
9.1.1.	I am aware of the process to follow to ensure compliance.					
9.1.2.	The organisation does not have a person responsible to ensure environmental compliance.					
9.1.3.	The organisation does not prioritise the issue of compliance to					

	environmental regulations.					
9.1.4.	I am aware of environmental regulations to comply with.					
9.1.5.	In my organisation employees are not trained therefore lack knowledge on environmental regulations to comply with.					

9.2. External Factors

		Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
9.2.1.	The compliance costs involved are expensive for the organisation.					
9.2.2.	Administration practices for complying with environmental regulations are not made clear.					
9.2.3.	Administration practices of environmental regulations are not easy to carry out ensuring compliance.					
9.2.4.	The application process to complying with environmental regulations is time consuming for the organisation.					
9.2.5.	The organisation receives little financial support from the government to continue operations.					

APPENDIX B – Letter of information



Letter of Information

Title of the Research Study: Administration Practices Affecting Environmental Compliance by Small and Medium Enterprises in the Manufacturing Sector.

Researcher: Jabhisile Roxetta Maphumulo (Master of Management Sciences in Administration and Information Management)

Supervisor(s): Dr CK Dongwe (PhD) and Dr CJ Nyide (DBA)

Brief Introduction and Purpose of the Study

Small and Medium Enterprises (SMEs) contribute substantially towards the South African economy and are an important factor to the local people regarding employment opportunities. SMEs do not only contribute economically but also have an environmental impact especially organisations in the manufacturing sector. The purpose of the study is to establish the compliance of SMEs to the environmental regulations and examine the administration practices employed by organisations to ensure environmental compliance.

A quantitative research method will be used to attain the objective of the study. A questionnaire with closed ended questions will be utilised to accumulate data for the study from the managers and administrative personnel of SMEs. Data acquired will be analysed using SPSS 25.0 version.

Outline of the Procedures: All participants of the study will be treated with respect and any information given will be solely for the purpose of the study. The researcher will apply for an ethical clearance through the research office. The questionnaire will take 15 minutes of the participants' time to complete and

participation is voluntarily. The participant can withdraw from the study anytime without giving reasons. The information the respondent gives will only be used for research purposes only.

Risks or Discomforts to the Participant: Not applicable.

Benefits: A journal article will be written for an accredited academic journal in the field of Accounting and Informatics.

Remuneration: There will be no remuneration received by the participant.

Cost of the study to the participant: There will be no costs of the study expected from participant towards completion of the study.

Confidentiality: All participants of the study will be treated with respect and any information provided by participant personal or professional, will be confidential. The researcher will apply for an ethical clearance through the research office. The study will not affect participants personally or professionally.

Persons to Contact in the Event of Any Problems or Queries: Please contact

Researcher: Jabhisile R Maphumulo 065 927 6442

Supervisor: Dr CK Dongwe 033 845 8898

Co-supervisor: Dr CJ Nyide 033 845 8804

APPENDIX C – Consent form



Consent Form

Consent form for the agreement to participate in the study

I, _____ (participant full name), hereby confirm that I have been informed by Jabhisile R Maphumulo (the researcher) about the nature of the study.

I have also received, read and understood the above written information (Participant Letter of Information) regarding the study. I am aware that the results of the study, including personal details regarding my sex, age and diagnosis will be anonymously processed into a study report. In view of the requirements of research, I agree that the data collected during this study can be processed in a computerised system by the researcher. I may, at any stage, without prejudice, withdraw my consent and participation in the study. I have had sufficient opportunity to ask questions and (of my own free will) declare myself prepared to participate in the study. I understand that significant new findings developed during the course of this research which may relate to my participation will be made available to me.

_____	_____	_____
Full Name of Participant	Date	Signature

I, _____ (name of researcher) hereby confirm that the above participant has been fully informed about the nature of the study.

_____	_____	_____
Full Name of Researcher	Date	Signature

_____	_____	_____
Full Name of Supervisor	Date	Signature

APPENDIX D – Ethical clearance



Faculty Research Office
Durban University of Technology
Date 30 April 2021

Student: Jabhisile Maphumulo
Student Number: 21308413
Degree: Master of Management Sciences in Administration and Information Management
Email: 21308413@dut4life.ac.za
Supervisor: Dr CK Dongwe
Supervisor email: cynthiaz@dut.ac.za

Dear Miss Maphumulo

ETHICAL APPROVAL: LEVEL 2

I am pleased to inform you that the Faculty Research Ethics Committee (FREC) following feedback from two reviewers has granted preliminary permission for you to conduct your research 'Administration practices affecting environmental compliance by small and medium sized enterprises in the manufacturing sector.'

When ethics approval is granted:

You are required to present the letter at your research site(s) for permission to gather data. Please also note that your research instruments must be accompanied by the letter of information and the letter of consent for each participant, as per your research proposal.

This ethics clearance is valid from the date of provisional approval on this letter for one year. A student must apply for recertification 3 months before the date of this expiry.

Recertification is required every year until after corrections are made, after examination, and the thesis is submitted to the Faculty Registrar.

A summary of your key research findings must be submitted to the FRC on completion of your studies.

Kindest regards.

Yours sincerely

Dr Mogiveny Rajkoomar
FREC Chair
Faculty of Accounting and Informatics
Durban University of Technology
Ritson Campus
Durban, South Africa
4001

APPENDIX E – Turnitin Report

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APPENDIX F – Editors Certificate

The Dissertation Design Master

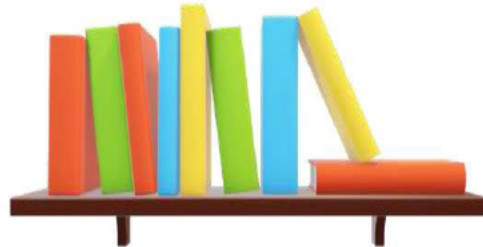


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This is to confirm that the thesis entitled

Administration Practices Affecting Environmental Compliance by Small and Medium-Sized Enterprises in the Manufacturing Sector

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was edited according to Durban University of Technology's specifications. The student received a detailed report with suggested changes. The thesis will be fit for submission when the student attends to all suggested changes (**to be reviewed by the supervisor**) and obtains permission to submit from the supervisor.

Report prepared by:

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Signature over printed name

Date: 2 December 2022



Certificate in Copy-editing
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