VALUES AND EMPLOYEES' VOLUNTARY PRO-ENVIRONMENTAL BEHAVIOUR IN SMALL, MEDIUM AND MICRO ENTERPRISES IN POLOKWANE MUNICIPALITY

by

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[redacted]

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DECLARATION

I, Motebejane Kabelo Nankie declare that this dissertation titled, “values and employees’ voluntary pro-environmental behaviour in small, medium and micro enterprises in Polokwane municipality” is submitted in fulfilment of the requirements for the degree of Master of Commerce in Business Management in the Department of Business Management at the University of Limpopo and is my own work and has not been previously submitted by me for a degree in another university. All the sources used in this study have been indicated and acknowledged accurately.

23 May 2022

Motebejane Kabelo Nankie Date

DEDICATION

I dedicate this study to my family members and God. To my family thank you for all the support that you gave me when I felt like giving up and did not think that the financial means to have this piece edited will be available. To God almighty, I thank you for carrying me through all the troubles I came across and never forsaking me.

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ABSTRACT

The primary objective of the study was to examine the effect of values (biospheric values, altruistic values, egoistic values and openness to change values) on voluntary pro-environmental behaviour of employees of SMMEs.In addition, the study investigated the moderating effect of demographic variables (gender, age and level of education) in the relationship between values and pro-environmental behaviour. The quantitative approach was utilised and the cross-sectional survey method was used to collect data from the respondents that were conveniently sampled. The Cronbach's alpha was used to measure reliability and the Partial Least Square Structural Equation Modelling (PLS SEM) was utilised to analyse data. The findings of the study indicated that biospheric values has a negative relationship with employees' voluntary pro-environmental behaviour. Three values (altruistic, egoistic and openness to change values) have significant positive relationships with voluntary pro-environmental behaviour of employees. The moderating effects of gender, age and level of education are insignificant. Recommendations on how to use values to improve the voluntary pro-environmental behaviour of employees of SMMEs are outlined.

Keywords: Pro-environmental behaviour, biospheric values, altruistic values, egoistic values, openness to change values, employees' voluntary pro-environmental behaviour, value belief norm theory.

LIST OF ABBREVIATIONS

SMME's:	Small, Medium and Micro Enterprises
PEB:	Pro-Environmental Behaviour
VBN:	Value Beliefs Norms theory
TREC:	Turfloop Research and Ethics Committee
PLS-SEM:	Partial Least Square Structural Equation Modelling
SEM:	Structural Equation Modelling

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CHAPTER ONE

INTRODUCTION AND BACKGROUND TO THE STUDY

1.1. INTRODUCTION AND BACKGROUND

The speed of economic growth in most developing and developed countries has led to many undesirable environmental effects such as pollution, the misuse of resources and environmental degradation. There is increasing acceptance that one of the most serious challenges that is faced by the world is climate change (Alvarado & Toledo, 2017). The Global Risks Perception Survey 2020 reports that environmental risks account for three of the top five risks of which climate change is the greatest concern (World Economic Forum, 2019). It is estimated that climate change will lead to about two hundred and fifty additional deaths annually between 2030 and 2050 (World Health Organization, 2018). The 26th United Nations Climate Change conference held in Glagow, Sctotlan in 2021 (COP 26) states that developing nations are most susceptible to the impacts of climate change and have seen their homes vanish below water and their crops destroyed by drought (United Nations Climate Change Conference, 2021). COP 26 further remarks that climate change is a huge risk that humanity is facing. Throughout the world, wildfires, storms and floods are escalating. Sadly, air pollution is badly affecting the health of tens of millions of human beings, and unpredictable weather causes damage to homes and livelihoods of people (United Nations Climate Change Conference, 2021). Business and individual behaviour as well as actions linked to consumption are some of the causes of these environmental problems (Noor, Shaari & Kumar 2014). COP 26 states that to mitigate climate change, countries, businesses and individuals contribute positively to environmental protection. Countries are requested to develop ambitious targets to reduce carbon dioxide emissions by 2030 that is in alignment with net zero goal by 2050 (United Nations Climate Change Conference, 2021)

The business activities of small, medium and micro enterprises (SMMEs) have a negative impact on the environment. There is an increasing proof that environmental challenges such as the loss of biodiversity and climate change are caused by the SMME activities (Graafland & Smid, 2016). Despite growing evidence that the negative environmental impact of SMME activities is high, the attention of government and researchers tend to focus on large firms (Terrier & Marfaing, 2015). Only a small

number of SMMEs implement pro-environmental activities in their organisations (Handrito, Slabbinck & Vanderstraeten, 2021). Although the separate environmental effects of SMMEs at the individual level may be minor, jointly their influence on the environment is important (Jansson, Nilsson, Modig & Hed Vall, 2017). The growing negative effect of the activirties of SMMEs has led to environmental researchers to focus on the sector (Malesios, Skouloudis, Dey, Abdelaziz, Kantartzis & Evangelinos, 2018; Rosa, Rulli, Davis, Chiarelli, Passera & D'Odorico, 2018). SMMEs account for the largest form of business organisations in many countries, but the importance that they put environmental management is weak (Lillah & Struwig, 2017). The way that SMMEs behave must change drastically in order to protect the environment (Cantele, Vernizzi & Campedelli, 2020). Pro-environmental behaviour (PEB) is one of the ways that SMMEs can reduce their negative environmental impact (Michalek, Thronicker, Yildiz & Schwarze, 2019). PEB may be defined as a personal behaviour that can be taken by business and individuals to make the environment better, or as a type of behaviour that looks to consciously reduce the behaviour that is negative on the natural environment (Park & Ha, 2012; Blok, Wesselink, Studynka & Kemp, 2015). It can also be defined as the behaviour that lessens ecological damages (Chakraborty, Singh & Roy, 2017). Regardless that business enterprises are the main contributor to the environmental problems that the world faces, research on pro-environmental behaviour has mainly focused on households while studies that focus on businesses are limited. Household-based studies have led to major observed results. It is not certain if their findings are applicable in the workplace. Furthermore, limited survey has explored PEB in SMMEs despite being the most common type of business enterprises (Banwo & Du, 2019).

The factors that can influence PEB are personal aspects (norms, attitudes, values and encouragement) and situational or contextual factors (government restrictions, adequate facilities for recycling) (Leung & Rosenthal, 2019). Fatoki (2019a) remarks that the factors that employee PEB include demographic factors (lifetime, earnings, education, and sex), mental factors (identity, values, norms and awareness), community-based factors (social ties), independent factors (enjoyment, pleasure, joy) and institutional factors (leadership behaviour, institutional support). Values are described as beliefs or behaviourheld by individuals or groups to a greater relative importance (Fatoki, 2019a). According to Gatersleben, Murtagh & Abrahamse (2012),

the four value orientations that underlie environmental concerns are egoism, altruism, biospherism and openness to change.

Gurmani, Khan, Khalique, Yasir, Obaid and Sabri (2021) remark that PEB can be categorised into involuntary and voluntary PEB. Involuntary PEB is enforced by the organisation to have employees perform their day-to-day tasks in a manner that is environmentally friendly (Patel & Holm, 2018). Voluntary PEB is the degree to which workers participate in behaviours that are friendly for the environment outside the tasks they are obligated to do in an organisational setting (Fatoki, 2021a). Voluntary PEB is optional and is carried out beyond the performance-evaluation and reward system of the organisation (Alzaidi & Iyanna, 2021). The effectiveness of an organisation on its practices of sustainability is highly depended on the contribution and support of employees, especially that of voluntary behaviour that is outside the performance formal evaluation system (Fatoki, 2021a).

Zientara and Zamojska (2018) postulate that although involuntary pro-environmental behaviour is crucial, it is insufficient to decrease the ecological footprint. Fatoki (2021a) states that corporate greening is rooted in the additional role and the individual sense of employees' PEB. It is tough for an enterprise to make volunteerism mandatory and impossible to get employees' honest commitment to the environment by official authorisation (Fatoki, 2021a). Therefore, this study seeks to understand the effect of value orientation, gender, age and educational level on employees' voluntary pro-environmental behaviour in SMMEs.

1.2 PROBLEM STATEMENT

Many SMMEs are known to be extremely resource-concentrated and consume a large and important number of resources that are non-renewable and other goods that are non-durable during their operational actions (Banwo & Du, 2015). SMME activities negatively impact on the environment. Reducing the negative environmental effects of these activities will require a change in many behaviours that they normally perform (Klewitz & Hansen, 2014). A sustainable environment has many benefits, including clear air, water and spaces for recreation and regeneration, but its attainment requires a shift at the individual, business and societal levels towards Pro-Environmental

Behaviour (Gifford & Nilsson, 2014; Bayulken, Huisingh & Fisher, 2021). One of the most known ways for SMMEs to minimise their unfavourable impact on the environment is to adopt PEB (Park & Ha, 2012). Although SMMEs significantly contribute to the environmental problems that the world faces, studies on pro-environmental behaviour have mainly focused on households and large firms; and research that focused on small firms were sparse (Chimucheka, 2013; Blundel, Baldock, Dadd, Gray & Sullivan, 2014; Du & Banwo, 2015).

In addition, studies that focus on SMMEs have tended to explore organisational factors rather than employees who play an important role in the workplace (Cegarra-Leiva, Sánchez-Vidal & Cegarra-Navarro, 2012; Matt, Orzes, Rauch & Dallasega, 2020). While corporate involvement in pro-environmental behaviour may be linked to the government, customer and industry pressure, the involvement of workers in PEB is frequently of free will or to meet the standard expectations of the firm (Klockner, 2013). Values are psychological factors that can influence the PEB of employees. However, studies that have focused on the outcome of value orientation on employees' PEB in the context of SMMEs are scarce. In addition, few studies on value orientation have been done in developed countries, and limited efforts have been made to validate the effectiveness of the findings of these studies in different cultural settings (Smith & O'Sullivan, 2012; Kanchana, 2013). To reduce environmental deterioration, there is a need for more research on PEB in developing countries such as South Africa. Marquart-Pyatt (2012) argues that one of the ways to better understand environmentalism worldwide is for scholars to explore investigations in a variety of contexts (e.g., developing and developed nations, southern and northern hemisphere, and large and small firms). Therefore, research that examines the PEB of SMMEs in different cultural settings are needed (Wei, Sial, Comite, Thu, Badulescu & Popp, 2021). Previous research has it that women have a higher pro-environmental behaviour compared to men (Longhi, 2013). The findings of the study by Longhi (2013) further indicate that having a university degree positively correlates with pro-environmental behaviour. This study will try to understand the effects of employee values on their voluntary pro-environmental behaviour as well as the role that demographic factors (gender, age and level of education play in the relationship.

1.3. AIM OF THE STUDY

This aim of the study is to explore the effect of values on the voluntary pro-environmental behaviour of employees of SMMEs.

biospheric values, altruistic values, egoistic values and openness to change values

1.4. OBJECTIVES OF THE STUDY

- To examine the effect of biospheric values on employees' voluntary pro-environmental behaviour of SMMEs.
- To determine the effect of altruistic values on the voluntary pro-environmental behaviour of employees of SMMEs.
- To investigate the effect of egoistic values on the voluntary pro-environmental behaviour of employees of SMMEs.
- To examine the effect of openness to change values on the voluntary pro-environmental behaviour of employees of SMMEs.
- To explore the moderating effect of gender level on the relationship between biospheric, altruistic, egoistic and openness to change values and employees' voluntary pro-environmental behaviour.
- To examine the moderating effect of age on the relationship between biospheric, altruistic, egoistic and openness to change values and employees' voluntary pro-environmental behaviour.
- To examine the moderating effect of educational level on the relationship between biospheric, altruistic, egoistic and openness to change values and employees' voluntary pro-environmental behaviour.

1.5. HYPOTHESES

Ha1: There is a significant positive relationship between biospheric values and employees' voluntary pro-environmental behaviour of SMMEs.

Ha2: There is a significant positive relationship between altruistic values and the voluntary pro-environmental behaviour of employees of SMMEs.

Ha3: There is a significant negative relationship between egoistic values and the voluntary pro-environmental behaviour of employees of SMMEs.

Ha4: There is a significant positive relationship between openness to change values and the voluntary pro-environmental behaviour of employees of SMMEs.

Ha5: Gender significantly and positively moderates the relationship between biospheric, altruistic, egoistic and openness to change values and employees' voluntary pro-environmental behaviour.

Ha6: Age significantly and positively moderates the relationship between biospheric, altruistic, egoistic and openness to change values and employees' voluntary pro-environmental behaviour.

Ha7: Educational level significantly and positively moderates the relationship between biospheric, altruistic, egoistic and openness to change values and employees' voluntary pro-environmental behaviour.

1.6. DEFINITION OF CONCEPTS

1.6.1. Pro-Environmental Behaviour

Sawitri, Hadiyanto and Hadi (2015) describe PEB as actions that are cognisant and that are made by individuals and businesses to reduce human activities which affect the environment negatively or improve environmental quality. PEB can be divided into voluntary and involuntary PEB. Involuntary PEB is behaviour that is formally required by an organisation to aid their employees complete their work task in an environmentally friendly manner (Alzaidi & Iyanna, 2021). Voluntary PEB is described as behaviour done by employees that protects the environment outside their formal work task (Zientara & Zamojska, 2018). In this study, voluntary PEB will be used. Therefore, the researcher's own conceptualisation of voluntary PEB is explained as when employees perform their day-to-day task in a way that protects and improves the natural and built environment separate from their formal work task.

1.6.2. SMMEs

SMMEs have three dimensions of classes in the republic of South Africa. “These are small, micro and medium enterprises, the quantitative definition focuses on the number of employees and the turnover” (Government Gazette, 2019). The number of workers is one of the pointers that may be utilised to categorise SMMEs. “A micro enterprise is expected to have between zero and ten employees, a small enterprise between eleven and fifty employees and a medium enterprise between fifty-one and two hundred and fifty employees” (Government Gazette, 2019). The researcher’s own conceptualisation of SMMEs is based on the above official definition.

1.6.3. Employee

Gobind (2018) says “Section 213 of the Labour Relations Act (LRA) provides that an employee is anyone, other than an independent contractor, who works for another person or who assists in conducting the business of an employer”. In this study, an employee is anyone that is working for and being paid by the SMME.

1.6.4. Values

Values are beliefs or ideas [about] desirable end behaviours or states, [which] exceed certain circumstances, have selection guided or appraisal of events and behaviour and are ordered by relative significance (Kumpikaitė-Valiūnienė, Liubinienė, Žičkutė, Duobienė, Mockaitis & Mihi-Ramirez, 2021). Egoistic values are values which place their focus on maximising individual results (Yadav & Pathak, 2016). Altruistic values are values showing worry for the wellbeing of others (Verma, Chandra & Kumar, 2019). Biospheric values are values emphasising the atmosphere and the environment (Howell, 2013). Openness to change values refer to a person’s degree of tolerance and conscious awareness of the likelihood that change may be required throughout a variety of scenarios and situations, together with the drive or desire to enact that change (Asumadu, 2019). In this study, values are what an employee believes in and in turn influences how they behave towards the environment.

1.7. PRELIMINARY LITERATURE REVIEW

This segment will place emphasis on theoretical and empirical literature. The theory that will be used in this study is the value belief norms theory. The theory will be

extended to include constructs that will better explain the topic of the study, thus making up the empirical literature of the study.

1.7.1. Value belief norms (VBN) theory

The value belief norm theory by Stern, Dietz, Guagnano and Kalof (1999) explains the effect of people's values on conduct in the context of environmentalism. The theory draws on the theoretical work on values such as the "norm-activation processes" by Schwartz (1977) and the moral "norm-activation theory" by Stern et al. (1999). The theory of VBN states that the relationship among norms, beliefs, values and behaviours are in a causal chain. For the value components, altruistic, biospheric and egoistic values, and openness to change values were proposed, based on Schwartz's theory of basic values (Blankenberg & Alhusen, 2018). Altruistic values are values that consider humans and existing species that inspire individuals to participate in PEB. Biospheric values put emphasis on the biosphere, the ecosystem and the environment. Egoistic values are known as values with regards to the society that put an individual's interest first, which includes authority, wealth, and ability to be influential (Van der Werff & Steg, 2016). Openness to change values refer to self-direction and stimulation built on the inspiration of autonomous thought and deed, which fights with the inspiration of ensuring that others' expectations are met. The VBN can be used to examine a relationship that is direct between values and actions. In addition, the theory allows for the inclusion of mediating variables such as beliefs that are specific or norms that are personal**.** Van der Werff and Steg (2016) suggest that according to the VBN theory, individuals are most probable to get involved in PEB when the feeling of moral obligation arises.

1.7.2 Empirical literature

The empirical literature aims to further explain the theory used in this study to better understand which constructs lead to or do not lead to pro-environmental behaviour.

1.7.2.1 Biospheric Values and voluntary PEB

Van der Werff, Steg and Keizer (2014) state that biospheric values are important for predicting and understanding ecological behaviour. Nguyen, Lobo and Greenland (2016) state that people with strong biospheric values care for the environment and

nature and powerfully base their choices and judgements to participate in certain activities on the end results of their behaviour for the environment and nature. The more people support values that are biospheric in nature, the more they act friendlier towards the environment (Nguyen et al., 2016). The overall aim of biospheric values is to safeguard the atmosphere, which makes it connected to PEB. Biospheric values are related to environmental self-identity, which shows the level to which a person thinks of themselves as an individual that behaves in an environmentally friendly manner. People get motivation from seeing themselves act in line that makes them appear as consistent. The stronger a person's environmental self-identify, the more they incline to reuse, drive-fuel efficient cars and form part of environmental activism (Van der Werff et al., 2014). Thus, a relationship that is positive among biospheric values and voluntary PEB is anticipated.

1.7.2.2 Altruistic values and voluntary PEB

People with altruistic values focus on the consequences of their actions on other people (Hiratsuka, Perlaviciute & Steg, 2018). Altruistic people consume environmentally friendly products to protect the environment for the protection of the human race (Hwang, Kim & Kim, 2020). Individuals with altruistic values act in a manner that increases the welfare of others by incurring personal costs but not gaining anything personally (Hartmann, Eisend, Apaolaza & D'Souza, 2017). Like most prosocial behaviour, the PEB has similar characteristics of altruism and can be interpreted as such (Hartmann et al., 2017). People with altruistic values will not think twice about taking political actions such as signing a petition or participating in boycotts to enforce environmental laws that are tough to protect the environment.

Individuals with altruistic values tend to have stronger pro-environmental beliefs and have the willingness to participate in different types of activities that are environmentally-conscious as compared to those who focus their interests on individual values (Lee, Kim, Kim & Choi, 2014). Thus, a positive relationship between altruistic values and voluntary PEB is anticipated.

1.7.2.3 Egoistic values and voluntary PEB

Hiratsuka et al. (2018) point out that egoistic values are about people placing their care in power or money for their own gain. This may have a negative relationship with

environmental concerns. People who have personalities with strong egoistic value orientation are more likely to consider the expenses and profits of PEB for themselves. “However, when the perceived benefit outweighs the perceived cost’s, they will behave in a way that is environmentally friendly and vice versa” (Gatersleben, Murtagh & Abrahamse, 2014). However, in multiple cases, when a person acts on an egoistic value orientation, it means they are not acting pro-environmentally because the personal costs that are linked with the PEB are more than the personal benefits (Gatersleben et al., 2014). Thus, a negative association between egoistic values and voluntary PEB is expected.

1.7.2.4. Openness to change values and PEB

Ghazali, Nguyen, Mutum and Yap (2019) postulate that openness to change is referred to as the self-direction and stimulation built upon the motivation of autonomous thought and action, which battles with the motivation of satisfying the hopes of others. Barbarossa, De Pelsmacker and Moons (2017) remark that individuals that value openness to change as a crucial principle may find happiness from being eco-friendly solution early adopters, which is highly innovative and conveys their inventive and unusual green self-identification. People with high openness to change are most probable to become sensational seekers (Hansen, Sørensen & Eriksen, 2018). Blok et al. (2015) found that “self-transcendence and openness to change are strong predictors of PEB. On the contrary, values related to self-enhancement and conservatism are strong negative predictors of PEB”. Therefore, it is expected that openness to change will have a helpful relationship with voluntary pro-environmental behaviour in organisations.

1.7.2.5. Moderating effect of gender on values and voluntary PEB

Vicente-Molina, Fernández-Sainz and Izagirre-Olaizola (2018) remark that minimal attention has been given to theories that explain PEB by taking gender differences into account. Although these findings are not consistent over time, some studies reveal that men are less inclined to PEB compared to women (Vicente-Molina et al., 2018). The reason why women and men behave differently is explained through the socialisation process that the two genders go through (Sreen, Purbey & Sadarangani, 2018). According to Sreen et al. (2018), the theory of gender socialisation argues that

girls and boys go through socialisation processes that are different from early childhood and thus develop social values and expectations that are different. For example, boys in India are taught to be more competitive, show no emotions and are expected to be sole providers for their family when they get old, while girls learn to show compassion and be cooperative since they are expected to be nurturing care givers when they mature into adulthood (Sreen et al., 2018).

The relationship between gender and PEB requires more empirical evidence (Vicente-Molina et al., 2018). In the past decades, researchers have pointed out the importance of gender when analysing behaviour towards the environment because it could influence beliefs, attitudes, behaviour and opinions. Prior research has also revealed that women tend to participate more with regards to pro-environmental actions when everyday behaviour (such as recycling, use of transport, energy conservation) is questioned and show an attitude that is positive towards products that protect the environment (Sreen et al., 2018). Thus, it is expected that gender will moderate values and voluntary PEB.

1.8. RESEARCH METHODOLOGY

This study was carried out in Polokwane Municipality in Limpopo Province of South Africa. Polokwane City is located in Capricorn District Municipality. The positivist philosophy and the deductive research approach were used in the study. According to Alakwe (2017), positivism as a philosophy holds the position that only knowledge that is factual and gained through observation, as well measurement, can be trusted. Positivism relies on observations that are quantifiable that in the end produce statistical analyses (Alharahsheh & Pius, 2020). The study made use of the quantitative research design, with the cross-sectional survey approach being used for the collection of data from respondents. A cross-sectional survey is defined by Lavrakas, Kennedy, de Leeuw, West, Holbrook and Traugott (2019) as glimpses of the population from which data is gathered. The cross-sectional survey gathers data to make conclusions about the population of interest at a certain point in time (Van der Stede, 2014). To collect data, a questionnaire that is self-administered was utilised. The target population of the study included all employees that are working in SMMEs in the wholesale, retail and sectors that provide services. The research sampled

SMME employees. Since a sampling frame of employees of SMMEs in area of study is not identified, convenience and snowball sampling methods were used to obtain data from a minimum of three hundred and seventy SMME employees. Convenience sampling is when individuals who fall into certain criteria of a study are recognised in any manner possible (Emerson, 2015). Snowball sampling is when a researcher asks the identified participants of the study to tell their acquaintances and friends about the study (Emerson, 2015). Primary data sources included a questionnaire given to the sample selected. The items of the questionnaire were adapted from existing studies. The psychometric property of the scales used by previous studies was used to check for reliability and validity. Questionnaires were given to identified research respondents by the investigator through E-mail addresses and in person, and the respondents were given one month to respond. The collected questionnaires were coded, and the Partial Least Square Structural Equation Modelling (PLS SEM) was utilised to analyse the causal relationship amongst variables using the Smart PLS 3 software. The data analysis included demographical analysis, descriptive analysis, the measurement model, the structural model, and the analysis of the effect of moderation. To show reliability of the study, the researcher used internal consistency (Cronbach's alpha) and composite reliability, which was obtained from PLS SEM (Rigdon, 2012). The "Heterotrait-Monotrait ratio of correlations" (HTMT) was utilised to check for discriminant validity (Roemer, Schuberth & Henseler, 2021). The researcher was also ethical when dealing with the sample group. To ensure that the research was carried out in a manner that is ethical, the researcher applied for ethical permission from the Turfloop Research and Ethics Committee (TREC) for consent to carry out the study. Ethical principles such as informed and voluntary consent, privacy and confidentiality of participants, respect and dignity as well as risk and harm of participants were taken into consideration and practised.

1.9. SIGNIFICANCE OF THE STUDY

Theoretically, the study tested and confirmed the applicability of the theory of VBN to employees in the context of SMMEs in a developing country. In addition, the study extended the VBN model by examining the moderating effects of demographic variables (gender, age and level of education). Empirically, studies on SMMEs have

placed their focus on organisations and not on employees, who play an important role in the workplace. This research aimed to explore the effect of values on employees' voluntary PEB, values as well as moderation factors that enable them to act or not to act in a pro-environmental manner in the workplace. This study added to knowledge by enabling employees to have a thorough knowledge on the significance of acting pro-environmentally, and will influence their attitudes in terms of them acting more ecologically (preserving and conserving the environment) and in terms of an opportunity to investigate different types of values and how those values influence them to act towards the natural and built environment.

The findings of this research benefited in terms of policy contribution, and is beneficial to SMMEs and organisations that support sustainability in small firms in understanding how values can affect the voluntary PEB of employees. This can lead to the development of training programmes and other interventions that will take the values of employees of SMMEs into consideration. The findings of the study will also be useful to government. South Africa as one of the signatories to the Paris Agreement on climate change has vowed to limit greenhouse gas emissions (United Nations Framework Convention on Climate Change, 2015). This will also assist COP as organised by the United Nations, of which South Africa is a part of, to reach its goal of mitigating climate change and reaching net zero emission by 2050 (United Nations Climate Change Conference, 2021). Also, one of the objectives of South Africa's National Development Plan 2030 is the transition of the country into a green economy. Understanding the effect of values on the voluntary PEB of employees of SMMEs can help to understand how employee values can be managed to improve the environment.

OUTLINE OF CHAPTERS

Chapter 1: Introduction and background of the study

Chapter 1 discusses the background of the study, touches on the problem statement, reveals the aim, objectives and hypotheses of the study together with the definitions of concepts, the preliminary literature review together with the methodology. Lastly, the significance of the study and the chapter outline are presented.

Chapter 2: Small, Micro and Medium Enterprises and their contribution to the economy

This chapter introduces SMMEs domestically (South Africa) and internationally. Firstly, the manner in which SMMEs are defined in both developing and developed countries as well as the definition of the domestic country (South Africa) in existing literature is outlined. The landscape and formalisation of SMMEs will also be discussed in detail. The support systems for South African SMMEs are investigated as well. Furthermore, the chapter discusses contributions of SMMEs in both South Africa and in selected international countries. This is then followed by challenges faced by SMMEs, and then the chapter is concluded.

Chapter 3: Values of Pro-Environmental Behaviour

This chapter provides an overview of values (that originate from the value beliefs norm theory) of employees of SMMEs, and how these values influence their pro-environmental behaviour. The overview helps to develop hypotheses of the study. In addition, a conceptual framework is created from the hypotheses and the chosen theory of the study is discussed.

Chapter 4: RESEARCH METHODOLOGY

The research methodology is outlined in this chapter. The research philosophy and approach are discussed first. This is followed by research design, the population of the study, sample and sampling methods, methods of collecting data, types of surveys, instruments of collecting data, procedures for data collection and methods of analysing data. Furthermore, the reliability and validity of the study is discussed. In this chapter again, the research pilot study as well as its ethical considerations are also investigated.

Chapter 5: ANALYSES AND INTERPRETATION OF RESEARCH RESULTS

The purpose of Chapter five is to present and interpret the data collected. The chapter will test if the outlined hypotheses are to be accepted or rejected and if the decision made is consistent with that of existing empirical literature.

Chapter 6: CONCLUSIONS AND RECOMMENDATIONS

This chapter concludes the study. Recommendations and conclusions directed by the results of the study are presented. The limitations of the study as well as future suggestions are also discussed.

1.11 SUMMARY

The necessity of conducting an empirical study to check if the relationship among the values of belief norm theory influences the voluntary pro-environmental behaviour of employees of SMMEs was clarified in the problem statement section of the research. The chapter furthermore explained the aim, objectives and hypotheses of the study, and reviewed its (the study's) theoretical and empirical literature. The methodology to be used was also discussed. In the methodology section, it was explained that a cross-sectional survey would be utilised to collect data and that specific ethical considerations would be adhered too. Then lastly, the significance of the study was provided. The chapter outline provides guidelines to the reader on the direction that this dissertation will take. Chapter 2 will discuss Small, Micro and Medium enterprises (SMMEs) in South Africa and internationally. The discussion will include quantitative and qualitative meanings of SMMEs in different countries. It will discuss contributions of SMMEs to its economies.The discussion will also include similarities and differences between SMMEs locally and internationally. Challenges faced by SMMEs will also be outlined.

CHAPTER TWO

SMALL, MICRO, MEDIUM-SIZED ENTERPRISES (SMMEs)

2.1. INTRODUCTION

The purpose of this chapter is to review literature on small, micro and medium-sized enterprises (SMMEs). The discussion will focus on the most important concepts that relate to SMMEs. The literature review in this chapter works as a point of departure to understanding how SMMEs operate in different countries. Thus, the literature will cover the definition of SMMEs from local and international contexts. Both the qualitative and quantitative definitions of SMMEs will be presented as well as an inter-country comparison of the definitions. South Africa's SMME landscape will be investigated. The landscape discusses the history of SMMEs and need for SMMEs in South Africa. The drivers of formalisation of SMMEs will also be discussed. This will be followed by the discussion of South African policy on SMME support programmes. The contribution of SMMEs will focus on employment, Gross Domestic Product and poverty alleviation in both developed and developing nations. Lastly, challenges faced by SMMEs in terms of internal and external environment are discussed.

The next section will define SMMEs from both the national and international context.

2.2. DEFINITION OF SMMEs

Kabanda and Matsinhe (2019) postulate that SMMEs have no sole definition that is accepted universally. Existing literature shows that there is an overabundance of

definitions. The definitions of SMMEs do not only differ between nations, but even within a nation and different regions of a continent (Sheriff & Muffatto, 2015). The definitions are mostly based on criteria such as the value of sales, the quantity of employees and or value of assets, even the criteria differ from nation to nation and from institution to institution (Ogubazghi & Muturi, 2014). Kambule (2014) states that SMMEs have no universal definition because the definition is mostly contextualised.

This study will present definitions of SMMEs from domestic and international viewpoints. From an international standpoint, both the qualitative and quantitative definitions in the European Union, China, United States of America, Nigeria, Egypt and Botswana will be provided. In the local context (South Africa), both the qualitative and quantitative definitions will be presented. Finally, a thorough comparison of international as well as local definitions to highlight the similarities and differences will be done.

2.2.1. International definition of SMMEs

2.2.1.1. Definition of SMMEs in the European Union

The European Commission provides that the criteria used to define SMMEs in the European Union is the average number of workers as well as yearly turnover and or the total balance sheet (European Commission, 2011). The Commission (2011) further defines an SMME as an entity that hires nothing greater than 250 workers, provides a yearly turnover of less than 50 million Euros and/or a total balance sheet of not more than 43 million Euros.

Table 2.1. Quantitative definition of European Union of SMMEs

Factors determining if an Enterprise is an SMME	**Micro-enterprises**	**Small enterprises**	**Medium-sized enterprises**
Average number of workers	< 10 employees	< 50 employees	<250 employees

Yearly turnover	< 2 million Euros or	< 10 million Euros or	< 50 million Euros or
Total balance sheet	< 2 million Euros	< 10 million Euros	< 43 million Euros

Source: European Commission (2011)

Table 2.1 shows that small enterprises are businesses that employ less than 50 workers, has a turnover of less-than €10 million and or €10 million in a total balance sheet. It further shows that medium-sized enterprises must employ less than 250 employees, provides a yearly turnover of less than €50 million and or a total balance sheet of €43 million, and lastly, alludes that micro enterprises must employ less than 10 employees and make a yearly turnover of nothing greater or equal to €2 million and or a total balance sheet of less than €2 million.

2.2.1.2. Definition of SMMEs in China

The SMME definition of China is dependent on the category of the industry and the criteria used to define it. It is the number of employees, yearly revenue, and total assets comprising an enterprise (SME Promotion Law of China, 2003). “An industrial SMME is defined as having a maximum of 2000 employees, a medium-sized enterprise has employees between 301 and 2000, while a small enterprise can have less than 300 employees” (SME Promotion Law of China, 2003).

Table 2.2. Quantitative definition of SMMEs in China

Size Category	**Industries**	**Employment Based**	**Total Assets**	**Business Revenue**
Small	1.Industry	<300	<¥40million	<¥30million
	2.Construction	<600	<¥40million	<¥30million
	3.Wholesale	<100		<¥30million
	4.Retail	<100		<¥10million

	5.Transport 6.Post 7.Hotel & Restaurant	<500 <400 <400		<¥30million <¥30million <¥30million
Medium	1.Industry 2.Construction 3.Wholesale 4.Retail 5.Transport 6.Post 7.Hotel & Restaurant	300-2000 600-3000 100-200 100-500 500-3000 400-1000 400-800	¥40million-400million ¥40million-400million	¥30million-300million ¥30million-300million ¥30million-300million ¥10million-150million ¥30million-300million ¥30million-300million ¥30million-150million

Source: SME promotion law of China, 2003.

Table 2.2 shows that the guidelines cover mainly payrolls, total assets and total revenue of the organisation. There is a specific criterion that applies to the industrial sector, construction, transport, together with wholesale businesses and retail

enterprises, hotel and restaurants. The guidelines of the industrial sector want SMMEs to have a maximum of 2000 employees and a yearly revenue that does not go above RMB300 million. Their total assets must not be above RMB400 million. A minimum of 300 employees must be employed by medium-sized enterprises. The total assets and yearly revenue must not go above RMB40 million and RMB30 million, respectively. Others are considered as small enterprises.

2.2.1.3. Definition of SMMEs in the United States of America
SMALL BUSINESS CONCERNS-

(1) In general "For the purposes of this Act, a small-business concern, including but not limited to enterprises that are engaged in the business of production of food and fibre, ranching and raising of livestock, aquaculture, and all other farming and agricultural related industries, shall be deemed to be one which is independently owned and operated and which is not dominant in its field of operation: Provided, That notwithstanding any other provision of law, an agricultural enterprise shall be deemed to be a small business concern if it (including its affiliates) has annual receipts not in excess of $750,000".

(2) ESTABLISHMENT OF SIZE STANDARDS-

(A) In general- the establishment of size standards adding on to the criteria mentioned above, specifications such as detailed standards or definitions done by the administrator by which a business concern can be considered to be a small business concern for the purposes of this or any other Act.

(B) In general—in addition to the criteria specified in paragraph (1), it may use the number of workers, dollar volume of an enterprise, net worth, net income, combination thereof, or other factors that are appropriate.

Table 2.3 Quantitative definition of SMMEs in the USA

	Manufacturing and non-exporting services firms[a]	Exporting services firms[b]		Farms
		Most	High value[c]	

Number of Employees	<500	<500	<500	<500[d]
Revenue	Not applicable	≤$7 million	≤$25 million	≤$250000

[a] comprises of exporting non-exporting firms that manufacture and non-exporting services firms.

[b] chosen on the basis of scale and export potential, and includes scientific services, finance and insurance services, wholesale trade services; professional, and technical services.

[c] in this category, computer services was the only sector.

[d] the commission staff imposed the threshold so as to partially match definitions across sectors; the defining institution did not impose it.

Source: USITC ("United States International Trade Commission") staff.

2.2.1.4. Definition of SMMEs in Nigeria

In Nigeria, the most recognised definition of SMMEs is that defined by the "Small and Medium Enterprise Development Agency of Nigeria" SMEDAN (2013), which defines a micro enterprise as an enterprise that has one to nine employees with a yearly turnover of not more than or equal to 10 million Naira (Franklin Eze, Ruhode & Gervase Iwu, 2018). A small enterprise is defined as an enterprise that has 10-49 workers with a yearly turnover that is not greater than 22 million Naira (Franklin Eze et al., 2018). A medium enterprise is also described as any enterprise that has employees who range between 50 and199 and with a yearly turnover of greater than 50 million Naira and less than 500 million (Franklin Eze et al., 2018).

Table 2.4 Quantitative definition of Nigeria's SMMEs

Size	**No. of Employees**	**Assets (=N= Million) (excl. land and buildings)**
Micro	1-10	< 5 Million

Small	10-49	5 Million – < 50Million
Medium	50-199	50 Million – < 500Million

Source: “Small & Medium Enterprises Development agency of Nigeria” (SMEDAN), 2013

Table 2.4. shows that in Nigeria, for an enterprise to be registered as a micro enterprise, it must have 1-10 employees with assets that exclude land and buildings being less 5 million. For small enterprises to be registered, they need to have between 10-49 employees, and assets (not including land and buildings) should have between 5 million – less than 50 million, and for an enterprise to qualify as medium, it must have between 50 and 199 employees, and with assets (excluding land and buildings) between 50Million – less than 500Million.

2.2.1.5. Definition of SMMEs of Egypt

SMMEs are classed in Egypt's “Small and Micro Enterprise Law (No. 141, 2004)” as enterprises that depend on the number of workers in which the maximum number is 50 employees, investment in capital is not greater than 5 million EGP, and the turnover in sales does not exceed 10 million EGP). In Egypt, when an enterprise is categorised as micro, it means it has less than ten workers, and to be categorised as a small and medium enterprise, the number of employees must range between 10 and 200, while for large enterprises, the number of employees is greater than 200 (Egyptian Central Bank, 2015).

Table 2.5 Quantitative definition of SMMEs in Egypt

Enterprise	Turnover	Number of employees
Micro	<50 000 LE	<10
Very small Small	50 000 LE- 5 000 000 LE (Industrial facilities) 50 000 LE- 3 000 000 LE (Non-Industrial facilities)	<200

Medium	5 000 000 LE- 10 000 000 LE (Industrial facilities) 3 000 000LE-5 000 000 LE(Non-Industrial facilities)	<200

Source: Central bank of Egypt (CBE), 2015

Table 2.5. shows that SMMEs in Egypt must have a turnover of less than 50 000 LE, and less than 10 employees to qualify as a micro enterprise. To qualify as a very small enterprise in the industrial facilities, the turnover must be between 50 000 LE and 5 000 000 LE with less than 200 employees. Small enterprises in the non-industrial facilities must have a turnover that is between 50 000 LE- 3 000 000 LE, and must have less 200 employees. To become a medium enterprise in the industrial facilities, the turnover must be between 5 000 000 LE-10 000 000 LE with less than 200 employees, and for medium enterprises in the non-industrial facilities, the turnover should be between 3 000 000 LE and 5 000 000 LE.

2.2.1.6. Definition of SMMEs in Botswana

SMMEs in Botswana are defined by the quantity of employees and the yearly turnover of enterprises (BIDPA, 2007). BIDPA (2007) further alludes that the micro enterprises must employ less than 6 workers, which includes the owner, and must have a turnover that does not go above P60000. The small enterprises must have less than 25 employees, with a turnover that ranges from P60000 to P1500000, and finally medium enterprises must have not more than 100 workers, with a turnover ranging from P1500000 to P5000000.

Table 2.6 Quantitative definition of SMMEs in Botswana

Factors determining if an Enterprise is an SMME	**Micro Enterprises**	**Small enterprises**	**Medium-sized enterprises**

Number of Employees	<6 employees, with the owner included	<25 employees	<100 employees
Annual sales	<P60000	≤P1500000	≤ P5000000

Source: Botswana Institute for Development Policy Analysis (BIDPA, 2007)

Table 2.6. shows that micro enterprises in Botswana must have less than 6 employees, of which the owner is included. Enterprises that are small must have less than 25 workers and medium-sized enterprises must have less than 100 employees. Their annual sales should be less than P60000, between P60000 and P1500000, and finally, between P1500000 and P5000000, respectively.

2.2.2. South African definition of SMMEs

South Africa's SMMEs are categorised based on the class or size of the enterprise, the number of employees, and annual revenues, to a lesser extent. In South Africa, an SMME needs to meet the quantitative and qualitative definitions in terms of the prescription of the national SMME Act. The "National Small Business Act (Act 102 of 1996, as amended in 2003 and 2004)" of South Africa defines an SMME as "A separate and distinct business entity, including co-operative enterprises and non-governmental organisations, managed by one owner or more which, including its branches or subsidiaries, if any, is predominantly carried on in any sector or sub-sector of the economy and which can be classified as micro, a very small, a small or a medium enterprise" (Government Gazette, 2003). The "National Small Business Act of 1996 (as amended in 2003 & 2004)" further classifies SMMEs into different groups, namely: "Survivalist enterprises (which include businesses such as vendors, hawkers and farmers who have assets that are minimal and have an income that is below the poverty line), micro enterprises (includes lack of formality in registration and taxation and their capital base is limited), very small enterprise (operate in the formal market with access to technology), small enterprise (these entities are more established and are registered for tax purposes) and medium enterprise (enterprises are often

characterised by the decentralisation of power to an additional management layer)" (Ngcobo 0& Sukdeo, 2015).

Additionally, the Act outlines the standard utilised to classify or determine such an enterprise as a "micro, a very small, small or a medium entity". The Act uses elements such as "the number of employees, annual turnover, and total gross asset value, excluding fixed property to classify SMMEs" (Hadebe, 2011).

- **NATIONAL SMALL BUSINESS ACT 2003 definition of SMME in South Africa**

Table 2.7. Quantitative definition of SMMEs in South Africa as per National Small Business Act 2003.

Column 1	**Column 2**	**Column 3**	**Column 4**	**Column 5**
Sector or subsector in accordance with the Standard Industrial Classification	**Enterprise class or size**	**The Total full-time equivalent of paid employees**	**Total Turnover**	**Total gross asset value (fixed property excluded)**
Agriculture	Medium	100	R5m	R5m
	Small	50	R3m	R3m
	Very small	10	R0.50m	R0.50m
	Micro	5	R0.20	R0.10
Mining and Quarrying	Medium	200	R39m	R29m
	Small	50	R10m	R6m
	Very Small	20	R4m	R2m
	Micro	5	R0.20m	R0.10
Manufacturing	Medium	200	R51m	R19m
	Small	50	R13m	R5m
	Very small	20	R5m	R2m
	Micro	5	R0.20	R0.10

Electricity, Gas and Water	Medium	200	R51m	R19m
	Small	50	R13m	R5m
	Very small	20	R5.10m	R1.90m
	Micro	5	R0.20	R0.10
Construction	Medium	200	R26m	R5m
	Small	50	R6m	R1m
	Very small	20	R3m	R0.50m
	Micro	5	R0.20m	R0.10
Retail and Motor Trade and Repair Services	Medium	200	R39m	R6m
	Small	50	R19m	R3m
	Very small	20	R4m	R0.60m
	Micro	5	R0.20m	R0.10
Wholesale Trade, Commercial Agents and Allied Services	Medium	200	R64m	R10m
	Small	50	R32m	R5m
	Very small	20	R6m	R0.60m
	Micro	5	R0.20	R0.10
Catering, Accommodation, and Other Trade	Medium	200	R13m	R3m
	Small	50	R6m	R1m
	Very small	20	R5.10m	R1.90m
	Micro	5	R0.20m	R0.10m
Transport, Storage and Communications	Medium	200	R26m	R6m
	Small	50	R13m	R3m

	Very small	20	R3m	R0.60m
	Micro	5	R0.20m	R0.10m
Finance and Business Services	Medium	200	R26m	R5m
	Small	50	R13m	R3m
	Very small	20	R3m	R0.50m
	Micro	5	R0.20m	R0.10m
Community, Social and Personal Services	Medium	200	R13m	R6m
	Small	50	R6m	R3m
	Very small	20	R1m	R0.60m
	Micro	5	R0.20m	R0.10m

Source: The National Small Business Act No. 102 of 1996, as amended in 2003

- **Amendment 2019 of the definition of SMMEs by the National Small Business Act 2019**

Table 2.8. Quantitative definition of SMMEs in South Africa as per National Small Business Act 2019

Column 1	**Column 2**	**Column 3**	**Column 4**
Sectors or sub-sectors in accordance with the Standard Industrial Classification	**Size or Class of Enterprise**	**Total Full-time equivalent of paid Employees**	**Total Annual Turnover**
Agriculture	Medium	51-250	≤R35m
	Small	11-50	≤R17m
	Micro	0-10	≤R7m
Mining and Quarrying	Medium	51-250	≤R210m

	Small	11-50	≤R50m
	Micro	0-10	≤R15m
Manufacturing	Medium	51-250	≤R170m
	Small	11-50	≤R50m
	Micro	0-10	≤R10m
Electricity, Gas and Water	Medium	51-250	≤R180m
	Small	11-50	≤R60m
	Micro	0-10	≤R10m
Construction	Medium	51-250	≤R170m
	Small	11-50	≤R75m
	Micro	0-10	≤R10m
Retail, Motor Trade and Repair Services	Medium	51-250	≤R80m
	Small	11-50	≤R25m
	Micro	0-10	≤R7.5m
Wholesale	Medium	51-250	≤ R220m
	Small	11-50	≤R80m
	Micro	0-10	≤R20m
Catering Accommodation and Other Trade	Medium	51-250	≤R40m
	Small	11-50	≤R15m
	Micro	0-10	≤R5m
Transport storage and communications	Medium	51-250	≤R140m
	Small	11-50	≤R45m
	Micro	0-10	≤R7.5m
Finance and Business Service	Medium	51-250	≤R85m
	Small	11-50	≤R35m

	Micro	0-10	≤R7.5m
Community, social and personal services	Medium	51-250	≤R70m
	Small	11-50	≤R22m
	Micro	0-10	≤R5m

Source: (Government Gazette SA, 2019)

2.3. SIMILARITIES AND DIFFERENCES BETWEEN SMMES

2.3.1. Similarities and differences in terms of the 2003 and 2019 definitions of SMMEs in South Africa

The National Small Business Act of 2003 of South Africa was amended in 2019 as shown in the Table 2.8 above. With this amendment, the metrics defining SMMEs were affected. The size or class of the enterprise was changed. In 2003, there were four classes, namely, medium, small, very small and micro for all industries classified, and in 2019, the classes were amended to medium, small and micro enterprises. The new 2019 definition also removed entirely the gross asset value as it was said that it was often “inappropriate and difficult to measure”.

The total number of fully paid employees was also changed. In 2003, the agricultural industry in its medium class was only limited to 100 employees. But in the 2019 changes, the number increased to a minimum of 51 and a maximum number of 250 employees. The small class moved from 0 to 50 employees to a minimum of 11 and a maximum of 50 employees for all industries. The micro class moved from a maximum of 0 to 5 employees to a minimum of 0 and a maximum of 10 employees for all industries.

The total annual turnover has changed as per the size or class of the enterprise. The 2019 total annual turnovers are higher than those of 2003 for all industries classified and the class or size of enterprise.

2.3.2. SMMEs similarities and differences for international and local definitions

(i) Similarities

Literature on the topic stipulates that the SMME sector is commonly categorised into three: small, micro and medium organisations (Jaiswal, Kishtawal & Bhomia, 2018). Prior research has gathered that SMMEs hold together any economy but still have no accepted universal definition (Jaiswal et al., 2018). The reason for the difficult formulation of the universal definition is that people adopt certain values for certain reasons, while governments of different countries, international enterprises and bilateral donor agencies like the World Bank, European Union and district development banks have their own SMME certified definitions (Wiid & Cant, 2021). Definitions of SMMEs have a similarity of recognising businesses of a particular size as either “micro”, “small” or “medium-sized” as compared to bigger businesses (Aremu & Adeyemi, 2011). The definitions naturally include features like the number of employees, size of yearly turnover and total assets (Aremu & Adeyemi, 2011). Recent research describes SMMEs as those with less than 250 employees though very small businesses are allowed to have less than 50 employees.

(ii) Differences

The lack of a universal definition makes it hard to develop a cross-country analysis data of SMMEs (Berisha & Pula, 2015). A study of the International Labour Organisation cited by Pobobsky (1992) identified definitions that are over 50 in 75 countries with noteworthy uncertainty in the terminology applied (Berisha & Pula, 2015). Since then, the definitions of SMMEs have not softened their heterogeneity. Literature has a critical issue with the terminology used to categorise enterprises that do not make up the field of large businesses (Amra, Hlatshwayo & McMillan, 2013). The one part calls them small enterprises, some refer to them as small and medium enterprises, while others call them micro, small and medium enterprises (Amra et al., 2013). Although they refer to the same class of enterprise, the definitions are different with regards to the level of involvement of these enterprises in the generic name (Francis & Willard, 2016). However, these notions can be utilised interchangeably and can be understood if an institution or author shows likeness for any one of them (Francis & Willard, 2016). The differences in the definitions of SMME can be extended into three flanks: international institutions definitions, international laws definitions and by definitions of industries (Berisha & Pula, 2015).

Existing literature on the definitions of SMMEs from international and local perspectives indicates that it is very challenging to arrive at a common definition. This shows that there is no universal accepted definition of SMMEs. Depending on the nation, business size, industry, products and assets, the definition of SMME will continue to be different. Developed countries such as the European Union defines an SMME as an entity that hires not more than 250 workers, and provides a turnover for a year of less than 50 million Euros and/or a total balance sheet of not more than 43 million Euros (European Commission, 2011). In China, an industrial SME is defined as having a maximum of 2000 employees, a medium-sized enterprise must have employees between 301 and 2000, while a small enterprise can have less than 300 employees (SME Promotion Law of China, 2003). In some developing countries such as Nigeria, a small enterprise is defined as an enterprise that has employees that range between ten to forty-nine with a turnover for a year of less than 22 million Naira (Franklin Eze et al., 2018). A medium enterprise is also defined as any organisation that has employees that range between fifty and hundred and ninety-nine, with an annual turnover that is greater than 50 million Naira (SMEDAN, 2013). Egypt, another developing country, classified SMMEs based on the number of employees, which should be a maximum of 50 employees with 50 million EGP in capital investment, and turnover in sales of a maximum of 10 million EGP (Zamzam, 2020). In South Africa, SMMEs have a maximum of 250 employees, and a maximum of R70 million annual turnover. These definitions from different developed and developing nations show that there is a difference in the manner that SMMEs are defined.

To show how SMMEs in South Africa came to be taken seriously, the SMME landscape in South Africa is outlined below.

2.4. SMME LANDSCAPE IN SOUTH AFRICA

Bhorat, Asmal, Lilenstein and Van der Zee (2018) state that after the end of the apartheid era in South Africa, the country faced socio-economic problems which required critical attention, comparative to those in other developing nations. The challenges included shortage of skills, increasing crime rate, high illiteracy levels, high unemployment level and poverty in rural areas. Bhorat et al. (2018) further point out that the challenges are extremely dominant in rural areas. SMMEs must be

encouraged to assist in solving some of the challenges that South Africa faces. Therefore, SMMEs were introduced formally in South Africa by the government in order to reduce unemployment and alleviate poverty (Moos & Sambo, 2018). These entities are not only to be defined formally and safeguarded by the Small Business Act No.102.1996, but these organisations are also thought to be extremely significant to the prosperity of the economy of the Republic of South Africa as they really function as defenders within the fortification against an economy that is not stagnant in one place (Moos & Sambo, 2018).

SMMEs in South Africa are diverse and exist in industries that are different, where the industries included are wholesaling, retailing, tourism, farming, mining, manufacturing, construction and services. Like SMMEs in other nations that are developing, South African SMMEs confront challenges that influence their development and survival (Arko-Achemfuor, 2012). When the significant commitment of SMMEs in South Africa is considered, it is imperative that they ought to get much consideration. The government of South Africa does recognise the significance of a solid and dynamic SMME sector (Mago & Toro, 2013). This is illustrated in its commitment for the advancement and support for SMMEs that have made it its purpose to upsurge the quantity of new organisations and create an environment that enables the growth and survival of the businesses (Mago & Toro,2013). The government seeks to attain such objectives via the 1996 “national small business act”. The “National Small Business Act 102 of 1996” provides administrative and bolster systems for SMMEs. “This defines an SMME as a separate and distinct business entity, including cooperative enterprises and non-governmental organisations, managed by one owner or more, which includes its branches or subsidiaries, if any, and is predominantly carried out in any sector or subsector of the economy” (Chimucheka, 2013). Sitharam and Hoque (2016) remark that the presence of a dynamic SMME sector regularly demonstrates the existence of an entrepreneurial soul and an economically sound society.

Although facing numerous structural challenges, the SMME sector is crucial to the contribution of the South African economy (Sitharam & Hoque, 2016). According to Maloka (2015), SMMEs make up 98% of the overall number of South African business firms, employs 55% of the labour force of the country and roughly contributes 42% to the overall remuneration. SMMEs contributed the highest gross value within construction and trade sectors, and made the slightest contribution in gas, water and

electricity (0%) and in mining (5%) (Chimucheka, 2013; Maloka, 2015). Chimucheka (2013) further reports that since the advent of democracy in SA, the country has focused on advancing businesses that are small as an engine for socio-economic integration and the growth of the economy. More recently, due to rising unemployment, the focus on promoting SMMEs has been renewed. Typically, from both the government and the private segment (Okyere, 2012), their focus is simply just not on SMMEs for the growth only, but more significantly as the driver of poverty alleviation and job creation, particularly amongst the historically disadvantaged groups (Okyere, 2012).

With the SMME sector being taken seriously due to its ability to create jobs and alleviate poverty, SMMEs were influenced to formalise their enterprises so that they are able to have access to the help being offered by its government and other private individuals and organisations.

2.5. DRIVERS OF FORMALISATION OF SMMEs

Kibuuka and Tustin (2019) argue that SMMEs have a great impact on the society when they embrace key strategic objectives of development, market advancement, expanded market share and market situating. The adoption of any of the above strategies requires formalisation of the business (Kibuuka & Tustin, 2019). The growth of the firm will necessitate any unregistered micro venture to raise capital. No speculator or bank may be eager to inject cash into an informal enterprise since traceability is not there (Thabela, Kabanda, Chigona & Villo, 2019). Thus, looking at it from strategic managers' or strategic entrepreneurs' perspective, it makes absolute sense for an enterprise that is informal to formalise its activities. Some form of argument can arise on whether strategic motives influence business owners of informal enterprises to or not to formalise (Thabela et al., 2019). These thought processes are the reasons for formalisation which may, among others, incorporate the desire and vision of owners of enterprises to develop their businesses.

In case the owner decides to take the formalisation route, there are trials to be faced. The formalisation of enterprises, among other things, include complicated processes of regulation, tax issues and bureaucracy (Maduku & Kaseeram, 2019). It is further argued by Maduku and Kaseeram (2019) that an unregistered company's ability to overcome these challenges successfully will depend solely on the personal traits and

background of the owner or manager. That is, at the end, enterprises with managers or owners who possess the attributes to turn an informal enterprise into a formal one will be able to thrive or graduate (Maduku & Kaseeram, 2019).

Table 2.10 Informal and formal SMMEs

Informal SMMEs	**Formal SMMEs**
1.Street vendors/hawkers	1.enterprises that operate from building with a fixed structure situated on business stands demarcated as such by local government (municipal) town.
2.Spaza shops (in-home businesses)	
3.Taxi operators	

Source: Author's own compilation based on various sources

Table 2.10. Above shows the types of informal and formal SMMEs.

Table 2.11 Traditional characterisation of the informal and formal sector

Informal sector	**Formal sector**
1. Ease of entry	1. Entry is restricted
2. Indigenous resources	2. Dependence on national and international finance capital
3. Intensive labour and technology is adapted	3. Capital-intensive and imported technology
4. family ownership	4. corporate ownership

Source: (Le Fleur, Koor, Chetty, Ntshangase, Mackenzie & Rawoot, 2018)**.**

Table 2.11 above shows some of the characteristics of informal and formal SMME sectors.

Formalising SMMEs allows owners of those SMMEs to have access to endless assistance such as being able to take opportunities of the policies that assist them to grow.

2.6. POLICY OF SMME SUPPORT PROGRAMME IN SOUTH AFRICA

In 1994, South Africa found itself joining the rest of the worldwide economy and community, and found itself having to deal with and manage several challenges (Cele, 2015). The improvement and development of its economy was one of its challenges. The other challenge was the alleviation of poverty amongst most of its people. According to the 2020-2025 strategic plan by the “department of small business development”, the global economy has the assumption that SMMEs are drivers of creation of jobs and the growth of the economy. Thus, South Africa decided to support programmes for SMMEs. This was done with the perception that SMMEs may have an influence in alleviating poverty, creating jobs and growing the national economy (Mago & Toro, 2013). The primary step was setting what it wanted to achieve based on the creation of employment, competitiveness and income distribution. The development of policy which was centred on the promotion and development of SMMEs then followed (Mago & Toro, 2013).

“In 1995 the government introduced a Growth, Employment and Redistribution strategy (GEAR) where the SMME development framework was reflected in the White Paper on Small Business and in the national small business Development Act of 1996” (Cele, 2015). With these policies and strategies being developed, the South African government was moving in sync with excellent practices in the developing and developed nations of the world. The policy initiatives for the support of SMMEs led to certain support institutions being created, which will be pillars of small business development (GEAR, 2014). According to GEAR published in 2014, the “Ntsika Enterprise Promotion Agency” was formed via the government initiative via the Department of Trade and Industry. Its purpose was to help SMMEs with matters that do not involve finances but help with developing the enterprise in other aspects. GEAR (2014) further states that Khula enterprise finance assists different retail finance intermediaries to directly deal with SMMEs. Its main purpose is to provide institutional support on tendering and tender processes as well as new guidelines that are introduced. Other support services include the Local Industrial Parks (LIPs) as well as the manufacturing advice centres (MACs) (Cele, 2015). Although the government has created all these support initiatives, information with regards to SMMEs support

programmes is still limited as well as the effect they have towards the overall economy (Amra et al., 2013).

The 2020-2025 strategic plan by the Department of Small Business Development stipulates that the government of South Africa had hopes of alleviating poverty via the support of SMME. There is controversy with regards to the practicality and feasibility of this (Cele, 2015). Other people agree that such programmes could alleviate poverty. Those that disagree argue that the support programmes provide minimum support to survivalist enterprises in rural, woman and township groups. They are believed to only have created riches to only a few because they have not reduced the income inequality in South Africa. Cele (2015) alludes that previous studies show that 4 to 6 percent of the funding was provided to groups that were previously disadvantaged, while 95 percent was utilised by the DTI to fund the growth of enterprises that are owned by white people. Even to date the support provided to Black Economic Empowerment is unacceptable.

It was further discovered that a lot of SMMEs do not know about the support services or how to access them (Malefane, 2013). The inability of relevant institutions to make them known or create awareness around them, the unequal geographical distribution of institutions of support and the procedures needed to make applications for financial help has prevented SMMEs from applying for assistance. Another reason why support programmes are failing is unclear priorities. It was not made clear on whether priority is placed on political, welfare objectives or the economy (Botha, Smulders, Combrink & Meiring, 2021).

In its realisation that it had obstacles in terms of helping to improve its economy, reduce poverty and create jobs, policies were created that unfairly favoured SMME development (Giddy, Idahosa & Rogerson, 2020). “There were policies like the White Paper of 1996 on small business development and GEAR” (Giddy et al., 2020). With all this help, SMMEs competed with big enterprises instead of focusing on helping solve the real problems that they say SMMEs help alleviate (Peters & Naicker, 2013). SMMEs that were established were unable to address the difficulties that they were facing in terms of accessing the funds created for them (Rogerson, 2016).

2.6.1. Support groups for SMMEs

2.6.1.1. Political support for SMME development

The restructuring of the South African economy is seen as part of transformation that has a political element (Peters & Naicker, 2013). The commitment of the ANC to economic restructuring is noticeable post-1994, the point after which they became the governing political party in South Africa (Rogerson, 2016). This period was characterised by multiple restructuring initiatives, particularly of transforming local government to deliver on the economic mandate it had set to cater for varied economic needs such as black people, people with physical challenges as well as women who were previously marginalised from taking part in economic activities (Rogerson, 2016). Malefane (2013) argues: “As a result there is significant political support for SMMEs, which is articulated by numerous conference resolutions that the ANC has passed over time”. The most notable conference is the 52nd national conference that took place in Polokwane in 2007 (Ndhambi, 2015). At this conference, the Party suggested that there will be a continuous review of strategies of SMMEs in order to enhance its impact on society (Ndhambi, 2015).

The support of the ANC Youth league for SMMEs also does not go unnoticed through the “National Youth S R Malefane 675 Volume 48 number 4 | December 2013 Journal of Public Administration Journal of Public Administration 675 Development Agency (NYDA)” (Malefane, 2013). The development of SMMEs as recognised by the ANC is important for job creation and economic development (Amra et al., 2013). At a media briefing in 2010 October 25th, the former president of South Africa Jacob Zuma stated that for the economy to grow, the needs of SMMEs should be met. In a fact, the necessity to support SMMEs surfaces in a lot of political office bearers’ speeches (Amra et al., 2013).

2.6.1.2. Legislative, policy and government strategy for the development of SMMEs

The support that SMMEs receive from politics has set the tone for the direction of legislation, policy and strategy, and has caused the legislation of South Africa to implement the objectives it has set out for the economy of SMMEs nationally (Malefane, 2013). Some parts of the legislation provide evidence that the government of South Africa has a commitment to form an environment that is supportive where SMMEs can thrive (Hoque, 2018). These comprise the “South African constitution, the

National Small Business Act (102 of 1996); the Local Government Municipal Systems Act of 2000", to name a few (Hoque, 2018). A few strategies that have been adopted but are worth mentioning are the "Economic Growth Path strategy 2010", which aims to create about five million jobs and reduce inequality, unemployment and poverty from 25 percent to 15 percent in 2020 (Tustin, 2015). The SMME provincial desks in the nine South African provinces that serve as information centres display the commitment of the South African provincial governments to support SMMEs (Masutha & Rogerson, 2015).

2.6.1.3. Institutional infrastructure support for SMMEs development

Institutional framework backing for SMME advancement has been enunciated in administrative, approach and methodology proclamations through the reconfiguration of public segment institution mandates to empower them to convey on their modern SMME order (Peters & Naicker, 2013). Some cases of sector-specific national and provincial offices whose orders were surveyed to empower them to provide on SMME advancement include the Public Works Department through the expansion of departmental programmes, the Local and Provincial Government as well as the Roads, Transport and Agriculture Department (Peters & Naicker, 2013). The provincial and national segment departments provide resources and support that boost activities of specific sectors in municipalities (Matebesi, 2019). The "Companies and Intellectual Property Registration Office (CIPRO)", an institution set up to create and keep a list of South African SMMEs, supports the DTI in keeping side by side the progressive advancement of SMMEs and their possession (Matebesi, 2019).

According to Malefane (2013), "the National Development Agency (NDA), the Centre for Small Business Promotion (CSBP) in the Department of Trade and Industry (DTI), Ntsika Enterprise Promotion Agency, Khula, the Land and Agricultural Development Bank of South Africa and the Industrial Development Corporation (IDC) all play a critical role as development financing institutions (DFIs) for SMME development countrywide". The essential role of these organisations is to advance, venture assistance and to help neighbourhood businesses in their areas to differentiate and become exporters of products and services, move forward competitiveness and help exporters to get to new worldwide markets (Khoase, 2015). The interest of districts in public-private organisations to provide administrations is the foremost exceptional

illustration of the potential of SMMEs to rebuild the financial base of districts (Khoase, 2015).

2.6.1.4. Funding and non-financial support mechanisms for SMMEs

Non-financial backing, which has been communicated through the control of swelling, lessening of duties and trade controls, illustrates governments support for SMME development (Mago & Toro, 2013). The strong part of governments, through financing and non-financial instruments, is included in commands of DFIs, like Khula Financial Enterprise Ltd, which set up R80 million finance in 2025 to supply subsidising openings (within the shape of credit) to SMMEs (Mago & Toro, 2013). In expanding monetary support, Khula gives non-financial support through mentorship and counselling administrations relating to undertaking bookkeeping, human resources, legitimate things, and other perspectives of overseeing an enterprise (Malefane,2013). Ntsika, which actualises the national SMME technique, gives non-financial support to SMMEs by running programmes that are open through a range of retail benefit suppliers categorised as (1) “local business service centres (LBSCs)”- for help with the administration of the organisation and common data; (2) “Tender Advice Centres (TACs)”- to give help and teachings to SMMEs on the information about the tenders that government issues out; (3) “Manufacturing Advice Centres (MACs)”, which give industry-specific evaluations and interface SMMEs with extremely dedicated particular benefit suppliers (Saah, 2019; Malefane, 2013).

In the non-financial support expansion, SMMEs in South Africa can be given credit by commercial banks (Agwa-Ejon & Mbohwa, 2015). In any case, access to credit like this is mostly decided by whether SMMEs meet terms and conditions, ordinarily by business plans submission, and cash stream projection statements for longer than 2 or 3 years (Agwa-Ejon & Mbohwa, 2015). The prerequisites vary among commercial banks and concur with the amount of credit requested by SMMEs (Langa & Govender, 2019). Langa and Govender (2019) further allude that SMMEs that are mostly granted credit are in the formal sector as opposed to those in the informal sector, since those in the informal sector in most cases do not meet the credit requirements. With the high level of interest rates and bank charges, it is almost impossible for SMMEs in the informal sector to get credit due to the current credit legislation (Rungani & Potgieter, 2018).

With policies on their side, it is crucial to understand why SMMEs have the support they do. In order to do this, SMME contributions to the economy are outlined.

2.7. CONTRIBUTION OF SMMEs

2.7.1. Contributions to employment

There is a great growth in empirical literature that supports the notion that small firms hire a big number of employees and create more jobs in developing economies (Nasr & Rostom, 2013). This positioned the development of SMMEs as a significant priority to authorities (Nasr & Rostom, 2013). Current research approves that small firms are crucial contributors to the overall job creation and employment (Ramukumba, 2014). SMMEs that are growing fast are vital for new job opportunities in both developing and developed economies (Molefe, Meyer & de Jongh, 2018). The importance of the SMME sector is well recognised nationally and internationally due to its important contribution to gratifying numerous socio-economic objectives, such as a higher growth of employment (Molefe et al., 2018). In developing countries such as South Africa, where challenges of socio-economic are high (e.g., high unemployment), governments have accepted that SMMEs are important to the economy because of their large absorptive labour capacity (Ndou, 2014). It is known widely that SMMEs absorb a large number of South African employees, and that the sector contributes total wages and salaries of up to 43% (Chimucheka, 2013).

In developed countries such as the USA, existing research offered evidence in support of the idea that small businesses are the main creators of job growth (Nasr & Rostom, 2013). This evidence revealed that 66 percent of all total new jobs in the USA between 1969—1976 were created by firms that had less than or equal to twenty employees, and a firm that had less than or equal to hundred employees created 81.5 percent of all new jobs (Nasr & Rostom, 2013).

Recent empirical studies show that SMMEs of high-income countries contribute over 65% to total employment (Kibuuka & Tustin, 2019). In low-income countries, informal enterprises and SMMEs are responsible for the total employment of over 70%, while middle-income countries contribute more than 95% to total employment (Kibuuka & Tustin, 2019). Chimucheka (2013) stated that SMMEs can create jobs needed by a

growing population. Chimucheka (2013) further stated that large enterprises are retrenching or shedding jobs while SMMEs are creating them. SMMEs usually deploy production processes that are more labour-intensive than large enterprises, so they proportionally require more employees. Thus, they meaningfully contribute to the provision of employment opportunities, the generation of income and decrease in poverty (Dhanah, 2017).

Table 2.12. Employment in developing and developed nations

Developing nations	**Employment contribution rate (%)**	**Developed nations**	**Employment contribution rate (%)**
Ghana	85%	Japan	70%
Zambia	88%	United Kingdom	74%
Brazil	96%	Germany	65%
South Africa	66%	Canada	85.6%

Sources: Statistics Canada, *Labour Force Survey*; and International Labour Organisation, 2019.

Table 2.12 above shows that SMMEs in developing countries such as Ghana contribute 85% to employment, Zambia contributes 88%, Brazil 96% and South Africa contributes 66% to its employment rate. In developed countries such as Japan, SMMEs contribute 70% to its employment rate, the United Kingdom 74%, Germany 65% and Canada 85.6% to its employment rate. Table 2.12 also shows that SMMEs contribute more to employment in developing nations than they do in developed nations.

2.7.2. Contribution to Gross Domestic Product (GDP)

SMMEs directly contribute to the overall economic development of an economy. They play a huge role in the growth of GDP on account of increased output, value added tax and profits (Singh & Venkata, 2017). Even without consideration of the multiplier effect on the economic activity and production by SMMEs, the GDP contribution by

SMMEs in economies across numerous regions cannot be overlooked (Ramukumba, 2014).

At a global level, the SMME sector accounts for a large portion of the GDP, and this in South Africa is not the reality. The current contribution by SMMEs to the country's GDP is relatively small. According to Leboea (2017), the country's SMMEs contribution to the GDP amounts to 36%. The contribution of SMMEs to the South African GDP is quite low when a comparison is made with other developing nations such as Chile (57%) and Brazil (59%) and developed nations such as China (60%) and Japan (55%). In addition to this, Leboea (2017) states that the "Organisation for Economic Cooperation and Development (OECD) (2010)" confirms that in South Africa, large firms contribute to the GDP of the nation more than its SMMEs. The OECD states that the reason SMMEs in South Africa contribute to the GDP at a lower level could be caused by the low growth rate and high rate of failure of SMMEs as the majority of SMME managers/owners have low levels of professional skills and are not easily motivated (Leboea, 2017).

Table 2.13. Contribution of GDP in developed and developing countries.

Developing Nations	**GDP contribution (%)**	**Developed Nations**	**GDP contribution (%)**
Cameroon	20	Poland	63
South Africa	36	Canada	57
Tanzania	33	USA	60
Ivory coast	19	Australia	51

Source: Authors own compilation based on different primary sources

Table 2.13 shows that SMMEs contribute more towards gross domestic product in developed countries (where Poland has a 63% contribution, Canada 57%, USA 60% and Australia 51% GDP contribution rate) than it does in developing countries (where Cameroon has a 20% contribution, South Africa 36%, Tanzania 33% and Ivory Coast 19% GDP contribution). The above table also depicts that developed countries contribute more to Gross Domestic Product than developing countries.

2.7.3. Contribution to poverty alleviation

Ntinga (2019) defines poverty as the deprivation (e.g income) that an individual undergoes. Poverty seriously affects the social and socio-economic wellbeing of an individual, and more needs to be done to have its impact reduced (Chiromo & Nani, 2019). To solve the poverty epidemic that the world and South Africa are facing, SMMEs have been recognised as the solution. Drbie and Kassahun (2013) state that SMMEs efficiently combine resources of society to have services and goods produced for the communities in which they operate in. They work as a means of bringing economic change by utilising the talent and skill of individuals without needing high-level training, too much capital and technology advancements that are too sophisticated (Drbie & Kassahun, 2013). This makes the sector more desirable to business entry, reduction of unemployment and the alleviation of poverty (Drbie & Kassahun, 2013).

Poverty is one of the present problems faced by both developing and developed nations (Ntinga, 2019). Even though this is the truth, in countries that are developing, poverty is still a persistent and prominent issue that needs to be addressed. Current literature reveals that poverty is drastically higher in developing nations than in developed nations (Mulibana, 2016). For example, 20.2% of South Africans out of the national population still live in conditions of extreme poverty and 45.5% out of the country's population still exist in moderate poverty, while in the USA, out of the entire population, only 14.8% live in poverty (Mulibana, 2016). In South Africa, the World Bank has it that SMMEs are very important for the reduction of poverty, as majority of them are located mainly outside the cities and mostly provide local people with employment opportunities, which lessens poverty and promote local economic activities by local inhabitants (Thekiso, 2016).

Table 2.14. Poverty levels in developed nations and developing nations

Developing nations	**Poverty rate (%)**	**Developed nations**	**Poverty rate (%)**
Cameroon	48	France	6
Senegal	54	UK	14

South Africa	57	USA	12
Zambia	68	Australia	8

Source: Authors own compilation based on numerous primary sources.

Table 2.14 depicts rates of poverty in selected developed and developing nations. In developing nations, Cameroon contributes 48%, Senegal 54% and South Africa 57% to the reduction of poverty. In developed countries, France contributes 6%, the United Kingdom 14% and Australia contributes 8% to the levels of poverty. This table shows how the poverty rate in developing nations is greater than that of developed nations.

Contributions made by SMMEs towards their economies and its people are remarkable but with all the changes and contributions they do, challenges are bound to exist.

2.8. CHALLENGES FACING SMMES

This sub-section will discuss two challenges that SMMEs face, namely, internal and external environmental conditions.

2.8.1. Internal environment

The internal environment refers to resources or characteristics of an enterprise over which an entrepreneur has some degree of control, together with inherent managerial and entrepreneurial qualities. Sitharam and Hoque (2016) also state that the internal environment comprises of factors in the environment of the business, which are mainly controlled by the business. The internal environmental challenges of an enterprise include financial access, innovation and technological capabilities, human resource and managerial skills (Khattak, Arslan & Umair, 2011).

2.8.1.1. Types of Internal environment challenges

- Innovation and technological capabilities

One of the most important components of a successful SMME's competitive advantage is the use of the most recent appropriate technology (Rankhumise & Masilo, 2017). The expansion and growth of small enterprises is restricted by shortage

of technology or expertise to look for and develop new enterprise ideas (Rankhumise & Masilo, 2017). Regardless of their size, all enterprises need to be innovative and adopt practices and ideas that are new to fulfil the constantly changing needs of the global environmental market. Being innovative brings outcomes such as the introduction of products and services that are new in existing and new markets; the development of enterprise structures that are new and show new ways of competing; and utilise new functions of production and technology in an inventive manner to satisfy customers' needs.

Moos and Sambo (2018) allude that SMMEs have access that is limited to technology development partially because they have a shortage of important information and proceed to hold onto destitute and out of date technologies. In developing countries, the success of small enterprises is still delayed by lack of implementation of technology despite the noteworthy support their governments and other organisations provide. When this technology is absent, small enterprises find it hard to grow or compete. According to Moos and Sambo (2018) in South Africa, "most SMMEs are not up to date with their technology, nor are they aware that they can access appropriate technology through the use of the services provided by the National Research Foundation and the South African Bureau of Standards".

- Human resource and managerial competency and skills.

There would be no firms if they (firms) did not have productive inputs from humans and goods that satisfy the needs of customers (Indris & Primiana, 2015). It is the responsibility of the entrepreneur to recruit and manage the labour of the organisations and other firm resources (Nzonzo & Matashu, 2014). However, the hiring and keeping of employees is affected by external as well as internal factors. If the enterprise is operating closer to its maximum capacity internally, increase in the demand of the products of the firm may increase the need for more labour (Sitharam & Hoque, 2016). Although internal conditions may need more labour for the firm, detailed laws of labour such as "Labour Relations, Employment Equity and Minimum Wage Regulations" may restrict employers from employing more labour (Sitharam & Hoque, 2016). Such restrictions of the legislature rob the market of its ability to grow, making firing and hiring too costly. While skilled labour is also a shortage, retaining employees becomes a problem, as employees who are skilled move from one firm to another in response

to better benefits and higher salaries being offered (Rambe & Makhalemele, 2015). The shortage of skills therefore makes the process of recruiting quality labour harder, time-consuming and very expensive (Moise, Khoase, Derera & Ndayizigamiye, 2019).

In today's changing and competitive business environment, the technical understanding of starting an enterprise is not enough. The skills required to venture into a business are diverse to those who manage it to successful grow its market segment (Tlhagale, n.d). An entrepreneur that starts a business successfully does not necessarily mean that they will be a great manager. In South Africa, this is a big restraint to the development of business even in the micro level, where only 4% employs labour (GEM, 2005). Achieving growth needs a risk-taker and involves tolerance for uncertainty. However, numerous entrepreneurs are afraid of taking risks beyond their comfort zone. Some cannot take action that is critical and are afraid of not being in control of their enterprise (Chiloane-Tsoka & Boya, 2015).

Many entrepreneurs that fall short of self-confidence or to persist to see an innovative idea through avoid taking financial risks and in return lose out on opportunities of making a profit even when the external market environment is favourable to the advancement of the business (Lekhanya, 2015). Research shows that SMME performance and the outcome of any other enterprise is related, among others, to training, education, management skills, managers and the experience of entrepreneurs together with their labour quality (Musa & Chinniah, 2016). A manager or entrepreneur that is well equipped in terms of education, training, experience and well trained in numerous functional marketing areas and management can work better than those who are less talented (Mutyenyoka & Madzivhandila, 2014). In South Africa, the entrepreneurial and managerial skills required for the development of SMME are lacking. Thus, most South Africans are in short of the ingenuity and mind-set to become entrepreneurs that add value that is high in the short-term (Mutyenyoka & Madzivhandila, 2014).

2.8.2. External environment

Appiah, Possumah, Ahmat and Sanusi (2018) found that in the business context, the external environment is a factor that has either a negative or positive effect on business activities, and functions outside the company, making it hard for the organisation to control it. Haroon and Mohd Shariff (2016) state that the external

environment refers to elements that are outside the organisation in which the entrepreneur's control is very little. These comprise "political, economic, social, technological, environmental, and legal factors" (Rambe, 2018). As mentioned above, these factors can hardly be affected by decisions taken by the management because they are external to the business and beyond the control of SMMEs (Rambe, 2018).

2.8.2.1. Types of external environment challenges

- Financial access

Financial access and the finance cost are huge barriers to enterprises that are starting and the effective growth of SMMEs in both developed and developing nations (Sitharam & Hoque, 2016). The Investment Climate Survey of 2004:12 states that in Sub-Saharan Africa, finance ranked in the top five restraints to enterprise development (Moorthy & Yacob, 2013). This is caused partially by the view of financial institutions believing that small enterprises are high risk ventures with inadequate collateral (Sitharam & Hoque, 2016). Borrowing such enterprises means administrative costs are high in relation to the scope of the loans (Rambe & Mpiti, 2017).

The type of support and funds needed for SMMEs depends largely on their development phase and size (Chimucheka & Mandipaka, 2015). This would include savings that are personal, family and friends for the beginning stages with bank credits for steady businesses (Chimucheka & Mandipaka, 2015). In South African enterprises, equity finances, which are extremely significant for young, superior growth and possibly high risk SMMEs, have been constrained (Agwa-Ejon & Mbohwa, 2015). Bank credit access is mostly given or limited to businesses that have an acceptable history of credit and sufficient collateral. Agwa-Ejon and Mbohwa (2015) further state that non-bank financial intermediaries such as micro lenders can assume a crucial role for micro and small businesses. South African SMMEs access to capital markets is still not properly developed.

Nonetheless, in South Africa SMMEs have a range of funding and support programmes available, which are from the private and public sectors. Institutions of the government like "Ntsika Enterprises Promotion Agency and Khula Enterprise Finance" were formed under the "Department of Trade and Industry (DTI)" to give SMMEs non-financial and financial support. Ntsika provides help in developing the

business services while Khula's responsibility is to provide financial support (Agwa-Ejon & Mbohwa, 2015). Ntsika also provides support to very small, micro sized and survivalist businesses. Other government support systems include the Industrial Development Corporation as well as Umsobomvu Youth Fund, among others. Despite the support that the government gives to SMMEs, the uptake of support and awareness has been minimal (Musa & Chinniah, 2016). The Small Business Survey of 2010 states that 75% of SMME owners did not know about support organisations (Mago & Toro, 2013). The majority of those who know about the programmes do not know how they operate, which shows failure of marketing the programmes. The requirements as well as the selection criteria for the application of finances are not made properly clear to clients, which causes a high-level rate of failure with the applications (Mago & Toro, 2013), thus the struggle by SMMEs to access non-financial and financial services and their stagnant performance (Agwa-Ejon & Mbohwa, 2015).

Bruwer (2018) has it that while financial support that is increased is essential, what is more crucial is the capacity to manage finances and retain good record. The crucial nature of cash flow for an enterprise to survive implies that competency in the administration of finances can lessen the level of business failure (Mpiti & Rambe, 2016). Therefore, the capacity to manage finances becomes a prerequisite for the growth of the business and its expansion (Mpiti & Rambe, 2016).

- Taxation

Constraints to business development means that complex tax administration and high tax rates can force enterprises to function in the "grey" economy, "where the pay-off from productive and non-productive activities can be high, with possible tax evasion or avoidance" (Mahadea, 2009). In South Africa, a medium sized enterprise and the preparation of file and payment of taxes take around 350 hours (nearly nine working days), which is a very high number as compared to that of the United Kingdom (which takes 105 hours), and Botswana (which takes 140 hours) (Refiloe, Derera, McArthur & Ndayizigamiye, 2020). These complex tax administration compliance processes make it hard for SMMEs to survive (Refiloe et al., 2020).

- Regulation and laws

A favoured reason for why individuals take upon self-employment is the freedom to be their own bosses and to do what they want whenever (Sityata, 2019). However, their

freedom is short-lived as they become obedient to satisfying the needs of customers, and in doing so, numerous laws and regulations have to be followed (Sityata, 2019). The regulatory environment as indicated by international evidence can be a big obstacle to the survival and growth of new and small businesses (Govori, 2013). Entrepreneurs from Africa face the biggest hurdles of a regulatory environment as compared to other regions (Zondi, 2017). Access to finance for venturing into a new enterprise in Africa is prohibitive because of the regulations and laws that have been put in place (example, difficulties accessing property rights) (Zondi, 2017).

2.9. SUMMARY OF THE CHAPTER

This chapter highlighted that SMMEs are defined differently in different parts of the world. The chapter looked at attributes that it takes to make an SMME successful. The chapter also highlighted how SMMEs are being supported and how owners of SMMEs can receive help to have their enterprises succeed. It also emerged that SMMEs assist with the reduction of unemployment and poverty. Even though it was revealed in this chapter that SMMEs do contribute to the economy, they still struggle in terms of getting finance from the formal funding sector. Overall, from the above research, it is clear that without the development of SMMEs, the economy would suffer.

Chapter 3 will review literature about values and pro-environmental behaviour of employees. Both chapters 2 and 3 review the literature of this study. Chapter 2 focuses entirely on which sector employees of the study will focus on, and in this case, employees of SMMEs, while chapter 3 reviews the values and voluntary pro-environmental behaviour of employees of SMMEs.

CHAPTER THREE

VALUES AND PRO-ENVIRONMENTAL BEHAVIOUR OF EMPLOYEES

3.1. INTRODUCTION

This chapter provides an insightful review of studies done by other researchers on values and pro-environmental behaviour of employees. These values include biospheric, altruistic, egoistic and openness to change values, where the moderating factors between the afore-mentioned values and PEB include age, gender and level of education. This study will also discuss different theories of pro-environmental behaviour, which are “Theory of Planned Behaviour, The norm activation model (NAM) and Value Beliefs Norms (VBN) theory”. It will find out why the Value Beliefs Norm theory was chosen. This conceptual framework of the study is outlined. This is followed by the summary of the chapter.

Sustainable development is discussed first so that a need for the practice of voluntary pro-environmental behaviour is undertaken by employees.

3.2. SUSTAINABLE DEVELOPMENT

The most frequently used definition of sustainable development is provided by the “Brundtland Commission” in its report of our common future (1987). The report defined sustainable development as development that satisfies humans’ current needs without compromising the ability by future generations to satisfy their own needs. Since then, numerous definitions of sustainable development have surfaced, for example: improving human beings’ quality of life while existing the carrying capacity of assisting ecosystems (Lele, 2013). An economic growth that offers equality and opportunity for all the people, not just the privileged few, without destroying further the world’s finite physical resources and carrying power (Rana & Guleria, 2018). Furthermore, Emas (2015) defines sustainable development (SD) as “development that meets the needs of the present without compromising the ability of future generations to meet their own needs”. Blewitt (2012) remarks that sustainable development is the idea that the future must be restored and be healthier than the present. Awan, Imran and Munir (2014)

state that sustainable development is the practice of energy savings and being environmentally responsible by using guidelines to produce development projects that are new and to keep and retrofit projects that are older. This can include utilising new construction, green materials, creating projects that make their own energy to have the load on power grid reduced, or that use green space so as to counterbalance the removed green space to build the facilities that are onsite (Triantafyllidis & Darvin, 2021).

Sustainable development is further discussed below.

3.2.1. History of Sustainable Development

Sustainable development was popularised in 1980 and made its first appearance as a concept in 1987 (Zaccai, 2012), and was acknowledged as a great challenge that it remains today in a summit held in 1987 in Rio by major leaders of the world (Khor, 2012). The term sustainable development was utilised in the “International Union for the Conservation of Nature’s World Conservation Strategy (1980), Lester R. Brown’s Building a sustainable society (1981) and Norman Meyers’s Gaia: an atlas of planet management (1984)” (Du Pisani, 2006). The United Nations had a group of 22 people that were from both developing and developed nations commissioned to identify environmental strategies that are long-term for the community that is international (Borowy, 2013). This World commission is better known as the “Brundtland Commission” (Borowy, 2013). The Brundtland Commission submitted a Brundtland report which mainly focused on human interests and needs and was concerned with fortifying a universal equity for generations to follow by having resources redistributed to countries that are poorer to boost the growth of their economies to ensure that all human beings are able to meet their basic needs (Samout & Marnissi, 2020). The report stated that it believes that the growth of the economy, social equity and environmental maintenance can occur simultaneously, thus having the three important components of sustainable development highlighted as the economy, the environment and the society, which were known later as the triple bottom line (Samout & Marnissi, 2020). The economic pillar is about promoting an economy that is responsible and incorporate social and environmental principles into the viability of the project. While the environment aspect is about putting its focus on protecting the natural resources, the social aspect is about integrating social aspects in international terms from both

external and internal perspectives of the corporation (Moldan, Janoušková & Hák, 2012). “The report discussed the need to apply integrated, sustainable solutions to a broad range of problems related to population, agriculture and food security, biodiversity, energy choices, industry, and more” (Dhahri & Omri, 2018). The Brundtland Report recognised the conflict between environmental protection and economic growth (Hosseini & Kaneko, 2012). Therefore, a conclusion that the growth of the economy was important, more especially in nations that are developing, but that a switch to sustainable development should be there, was drawn (Hosseini & Kaneko, 2012).

In recent years, the Sustainable Development World Summit was held in 2002 in Johannesburg, where 191 national governments were in attendance, including multifaceted financial institutions, agencies of the UN and other key groups to check the advancement since Rio (Bäckstrand & Kylsäter, 2014). The summit delivered three important outcomes: “a political declaration, the Johannesburg Plan of Implementation, and a range of partnership initiatives” (Karjalainen, 2014). Water and sanitation, sustainable consumption and production, and energy were among the most important commitments (Karjalainen, 2014).

3.2.2 Importance of sustainable development

From the past two or three decades, it has been seen that for the sake of economic growths, the health of the environment has suffered (Loewe, 2012). As a result, an impact on the environment has been done such as a deterioration in the quality of air and climate change owing to greenhouse gases (Scholz, 2017). All the mentioned factors made sustainable development a need, as if left unattended it can cause irreversible damage to the environment (Scholz, 2017). According to Chams and García-Blandón (2019), sustainable development is important due to the following: utilising the accessible resources wisely and working towards preserving the environmental balance. It is also crucial for avoiding degradation of the natural environment and placing emphasis on protecting the environment. Lastly, it is important for avoiding the overutilisation of resources.

3.2.3. Goals of sustainable development

In 2015, the United Nations adopted the goals of sustainable development as a universal call to eradicate poverty, save the planet and guarantee that by the year 2030 all persons enjoy peace and affluence (Pedersen, 2018). There are 17 joined sustainable development goals. They understand that action in one area will influence the outcome of others, and that development must balance economic, environmental social sustainability (United nations Department of Economic and Social Affairs, 2011).

According to the United Nations Department of Economic and Social Affairs (2011), there are 17 goals of sustainable development: “No poverty, zero hunger, good health and well-being, quality education, gender equality, clean water and sanitation, affordable and clean energy, decent work and economic growth, industry, innovation and infrastructure, Reduced inequalities, sustainable cities and communities, responsible consumption and production, climate action, life below water, life on land peace, justice and strong institutions, Partnerships for the goals”.

These goals are a call by all nations - developing and developed - through a global partnership in order to work towards ending poverty and other forms of deprivation, improving the education and health strategies of the nations that are part of the United Nations membership, reduce inequality and spur economic growth, while climate change is being tackled and working towards preserving forests and oceans.

The South African “National Development Plan 2030” aims to eradicate poverty and reduce inequality by the year 2030. According to the plan, “South Africa can realise these goals by drawing on the energies of its people, growing an inclusive economy, building capabilities, enhancing the capacity of the state, and promoting leadership and partnerships throughout society” (National Planning Commission, 2013). To achieve the sustainable development goals (“No poverty, zero hunger, good health and well-being, quality education, gender equality, clean water and sanitation, affordable and clean energy, decent work and economic growth, industry, innovation and infrastructure, Reduced inequalities, sustainable cities and communities, responsible consumption and production, climate action, life below water, life on land peace, justice and strong institutions, Partnerships for the goals”) and the national development plan 2030 of South Africa, PEB by households and businesses are needed (National Planning Commission, 2013).

Sustainable development has been defined by empirical literature as development that aims to meet the present needs of humans without jeopardising the ability of the future generation to meet their own needs. Pro-environmental behaviour is defined as behaviour that looks to consciously reduce the negative impact of a person's actions on the built and natural environment. Sustainable development and pro-environmental behaviour go hand in hand as they are both focused on protecting the environment. Understanding sustainable development is important because this will make a person understand why it is important for them to act in a pro-environmental manner. According to Mesmer-Magnus, Viswesvaran and Wiernik (2012), PEB comprises individual behaviour that adds to the sustainability of the environment and that can be carried out at home or the workplace.

The sustainable development plan is to save the built and natural environment for future generations. The practice of pro-environmental behaviour is discussed below as a practice that can protect and save the earth.

3.3. PRO-ENVIRONMENTAL BEHAVIOUR

Pro-environmental behaviour (PEB) is defined by Kollmuss and Agyeman (2002) as behaviour that seeks to consciously minimise the negative effect that one will cause on the built and natural world (Faught, 2019). Pro-environmental behaviour can be well-defined by its impact on the natural environment or the intent behind the behaviour (Ture & Ganesh, 2014). PEBs are activities that reduce the damaging impact on (such as sustaining and avoiding damage to), and or encourage improvements, to the built and natural environments **(**Udall, de Groot, de Jong & Shankar, 2020). PEBs are described as any form of action that protects the entire environment and or a certain ecosystem from destructive human activities (Ghazali et al., 2019). According to Prášilová, Procházková and Varvažovská (2015), pro-environmental behaviour is a procedure that is greatly influenced by the values of customers, their norms and customs. Boiral, Paillé and Raineri (2015) allude that PEBs consist of recommended or voluntary activities that are undertaken by an individual with the objective of protecting the natural and built environment. Pro-environmental behaviour can be divided into involuntary and voluntary pro-environmental behaviour (Gurmani et al., 2021).

3.3.1. Involuntary or (task-related) pro-environmental behaviour of employees

Task-related (involuntary) pro-environmental behaviour is described as personal precise behaviours of getting a job that is required done in a manner that employs green, environmentally and friendly approaches (Wesselink, Blok & Ringersma, 2017). In theory, pro-environmental behaviours that are task-related highlight that the completion of work must be done in a manner that preserves natural resources and protects the environment (Bissing-Olson, Lyer, Fielding & Zacher, 2013; Robertson & Carleton, 2018). For example, a hairdresser that does not have water running while cutting the hair of the customer displays high task-related pro-environmental behaviour. A secretary that prints a draft report utilising one side of the page (rather than printing on the double side) of the paper reveals low task-related pro-environmental behaviour (Bissing-Olson, 2016).

3.3.2. Voluntary Pro-Environmental Behaviour of employees

Scholars have described pro-environmental behaviour at work as a pro-social organisational behaviour that has the largest potential to create value (Alzaidi & Iyanna, 2021). Voluntary individual behaviour is behaviour that is not made mandatory by the organisation and does not form part of the formal work description, expectations or work requirements. This behaviour is therefore the individual's choice already rooted in their everyday activities. Budzanowska-Drzewiecka and Tutko (2021) define voluntary PEB as behaviour of the individual employee that is not recognised by the formal reward system that the employee engages in that may be promoted but not required by the organisation. Therefore, employees' pro-environmental behaviours are mainly voluntary but could also be connected directly to any aspect of the job to be performed.

Discretionary behaviour (voluntary) is behaviour of the employee that is not recognised directly by the formal reward system, and in total, promotes the effectiveness and efficiency of the way the organisation functions. To this end, "scholars have argued that individual, pro-environmental actions performed in a workplace are a particular type of OCB" (Stritch & Christensen, 2016). Discretionary pro-environmental behaviours are called organisational citizenship behaviours that focus on the

environment (OCB-E) (Boiral & Paillé, 2012). OCB-E contains environmental attempts that are discretionary act within the setting of the organisation and not required or rewarded from the organisation (Stritch & Christensen, 2016). Employees who exceed what is expected of them with regards to their job description by taking part in helping behaviours precisely directed for the environment can foster environmental performance in total. In contrast with task behaviour that is mandated or required as a part of the performance of the employee, OCB-Es are voluntary (Stritch & Christensen, 2016). Therefore, people who take part in OCB-E are mostly driven by an inner mechanism except self-interest linked to self-conservation via compliance with formal enterprise rules and policies (Robertson & Barling, 2013). The discretionary behaviours of the workplace that focus on the environment might include trash reduction, recycling, the conservation of water and energy when they are informal and carried out at the individual employees' discretion (Robertson & Barling, 2013; Stritch & Christensen, 2016). These OCB-Es are classified by Boiral and Paillé (2012) as individual voluntary pro-environmental behaviour, who describe them as "discretionary behavior and suggestions to improve environmental practice and performance" (p. 442) of the organisation. Therefore, voluntary pro-environmental behaviour is investigated in this chapter. This is because the researcher has seen that to have people practice pro-environmental behaviours consistently needs to be practiced willingly. This will ensure that the natural and built environment is protected for years and years. Voluntary pro-environmental behaviour can be practiced at home and at work.

Table 3.1. Definition of PEB at home

Author	**Year, country**	**Definition of PEB at home**	**Objectives of the study**	**Findings of the study**
Xu, Huang & Whitmarsh.	2020, China	PEBs at home is defined as behaviours of persons around and in the home environment that creates	The objective of the study was to examine the potential consistency and spillover effects among PEBs in	The findings of this research paper reveal that significant positive relationships among tourism PEBs and domestic PEBs, with the attachment of

		environmental impacts that are positive. This involves resource effectiveness and the consumption of green products (e.g., the purchase of organic food), recycling domestic resources (e.g., batteries) using ecologically friendly transport (e.g., travelling by bus) and helping others act sustainably.	the tourism and domestic contexts.	the environment and pro-environmental identity relating positively, and moral licensing beliefs relating negatively to consistency among PEBs in both contexts.

Source: Authors' own conceptualisation.

Table 3.1. Shows the definition of PEB at home by different authors. It also outlines the objectives and findings of the research papers by these authors

Table 3. 2. Definition of PEB at work

Author	**Year of paper, country**	**PEB definition**	**Objectives of the study**	**Findings of the study**
Suganthi	2019, India	PEB at work is defined as an	The research objective was "to	The results also show how

		employees' behaviour that consciously seeks to reduce the adverse impact of their actions on the built and natural environment at the workplace.	examine the conceptual framework that relates adoption of CSR initiatives, green practices both product and process related practices and the effect of these practices on performance and employees' pro-environmental behavior (PEB) at work".	enterprises can include initiatives of CSR synergistically to improve performance and PEB at the workplace for corporate sustainability.
Lu, Liu, Chen, Long & Yue	2017, China	PEB at work is defined as "a series of environment-friendly behaviours as well as the expanding behaviours conducted by employees to achieve the organizational objective of	The objective of the paper was to investigate the effects of demographic and organisational variables on PEB of employees and its dimensions	The research found that employees that have a low PEB score tended to be localised and were mainly distributed in groups of single (not married) workers, workers from the countryside, young

		environmental protection".		employees, workers who have an educational level of middle school and below, and workers with an income that has low satisfaction, as well as both high and basic-level employees, and public institutions and private enterprises employees.
Ture & Ganesh	2018, India	Pro-Environmental Behaviour at work is referred to as any activity, indirect or direct, carried out by an individual (at his or her workplace), which he or she thinks will enhance or help to boost the	This objective of this paper was to comprehend the effect of organisational and individual factors on PEB of workers at work.	The results of the study found that both organisational and individual efforts influence employees' PEB. However, the results differ according to the behaviour type. "Personal norm mediates the relationship

		natural environment		between subjective social norm and two types of pro-environmental behaviours".
Fatoki	2019, South Africa	Workplace PEB can be defined as indirect or direct behaviours that are undertaken by an individual at their workplace to enhance the natural environment.	This study aimed to examine the effect of green entrepreneurial orientation (GEO) on the sustainable performance (SP) of firms in the context of the hospitality sector.	The results showed a significant positive relationship among GEO and financial, environmental and social performance.

Source: Authors' own conceptualisation

Table 3.2. Looks at how PEB at work is defined by different authors from different countries, the purpose of their studies with regards to their research papers and the findings of the paper.

Looking at both the definition of PEB at home and work, the researcher has come out with her own PEB definition in a generalised manner. The author of this paper, therefore, defines PEB as a behaviour that is direct or indirect and is undertaken by an individual at home or at work to reduce the adverse impact on the natural or built environment. This research will focus on voluntary PEB at work as behaviour done by employees that protects the environment at work. Such behaviour is not incentivised materially and/or monetary recognised by employers.

The voluntary pro-environmental behaviour of employees at work is influenced by a certain life standard. For this reason, different forms of values are discussed to see what influences employees to act or not to act in an environmentally friendly manner.

3.4. VALUES

Values are defined as significant life standards or goals that act as principles that guide a person's life (Liu, Zou & Wu, 2018). "Values play a role as an organisational system in one's life and are viewed as determinants of attitudes and behaviours" (Liu et al., 2018). There are three different values extracted by Schwartz's that may affect pro-environmental behaviour, namely, egoistic, altruistic and biospheric values and openness to change values (Liu et al., 2018**)**.

As values are goals or standards that act as a principle that guides an individual's life, it is imperative to understand what motivates employees to live by a certain value or values. Thus, the employee motivation to participate in PEB is discussed below.

3.5 EMPLOYEE MOTIVATION TO ENGAGE IN PRO-ENVIRONMENTAL BEHAVIOUR

Employees' PEB is described as actions and behaviour that employees engage in voluntarily to help improve the natural and built environment sustainability in the workplace. Fatoki (2019b) alludes that the PEB of employees can be classified into five: (1) conserving aims to have resources retained and waste evaded (e.g., recycling). (2) avoiding harms are behaviours that ease or lessen harm to the environment (e.g., the prevention of pollution). (3) transforming prioritises the change and adaptation to sustainable behaviour (e.g., purchasing green products). (4) Influencing others emphasises social behaviours that boost sustainability (e.g., training, motivation). (5) Taking initiative is about behaviours that do not boost the set-out status quo (e.g., activism). When employees of a firm engage in pro-environmental behaviour, (1) the natural environment improves. The world is dependable on PEB for its long-term survival, where waste is lessened and resources that are scarce are preserved via PEB. (2) The inability to obey the regulations of the environment can lead to financial repercussions. (3) Via PEB, enterprises can

decrease costs and enhance the triple below line (environmental, financial, and social performance) (Fatoki 2019b; Ture & Ganesh, 2018; Palupi & Sawitri, 2018). The focus of this study is on voluntary PEB of employees. Employees spend most of their lives at work, thus if they were to engage in voluntary PEB, the afore-mentioned benefits are surely going to work better for the company and the natural and built environment. The company will be able to reduce the costs with reference to the triple below line (environmental, financial, and social performance). This adds to the companies' profits for the financial year in question.

3.6. THEORETICAL LITERATURE REVIEW

The above section discussed the voluntary pro-environmental behaviour of employees and the sustainability of the earth as well as values of people. This section will discuss theories that one needs to understand to fully participate in PEB, more specifically, voluntary PEB. The previous section and this section will assist in understanding how and what makes one to act in a manner that protects the environment.

3.6.1. Theory of Reasoned action

The Theory of Reasoned Action (TRA) (Ajzen and Fishbein, 1980; Ajzen and Fishbein, 1975) is founded on the idea that individuals are logical and make an orderly use of information offered to them. Numerous researchers have utilised the reasoned action theory in their research papers. The theory tries to intricate and foretell behavioural intentions. Martin Fishbein and Icek Ajzan developed the theory, which has been used to have the behaviour of humans explained as a major theoretical framework. According to Ajzen and Fishbein (1975), the performance of behaviour in the theory can be predicted based on the intentions of people. TRA's emphasis is on the intention of behaviour as antecedent to behaviour that is actual. Intentions are believed to capture the motivating elements that influence behaviour. Intention shows how hard people are inclined to try or the level of effort they would use to have the behaviour performed (Ajzen, 1991).

To understand a certain person's behaviour, it is crucial to pinpoint the element of behavioural intention (Bidin, Mohd Shamsudin & Othman, 2014). TRA suggests two determinants that are independent on intentions e.g., attitudes towards behaviour and

subjective norms. Ajzen and Fishbein (1980) described attitude as the extent to which a person has an evaluation that is poor or good on a specific behaviour. Behavioural belief is one of the reasons that determine attitudes, which involves assessment of the outcome or consequences of a certain behaviour. Attitudes are swayed by a belief in an outcome in which its level is assessed in terms of outcome evaluation. Subjective norms refer to “social pressures perceived to be exerted on an individual to act or not to act” (Ajzen, 1991). The belief that triggers subjective norms is described as normative belief, which is influenced by the belief of an individual towards a referent group or referent other. This means that a person tries to perform an action when he/she thinks that other people believe it is crucial for them to carry out the act (Biding et al., 2014).

The theory of reasoned action was expanded later to incorporate the perception of the ability by an individual to execute a behaviour (i.e., perceived behavioural control) and retitled the “Theory of Planned Behavior” (Doane, Pearson & Kelley, 2014).

3.6.2. Theory of planned behaviour (TPB)

The planned behaviour theory was discovered by Professor Icek Ajzen and Fishbein (Tornikoski & Maalaoui, 2019), who states that the planned behaviour theory suggests that “behavior is determined by intentions, attitudes (beliefs about a behavior), and subjective norms (beliefs about others' attitudes toward a behavior)”. Tornikoski and Maalaoui (2019) further state that professor Icek Ajzen and Fishbein were some of the first people to investigate intentions and behaviour, especially Fishbein, beginning in the late 1960’s. Since its beginning, the theory has been advanced, tested and challenged in numerous fields of social science and has been citated more than 60 000 times to date (Tornikoski & Maalaoui, 2019). The theory of planned behaviour is a well-versed extension of the reasoned actioned theory, which has made its contribution to the detailed explanation of elements involved in several social behaviours with pro-environmental behaviour included (Carfora, Caso, Sparks & Conner 2017). The theory of planned behaviour is one of the greatest influential theories that describe and predict behaviour (Hegner, Fenko & Teravest, 2017). “It offers a comprehensive yet parsimonious psychological theory that identifies a causal structure for explaining a wide range of human behaviour including consumer behaviour” (Hegner et al., 2017). The theory has it that subjective norm, attitude, and

control affect a person's intention to act out a given behaviour. Intentions are alleged to be the predecessor of behaviour.

According to the planned behaviour theory, "intention is a direct function of the attitude towards the behaviour, subjective norm and control" (Hegner et al., 2017). Subjective norm refers to the way an individual perceives broad social pressure (Carfora et al., 2017). If a person perceives that important people around them support (or condemn) the behaviour, there are high (or low) chances that the behaviour will be shown. Attitude in relation to the behaviour indicates a person's unfavourable or favourable evaluation of playing out a certain behaviour. Overall, if the attitude concerning the behaviour is positive, the stronger an individual will feel the intent to execute it. According to Hegner et al. (2017), "control factors are concerned with the perceived influence of specific factors to facilitate or inhibit behaviour".

The theory of planned behaviour has it that the intention to carry out behaviours that are eco-friendly, and the way behavioural control are perceived is the immediate antecedent of pro-environmental behaviour (De Leeuw, Valois, Ajzen & Schmidt, 2015). The way control is seen can have an effect that is direct on behaviour and can also impact behaviour in an indirect manner by its effect on intentions (De Leeuw et al., 2015). The planned behaviour theory also assumes that a person's intent to implement PEB must increase to such a level that an individual has favourable attitudes concerning PEB, thinks that important close people boost these behaviours (e.g., injunctive norm) or adopt pro-environmental behaviour themselves (e.g., descriptive norm), and seen to have absolute control over these behaviours (Yuriev, Dahmen, Paillé, Boiral & Guillaumie, 2020).

Recently, many articles have used the theory of planned behaviour to explore employees' pro-environmental behaviours (Yuriev et al., 2020). However, there are concerns that are serious with regards to the efficiency and completeness of the theory of planned behaviour when predicting green behaviours (Yuriev et al., 2020). For example, numerous articles about the theory of planned behaviour appear to measure the intention to act environmentally instead of behaviour, mainly because many pro-environmental behaviour validated measures do not exist (Yuriev et al., 2020).

3.6.3. Norm activation theory (NAT)

The norm activation theory was first published in 1977 by Shahlom Schwartz. The theory focuses on exploring the functions of expected pride and remorse in pro-environmental behaviour (Bliesner, Liedtke, Welfens, Baedeker, Hasselkuß & Rohn, 2014). The norm activation theory explains environmentally-friendly and altruistic behaviour (Yazdanmehr & Wang, 2016). Onwezen, Antonides and Bartels (2013) state that the norm activation model was proposed by Schwartz as a social-psychological model to explain altruistic behaviour or intention in wealthy industrial societies such as bone marrow or blood donations, volunteering and assisting in situations of emergency. “The original NAM and its extensions have been later successfully applied to study various types of pro-environmental intentions or behaviours, among which yard burning, recycling, green phone purchasing, use of public transportation, electricity saving, willingness to pay for environmental protection, and intentions to attend an environmentally responsible convention, since pro-environmental intention or behaviour can be regarded as a specific form of altruistic or prosocial intention or behaviour” (Onwezen et al., 2013). Although often there is no benefit that is received by the individual directly, individuals who participate in pro-environmental behaviour advantage or benefit others (Onwezen et al., 2013). The norm action model is amongst one of the most influential models for the prediction of pro-environmental and pro-social behaviour (Budovska, Torres Delgado & Øgaard, 2020). Budovska et al. (2020) further state that numerous researchers who engage in pro-environmental behaviour hold the norm activation model as a theoretical framework that is essential because of its robust predictive power and explanatory power.

The norm activation model has three variables that are important: personal norm, awareness of consequences and ascription of responsibility (Zhang, Liu & Zhao, 2018). Personal norm is known as a feeling or an obligation that is moral to execute or refrain from certain actions (Zhang et al., 2018). Awareness of consequences is defined as “whether someone is aware of the negative consequences for others or for other things one values when not acting prosocially” (Zhang et al., 2018). Ascription of responsibility is defined as an individual’s personal feelings of whether she or he takes responsibility for the negative consequences of acting in a non-pro-social

manner (Onwezen et al., 2013). Awareness of consequences and ascription of responsibility can be classified as a set of beliefs limited to behaviour (Benyamin et al., 2018). In terms of this theory, higher awareness of consequence causes a higher ascribed responsibility and a higher personal norm, accordingly (Bliesner et al., 2014). Personal norm in the end will drive somebody to behave pro-environmentally, which produces a greater rate of PEB. The norm activation theory is particularly crucial in explaining PEB as variables specific to a particular behaviour will produce a correlation that is stronger with the intent to behave.

The norm activation model has been utilised in numerous studies to explain the decision-making process of pro-social behaviours (Han, Hwang, Kim & Jung, 2015). However, the way the variables of the norm activation framework relate to one another is still unknown to date (Han et al., 2015). When the norm activation model was extended in previous studies, its employment has been an inconsistent one. While some researchers have broadened the norm activation model by interpreting it as a sequential model, other researchers have attempted to expand it as a moderator model (Han et al., 2015). That is, the interpretations that exist in literature of the norm activation model conflict (Han et al., 2015). In addition, despite the frequent use of the norm activation model for pro-social behaviour, the predictive ability of the theory, especially for pro-environmental behaviour or intention has been questioned repeatedly (Vaske, Jacobs & Espinosa, 2015).

3.6.4. Value Beliefs Norms (VBN) theory

The VBN theory by Stern et al. (1999) explains the effect of people's values on conduct in the context of environmentalism. The theory draws on the theoretical work on values such as the norm-activation processes by Schwartz (1977) and the moral norm-activation theory by Stern, Dietz, Abel, Guagnano and Kalof (1999). "The VBN postulates that the relationships between values, beliefs, norms and behaviours are in a causal chain. For the value components, altruistic, biospheric and egoistic values, and openness to change values were proposed, based on Schwartz's theory of basic values" (Blankenberg & Alhusen, 2018). Altruistic values are values that consider humans and existing species that inspire individuals to participate in PEB. "Biospheric values, emphasise the biosphere, the environment, and the ecosystem while egoistic values refer to self-interest in regard to society, which includes wealth, authority, and

being influential" (Van der Werff & Steg, 2016). Openness to change values refer to stimulation and self-direction built on the inspiration of autonomous thought and deed, which fights with the inspiration of ensuring that others' expectations are met. The VBN can be used to examine a relationship that is direct between values and actions. In addition, the theory allows for the inclusion of mediating variables such as beliefs that are specific or norms that are personal. Van der Werff and Steg (2016) suggest that according to the VBN theory, individuals are most probable to get involved in PEB when the feeling of moral obligation arises.

The theory of reasoned action was not used in this study because its focus is mainly on what outside people think about the behaviour that an individual has carried out and not more on what the individual themselves feel is right to do. The theory of planned behaviour was not chosen also because it depends on the beliefs and attitudes of other people rather than on the individuals' very own beliefs and attitudes. The norm activation theory was not chosen for this study because it only focuses on the altruistic values. The researcher saw it as a good idea to have other values that are included in the extension of the norm activation theory in this study so that it can be seen how different values influence individuals to act or not to act pro-environmentally. Therefore, the author chose to use the VBN theory because the main focus of this research paper is to examine how values of employees affect their pro-environmental behaviour. The VBN theory carries a great deal of appropriate values to explore in this paper.

3.7. EMPIRICAL LITERATURE REVIEW

The empirical literature of this study aims to further explain the theory used in this research to better understand which constructs lead to or do not lead to voluntary pro-environmental behaviour.

3.7.1. Biospheric Values and voluntary pro-environmental behaviour of employees

Biospheric values are crucial for predicting and understanding environmental behaviour (Van der Werff et al., 2014). Nguyen et al. (2016) state that persons with biospheric values that are strong care for the environment and nature and powerfully base their choices and judgements to participate in certain activities on the end results

of their behaviour for the environment and nature. The more people support biospheric values, the friendlier towards the environment they act (Nguyen et al., 2016). The overall aim of biospheric values is to safeguard the atmosphere, which makes it connected to voluntary PEB. A person displays their biospheric values when they show concern for all living things and surroundings. People who have biospheric values believe that the world can be turned into a better place by having something positive done towards the natural and built environment (Meyer, 2013). According to Martin and Czellar (2017), "Research suggests that biospheric values can be predictive of preferences for green products, intentions, and attitudes towards sustainable behavior, as well as environmentally relevant norms". For example, people who have biospheric values appear to be associated with a higher probability for using food that are organic, and always choose options that are environmentally-friendly (Soyez, 2012; Haws, Winterich & Naylor, 2014).

Biospheric values are connected to environmental self-identity, which shows the level to which a person thinks of themselves as an individual that behaves in an environmentally-friendly manner. People get motivation from seeing themselves act in a line that makes them appear consistent. The stronger a person's environmental self-identify, the more they incline to reuse, drive fuel efficient cars and form part of environmental activism (Van der Werff et al., 2014). Thus, a positive relationship among biospheric values and PEB is anticipated.

In their study done in Netherlands, Van der Werff, Steg and Keizer (2013) hypothesised that "biospheric values are related to environmental self-identity and that self-identity is in turn related to preferences, intentions, and behaviour". A confirmatory factor analysis via the multiple group method was utilised to analyse data from 468 respondents. Ateş (2020) conducted a study in Turkey and hypothesised that "Biospheric values are positively related to attitude toward pro-environmental behavior". To collect data, a questionnaire was utilised. The data was collected from 340 participants. The software used to collect the data was SPSS 21 and AMOS 20. Peijari (2020) from Finland did a study titled "Gender differences in Personal Values as Antecedents of Pro-Environmental Behavior-Evidence from the European Social Survey". In the study, it was hypothesised that biospheric values are uniquely, strongly and differently related to specific and general beliefs and behavioural intentions. To analyse data, the researcher used the "IBM SPSS" statistics (SPSS stands for

“Statistical Package for the Social Sciences”) analyses software with a sample size of 1896.

Prior research with regards to biospheric values has it that people will act in a manner that protects and safeguards the environment. The researcher has also seen through research that individuals with biospheric values place the environment and nature first, and their choices will be based on how the end results of their activities will affect the environment, and if it is not for the benefit of the environment, they will not participate in it. Since people with biospheric values will always act in a manner that protects the environment, the researcher concludes that a relationship between biospheric values and voluntary pro-environmental behaviour exists. From this, the following hypothesis can be drawn for the study:

Ha1: There is a significant positive relationship between biospheric values and employees’ voluntary pro-environmental behaviour of SMMEs.

3.7.2. Altruistic values and voluntary pro-environmental behaviour of employees

Altruistic values are also well known as humanistic values (Bouman, Steg & Kiers, 2018), and arise when a single person sees other people as equals, is worried about other people with regards to the environment, and feels they are obligated to act in a way that is beneficial to other humans (Van Riper & Kyle 2014). People with altruistic values focus on the consequences of their actions on other people such as friends, family and people in their surroundings or country (Hiratsuka et al., 2018). Pereira and Forster (2015) found that altruism is linked to environmental concerns such as the loss of wildlife environment, profitable fishing, and the loss of wet land. Altruistic people consume environmentally-friendly products to protect the environment for the protection of the human race (Hwang et al., 2020). Individuals with altruistic values act in a manner that increases the welfare of others by incurring personal costs but not gaining anything personally (Hartmann et al., 2017). Like most prosocial behaviour, the PEB has similar characteristics of altruism and can be interpreted as such (Hartmann et al., 2017). People with altruistic values will not think twice about taking political actions such as signing a petition or participating in boycotts to enforce environmental laws that are tough (Balabanis, 2013).

A study done by Meyer (2013) in South Africa focused on altruistic values. The objectives of the study were to “explore altruistic value orientation of female consumers in clothing disposal behaviour”. The data was analysed using descriptive analysis, which progressed to inferential statistics. A study by van Riper, Lum, Kyle, Wallen, Absher and Landon (2020) in the United States of America hypothesised that “altruistic values would positively predict all motivations and intended behavior”. A 520-sample for the study was used. A “two-step structural equation modeling procedure” was utilised to test out the hypothesis. A confirmatory factor analysis was used first then followed by a full structural equation model. In Taiwan, Liu and Wu (2021) did a study that hypothesised that altruistic values have a positive impact on the environment. The study used a Descriptive Statistical Analysis to analyse the data, which was collected from 405 participants where 371 responses were acceptable.

Lee et al. (2014) alluded that individuals with altruistic values tend to have stronger pro-environmental beliefs and have the willingness to participate in different types of activities that are environmentally-conscious as compared to those who focus their interests on individual values. For Altruistic values, the researcher has it that people look out for each other and will ensure that they protect the environment for the benefits and interests of other people. The researcher also states that people with altruistic values will take part in activities that place the environment first. Other studies done on altruistic values and PEB have hypothesised positively for the relationship. In this study, the researcher supports the notion because it is guaranteed that people who are willing to go over and beyond to protect the environment are acting and will always act in a pro-environmental behaviour. Thus, it is concluded that a significant positive relationship among altruistic values and PEB is anticipated and exists.

Ha2: There is a significant positive relationship between altruistic values and the voluntary pro-environmental behaviour of employees of SMMEs.

3.7.3. Egoistic values and voluntary pro-environmental behaviour of employees

Egoistic values are also popularly known as self-interest values (Meyer, 2013). In this study, they are referred to as egoistic values, which suggest that a single person’s concern for the natural and built environment is in direct relationship with the benefits the single person obtains for acting in a pro-environmental manner. In other words, the single person has their own interest of concern (Prakash, Choudhary, Kumar,

Garza-Reyes, Khan & Panda, 2019). Therefore, only when the individual feels that it is for their own interest to participate in pro-environmental activities, the encouragement to take part will be there (Prakash et al., 2019). Hiratsuka et al. (2018) point out that egoistic values are about people placing their care in power or money for their own gain, and this may have a negative relationship with environmental concern. People who have personalities with strong egoistic value orientation are more likely to consider the expenses and profits of PEB for themselves. “However, when the perceived benefit outweighs the perceived costs’, they will behave in a way that is environmentally friendly and vice versa” (Gatersleben et al., 2014). However, in multiple cases, when a person acts on an egoistic value orientation, it means they are not acting pro-environmentally because the personal costs that are linked with the PEB are more than the personal benefits (Gatersleben et al., 2014). Thus, a negative association between egoistic values and PEB is expected.

A study done by Tamar, Wirawan, Arfah and Putri (2020) in Indonesia, titled “Predicting pro-environmental behaviours: the role of environmental values, attitudes and knowledge” hypothesised that altruistic values predict environmental behaviour through environmental attitude. A sample of 500 students was used in the study, and the results were performed on a Structural Equation Modelling (SEM) software. Schley (2021) from the Netherlands did a study titled “A mediation Study: The effect of self-enhancement values on the relationship between egoism and pro environmental behaviour”. In the study, it was hypothesised that Egoism is associated negatively with pro-environmental behaviour. The PROCESS tool was utilised to analyse data with 116 participants. A study done by Van Riper et al. (2020) in the USA titled “Values, motivations, and intentions to engage in pro-environmental behavior. Environment and Behavior” hypothesised that altruistic values positively correlate with PEB. The structural equation model with a sample of 520 participants was utilised to analyse data.

The researcher has seen that prior research with regards to egoistic values finds that people tend to act in line with being pro-environmental if the behaviour of doing such will benefit them; otherwise they are not willing to compromise their benefits for the good of other people. Also, previous studies have had differences when it comes to hypothesising egoistic values with regards to PEB. In this study, the researcher hypotheses that a negative relationship exists between egoistic values and pro-

environmental behaviour. This conclusion or hypothesis is drawn negatively because having to depend on how people feel to act in a certain manner is, in many cases, not guaranteed to benefit other people.

Ha3: There is a significant negative relationship between egoistic values and the voluntary pro-environmental behaviour of employees of SMMEs.

3.7.4. Openness to change values and voluntary pro-environmental behaviour of employees

Openness to change refers to the stimulation and self-direction based on the motivation of independent thought and action, which conflicts with the motivation of fulfilling others' expectations (Ghazali et al., 2019). It relates to actions, thoughts and feelings, and the readiness for experiences that are new and independent. It involves self-direction and stimulation values (Hansen et al., 2018). Individuals that value openness to change as a crucial principle may find happiness from being early adopters of a solution that is eco-friendly, which is highly innovative and conveys their unconventional and pioneering green self-identification (Barbarossa et al., 2017). People with high values of openness to change are most probable to become sensational seekers (Hansen et al., 2018). Blok et al. (2015) found that "self-transcendence and openness to change re-strong predictors of PEB. On the contrary, values related to self-enhancement and conservatism are strong negative predictors of PEB". Therefore, it is expected that openness to change will have a helpful relationship with pro-environmental behaviour in organisations.

A study done by Blok et al. (2015) in the Netherlands hypothesised that openness to change is related positively to PEB at work. Data was collected from 411 respondents, and was analysed using Stata v12.1. A study done by Barbarossa et al. (2017) in Denmark, Belgium and Italy titled "Personal Values, Green Self-identity and Electric Car Adoption" hypothesised that openness-to-change values have a positive relationship with PEB. A sample of 2005 car drivers was utilised to record data in the SEM technique with LISREL 8.80. Isa, Yunos, Ibrahim, Ismail and Marzuki's (2018) study titled "An Exploration of Drivers and Strategies for Encouraging the Delivery of Green Building Projects in Housing Development" in Malaysia hypothesised that openness to change has a positive relationship with Pro-environmental behaviour.

Data was analysed with the use of descriptive statistics, Cronbach's alpha, correlation, and multiple regressions. A sample of 234 was used in the data analysis.

Previous research with regards to openness to change values and PEB shows that openness to change as a value is positively related to PEB. Therefore, it is hypothesised that openness to change values have a positive relationship with PEB.

Ha4: There is a significant positive relationship between openness to change values and the voluntary pro-environmental behaviour of employees of SMMEs.

3.7.5. Moderating effect of gender on values and voluntary pro-environmental Behaviour of employees

Vicente-Molina et al. (2018) remark that minimal attention has been given to theories that explain PEB by taking gender differences into account. Although these findings are not consistent over time, some studies reveal that men are less inclined to PEB compared to women (Vicente-Molina et al., 2018). The reason for women and men to behave differently is explained through the socialisation process that the two genders go through (Sreen et al., 2018). According to Sreen et al. (2018), the theory of gender socialisation argues that girls and boys go through different socialisation processes from early childhood and thus develop different social values and expectations. For example, boys in India are taught to be more competitive, show no emotions and are expected to be sole providers for their family when they get old, while girls learn to show compassion and be cooperative since they are expected to be nurturing care givers when they mature into adulthood (Sreen et al., 2018).

The relationship between gender and PEB requires more empirical evidence (Vicente-Molina et al., 2018). Researchers in the past decades have pointed out the importance of gender when analysing behaviour towards the environment because it could influence beliefs, attitudes, behaviour and opinions. Prior research has also revealed that women tend to participate more with regards to pro-environmental actions when everyday behaviour (such as recycling, use of transport, energy conservation) is questioned, and show an attitude that is positive towards products that protect the environment (Sreen et al.,2018). Thus, it is expected that gender will moderate values and PEB.

A study done by Quoquab, Jaini and Mohammad (2020) titled “Does It Matter Who Exhibits More Green Purchase Behavior of Cosmetic Products in Asian Culture? A Multi-Group Analysis Approach” hypothesised that gender moderates the relationship between altruistic, biospheric, egoistic values and openness to change values and pro-environmental behaviour. Data was collected from 240 participants made up of 161 females and 79 males. The multi-group analysis (MGA) technique and PLS-SEM approach were used to have data received from participants that were analysed.

The study mentioned above shows that gender does moderate the relationship between the afore-mentioned values and pro-environmental behaviour. In this study, it is therefore hypothesised that gender positively moderates the relationship between altruistic, biospheric, egoistic values and openness to change values and pro-environmental behaviour.

Ha5: Gender significantly and positively moderates the relationship between biospheric, altruistic, egoistic and openness to change values and employees’ voluntary pro-environmental behaviour

3.7.6. Moderating effect of age on values and voluntary pro-environmental behaviour of employees

Feelings that come with being connected to nature come in many various forms (Krettenauer, Wang, Jia & Yao, 2020), and may manifest while enjoying and experiencing nature through all the five senses (hearing, sight, taste, touch, and smell) or when one has a deep communion sense with nature (Krettenauer et al., 2020). Despite the numerous manifestations, prior studies have shown that feelings that come with being connected to nature are significantly related to pro-environmental behaviour. “This relationship holds across the life span and applies similarly to children, adolescents, and adults” (Krettenauer et al., 2020). At the same time, feelings that come with being connected to nature are methodically related to age (Patel, Modi & Paul, 2017). Adolescence is characterised as a “timeout” in the relationship that humans have with nature (Patel et al., 2017). Teenagers are more likely to enjoy nature less than adults and children (Patel et al., 2017). Similarly, feelings that come with being connected to nature in adolescent years are found to be lower (Krettenauer et al., 2020). Krettenauer et al. (2020) further allude that these results are attributed to the peer orientation and sensational seeking of adolescents. As feelings of being

connected to nature lower in adolescent years, so does the expected pro-environmental behaviour (Krettenauer et al., 2020).

A wide range of studies have shown that age is a crucial predictor of PEB (Bronfman, Cisternas, López-Vázquez, Maza & Oyanedel, 2015). While some studies have determined that the younger generation is not as concerned with the environment as compared to older people, other studies found young people to have a more obligatory sense to the environment (Bronfman et al., 2015). Patel et al. (2017) state that an "increase in environmentally friendly behaviour and awareness is positively associated with increase in age". Therefore, age positively moderates the relationship between altruistic, biospheric, egoistic and openness to change values and pro-environmental behaviour.

Ha6: Age significantly and positively moderates the relationship between biospheric, altruistic, egoistic and openness to change values and employees' voluntary pro-environmental behaviour

3.7.7. Moderating effect of education level on values and voluntary pro-environmental Behaviour of employees

A demographic variable that has been linked consistently to environmental behaviour by existing research is the level of education (Patel et al., 2017). This variable has gained popularity in existing research over other demographical variables (Patel et al., 2017). "Among other demographic variables, the relation of education level with environmental behaviour has been more consistent but still unclear and not definitive" (Patel et al., 2017). Education has been identified consistently by studies to be a powerful predictor of behaviour towards the environment, possibly because people that are better educated are "better aware of the potential damage" (Giefer, Peterson & Chen, 2019). Although other studies have found a negative association between environmental behaviour and educational level, most studies have revealed a positive relationship between pro-environmental behaviour and educational level (Giefer et al., 2019). Patel et al. (2017) observed that individuals who are highly educated gained their knowledge about issues of the environment through schooling and are thus expected to act positively towards the environment. Bronfman et al. (2015) also state that the more educated people are, the more they tend to be concerned about the environment and more willing to stick to pro-environmental behaviours. Therefore, it is

hypothesised that educational level positively moderates the relationship between altruistic, biospheric, egoistic values and openness to change values and pro-environmental behaviour.

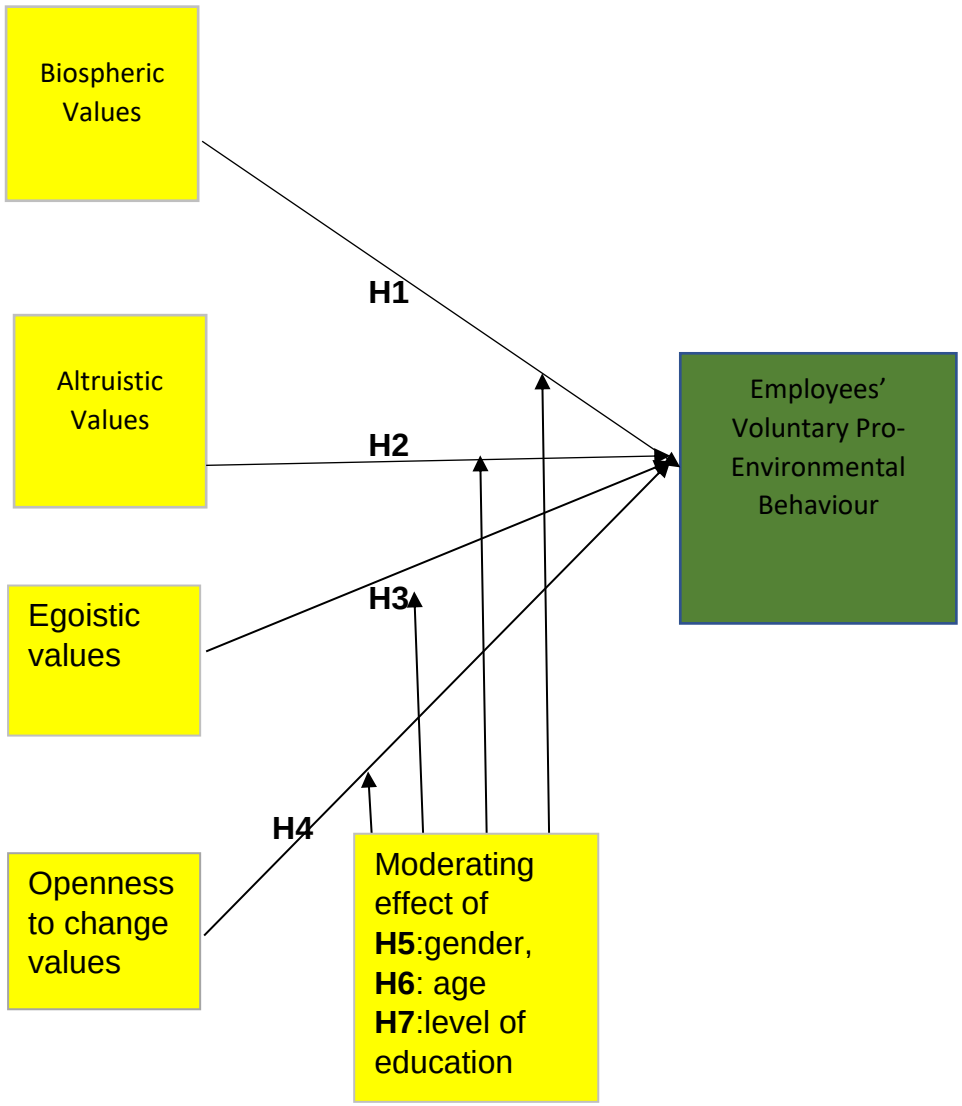
Ha7: Educational level significantly and positively moderates the relationship between biospheric, altruistic, egoistic and openness to change values and employees' voluntary pro-environmental behaviour.

This empirical literature review of the study discussed the findings of previous research. The researcher of this study outlined the hypothesis that is to be tested. The conceptual framework is drawn from the hypotheses.

3.8. CONCEPTUAL FRAMEWORK

Based on the VBN theory, Figure 1 depicts the conceptual framework of the study. The moderating effect of gender, level of education and age have been added to the VBN.

Figure 1: The Conceptual framework of the research



Source: Authors own conceptualisation.

3.9. SUMMARY

This chapter explored the values and pro-environmental behaviour of the study. The definition, history, importance and goals of sustainable development were examined, as well as different definitions of PEB at work and at home. The author of this research defined PEB with reference to prior research papers. The definition of values and

employee motivation was presented. The theoretical literature review looked at different theories that can be used in studies concerning PEB. The theory of value belief norm was chosen out of the four theories mentioned in the study because the researcher saw it fitting for the purpose of this research. The empirical literature of the study was discussed, hypotheses were outlined, and a conceptual framework was drawn.

The researcher found that PEB can either be voluntary or involuntary, and chose to use the voluntary PEB of employees since it has not received much attention, and that since people spend one-third of their lives at work, it was worth pursuing the volountary PEB. It was also found that the engagement of employees in voluntary PEB assists enterprises in saving money for the enterprise through the triple below line (environmental, financial, and social performance). The value belief norm theory seemed to be appropriate in the study since the research is about values of employees and what makes them act the way that they do with regards to the environment.

The next chapter will discuss the research methodology of this research paper.

CHAPTER FOUR

RESEARCH METHODOLOGY

4.1. INTRODUCTION

This chapter aims to discuss the methodology utilised in the study. Methodology is a manner in which problems of research and processes of doing research can be solved systematically and scientifically (Mpiti, 2016). Mpiti (2016) further alludes that methodology can be understood as the science of doing research in a dependable and credible way with the end goal of resolving difficult societal problems. In research, methodology can be considered as the theory of accurate scientific findings (Pandey & Pandey, 2015).

This chapter entails the research philosophy and approach of this study. This is followed by research design, which will discuss the type or research method the study will focus on between quantitative, qualitative and mixed methods. The population of the study will also be discussed. Sample and sampling methods, data collection instruments and data collection procedures will be also outlined. Data analysis methods will discuss methods that will be utilised to analyse the collected data. Reliability and validity will also be discussed. Ethical considerations to protect respondents will be outlined as well.

4.2. RESEARCH PHILOSOPHY AND APPROACH

4.2.1. Research philosophy

Research philosophy is described as a system of beliefs and assumptions about the development of knowledge (Dougherty, Slevc & Grand, 2019). Although the definition of research philosophy might have an intense sound to it, it is exactly what is being done when research is embarked on: developing information in a certain field. At every phase of research, there are a number of assumptions that are made (Dougherty et al., 2019). These assumptions are made on the knowledge of humans (epistemological assumptions), about realities that are being encountered in research (ontological assumptions) and the level and manners to which own values influence the process of research (axiological assumptions) (Žukauskas, Vveinhardt &

Andriukaitienė, 2018). These assumptions shape how research questions, methods utilised are understood and the way findings of the research are interpreted (Žukauskas et al., 2018). The three assumptions to differentiate research philosophies are ontology, epistemology and axiology. (i) Ontology is described as what people assume is the nature of reality. Ontological assumptions form the way in which the research objects are studied. The assumptions respond to questions such as “what is there that can be known?” or “what is the nature of reality”? (Mertens, 2012). (ii) Epistemology is a way in which we understand and explain how “we know what we know”. Epistemology is also concerned with starting a foundation that is philosophical to determine which forms of knowledge are likely to happen and how it can be ensured that both of them are legitimate and adequate (Holma & Hyytinen, 2015). (iii) Axiology is described as the role of ethics and values in the process of research (Biddle & Schafft, 2015). This comprises the way in which researchers deal with values of their own as well as those of research participants (Biddle & Schafft, 2015).

The most common philosophical positions researchers rely on are: (i) Positivism, which is founded on the fact that knowledge gained via observation (the senses) and measurement are trustworthy (Park, Konge & Artino, 2020). In positivist studies, the researcher’s role is limited to the collection of data and its interpretation in an objective manner (Ryan, 2018). (ii) Realism- realism research depends on the notion of independence of reality from the human’s mind. Realism is centred on the assumption of a scientific technique in the development of knowledge (Llewellyn, 2017). (iii) Pragmatist research philosophy concepts are accepted as being relevant only when the action is supported (Saunders, Lewis, Thornhill & Bristow, 2015). Saunders, Lewis and Thornhill (2012) postulate that pragmatism recognises that there are many different ways of interpreting the world and undertaking research, that no single point of view can ever give the entire picture and that there may be multiple realities. (iv) Interpretivism includes researchers’ interpretation of elements of the study, thus interpretivism integrates interests of humans into a study. Accordingly, interpretive researchers assume that access to reality (given or socially constructed) is only through social constructions such as language, consciousness, shared meanings, and instruments (Attri, Dev & Sharma, 2013).

This study used a positivism philosophical position, which focuses on data measurement as they are trustworthy. So, the data used in this study will be measured, thus the selection of the positivist philosophy.

4.2.2. Research approach.

There are two approaches in research: deductive and inductive approaches. Deductive research is an approach that is supported by a basic idea for the development of certain conditions. This approach is important in the positivist paradigm (Rahi, 2017). In research, when utilising the deductive approach, the hypothesis has to be examined first (Gorat & Prijambodo, 2013). Varpio, Paradis, Uijtdehaage and Young (2020) state that a deductive approach is concerned with the development of hypotheses centred around the theory that exists, and then having a research strategy designed to assess the hypotheses. It is a form of research approach where the researcher mostly utilises it to perform scientific studies (Gorat & Prijambodo, 2013). Inductive research is research used by researchers to perform qualitative research (Liu, 2016). Researchers use this form of research approach when they do not know anything about the research results (Liu, 2016). The deductive research approach was used in this study because theories of behaviour were adopted. The development of hypotheses was done and empirically tested to check the validity of the theory.

4.3. RESEARCH DESIGN

Pandey and Pandey (2015) define research design as a key plan that specifies procedures and methods for collecting and analysing the information needed. Research design deals with logical, and not logistical, problems (Roller & Lavrakas, 2015). According to Akhtar (2016), the structure of research is known as research design, which is seen as the “Glue” that grips all research essentials together; in summary, it is the blueprint of the research work proposed (Akhtar, 2016). This design has been described in different terms by different social scientists (Akhtar, 2016). Akhtar (2016) states that a research design is the arrangement of conditions for the collection and analysis of data in a manner that aims to combine relevance to the research purpose with economy and procedure. Akhtar (2016) further states that

research design is the plan, structure and strategy and investigation concaved so as to obtain ensured to search question and control variance (Jongbo, 2014). Schwartz-Shea and Yanow (2013) remark that research design refers to a research project structure that is basic, and an outline for running an investigation which is focused on questions of research that are key to the concerns of a certain epistemological community.

4.3.1. Types of research

In academic research, there are three research design methods that can be used to collect and analyse data. These methods are qualitative, quantitative and mixed methods (Strijker, Bosworth & Bouter, 2020).

4.3.1.1. Qualitative research

Balarabe Kura (2012) defines qualitative design as an activity that is situated and located where the observer is in the world. Qualitative design involves a naturalistic, interpretive approach to the world. For example, researchers who engage in qualitative research study phenomena in their natural settings, trying to make sense of, or interpret phenomena in accordance with the meaning that humans bring to them (Balarabe Kura, 2012; Lockwood, Munn & Porritt, 2015). Qualitative research suggests emphasis on the traits of entities and on meanings and processes that are not experimentally measured or examined (Lockwood et al., 2021).

4.3.1.2. Quantitative research

Quantitative research refers to a research approach which is intended to test theories, determine facts, display relationships amongst variables and predict outcomes (Liang, Fulmer, Majerich, Clevenstine & Howanski, 2012). Quantitative research utilises methods that come from the natural sciences which are designed to ensure generalisability, objectivity and reliability (Blumberg, Cooper & Schindler, 2014). “The techniques used in quantitative research include random selection of research participants from the study population in an unbiased manner, the standardized questionnaire or intervention they receive, and statistical methods used to test predetermined hypotheses regarding the relationship between specific variables” (Czychon, 2020). Quantitative research is statistically based, deals with questions

which are best answered in numbers, and is much more reliable and objective (Brannen, 2017).

Quantitative research utilises different forms of tools. These tools are utilised to collect data that is numeric in terms of numbers and statistics (Park & Park, 2016). The data is then symbolised in non-textual forms such as figures, tables and charts (Park & Park, 2016). The non-numerical data can be used by researchers to examine information. There are five forms of quantitative research: survey, descriptive**,** experimental, correlational, and causal-comparative research (Hodge, 2020). Survey research is known as one of the primary statistic methods. The aim of a survey research is to give a comprehensive description of the characteristics of a certain group or population (Vaske, 2019). Descriptive research describes the current status of all variables identified or selected (Rutgers, 2022). The basic objective of descriptive research is to describe and evaluate the people's current status, conditions, events or settings (Onen, 2016). Experimental research is based on multiple or single theories (Dechenaux, Kovenock & Sheremeta, 2015). Correlation research is utilised to establish the relationship between two close entities and to determine the relational impact of each other (Koo & Li, 2016). Causal-comparative research is one amongst many of the scientific methods that apply to summarise the cause-and-effect equations between different variables (Liang et al., 2012). In causal relationships, one variable is founded on the complementary experimental variable (Liang et al.,2012).

Goertzen (2017) states that quantitative research has the following main advantages. Results can be generalised to a certain population. The large data sets and results represent the entire population. Also, the framework of research and documentation methods can be shared and replicated. Lastly, in homogenous approaches, the study is allowed to be replicated over time (Goertzen 2017). Liang et al. (2012) stipulate that quantitative research has the following main limitations. Firstly, data provides no evidence for why populations feel, think, or act in a specific manner. Secondly, precise demographic groups, more especially disadvantaged or vulnerable groups, may be hard to access. And lastly, research may be time-consuming and necessitate data collection over long periods of time.

4.3.1.3. Mixed research

Brannen (2017) defines mixed methods as a method of research that comprises both quantitative and qualitative data collection and analysis in a form that is parallel. It is a kind of research where the researcher utilises the qualitative research paradigm in one stage of the study and the quantitative research paradigm in the other stage (Brannen, 2017). Pandey and Pandey (2015) argue that mixed methods research is greater than just collecting both quantitative and qualitative data. It suggests that data be integrated, linked, or mixed at some point in the process of research.

The goal of mixed methods for combining both qualitative and quantitative research elements is to grow and fortify the conclusions of the study thereby contributing to existing literature (Schoonenboom & Johnson, 2017). The use of mixed methods in all studies must contribute to answering questions of research. In the end, mixed methods are about heightening knowledge and validity (Schoonenboom & Johnson, 2017). There are three forms of research that can be utilised when the three methods of research (quantitative, qualitative or a mixture of both) are applied. These forms are exploratory, descriptive and causal research (Sreejesh, Mohapatra & Anusree, 2014). In this research, exploratory and descriptive research will be used.

Exploratory research is described as research utilised to investigate a problem that is not defined clearly (Ponelis, 2015). It is undertaken to understand the existing problem but will not give results that are conclusive. For this type of research, the researcher commences with an idea that is general and utilises this research as a medium to detect problems that may be of great value for future research (Cooper & Schindler, 2011). A crucial part here is that the researcher must be willing to have their direction subject changed to the revelation of new insight or data (Cooper & Schindler, 2011). This form of research is normally done when the problem is at the beginning stages. Exploratory research is connected to the quantitative method, which utilises statistical analysis to interpret data (Cooper & Schindler, 2011). Schoonenboom and Johnson (2017) state that exploratory research is utilised to answer questions such as what, why and how. The researcher used exploratory research to uncover extra studies that related to the problems of the study, to uncover crucial gaps in literature, and to have the research questions and problems further investigated in order to put together

hypotheses. A pilot study was used to refine the questions used in the final questionnaire. This also assisted in ensuring its validity.

Descriptive research is described in the quantitative research part of this study as the current status of all variables identified or selected (Rutgers, 2022). Its main objective is to state and assess the current status, circumstances and events of people in detail (Onen, 2016). It is used to answer questions such as who, what, when, where, and how, but finds it difficult and impossible to answer the why question (Ghauri, Gronhaug, Kristinslund, 2010). Descriptive research is used in quantitative research as a predecessor as it provides indicators that are valued as to what components and variables can be utilised (Kaur, Stoltzfus & Yellapu, 2018). In descriptive research, the emphasis is placed on instruments for the outcome of statistical measurements (Nassaji, 2015). “Descriptive research” is also utilised in this study in terms of measures of central tendency to outline statistical results and analyse data.

This research study is not a qualitative study since for a study to adopt a qualitative research approach, it must not, according to the information stated above, place its emphasis on the processes and meanings that are experimentally measured or examined. This study is also not a mixed method study since for a study to be mixed method, one phase of the study must have qualitative data and the other must have quantitative data and. In this study, no qualitative data was used. Therefore, this study adopted a quantitative research design since it used a homogenous questionnaire to determine the relationship between certain variables that originate from the study hypotheses. Quantitative research is also helpful in that the robust statistical results that are attained from it are of excellent quality for estimating the probability of success (Davies & Hughes, 2014), as is the case of this research, which seeks to find out how employees’ values affect their pro-environmental behaviour.

4.4. POPULATION OF THE STUDY

A population study is made up of all the objects, items or individuals who are under consideration in a scientific query (Mpiti, 2016). The population of this study is targeted. A target population means that the study concentrates on members or individuals who specifically meet the criterion of the research since studying all the

elements of the population is not possible due to cost and time constraints, thereby requiring the researcher to choose a targeted population (Alvi, 2016; Bhattacherjee, 2012). Therefore, the target population of this study is all employees that are working in SMMEs in all sectors in Polokwane.

4.5. SAMPLE AND SAMPLING METHODS

A subset of a population is known as a sample (Ferguson, 2017). A sample needs to be a representation of the population from which it was selected and should be a big enough number to provide statistical analysis (Ferguson, 2017). The individuals from the sample are called participants (Shorten & Moorley, 2014). The process of drawing a sample is known as sampling (Dovrat, Lang & Avidan, 2019). Taherdoost (2016) states that there are two forms of sampling techniques: “probability sampling and non-probability sampling methods”.

Probability sampling is known or described as each person or object of the population having a probability of non-zero for being included in the sample. Ferguson (2017) postulates that probability sampling can be categorised into four. (i) Systematic random sampling is where every nth case after a random start is selected. For example, if surveying a sample of consumers, every fifth consumer may be selected from your sample (Taherdoost, 2016). (ii) Simple random sampling” refers to the fact that every member of the population has the same chance of being included in the sample (Emerson, 2015). (iii) “Cluster sampling” is when the total population is divided into groups or clusters. Subsequently, a simple that is random is taken from these clusters or groups, for which all of them are utilised in the final sample (Emerson, 2015). The benefit of cluster sampling is that it benefits those researchers whose focus is divided over huge geographical areas as it ensures that money and time are saved. (iv) “Stratified random sampling” is when the population is separated into a subgroup and a sample that is random is then taken from every single subgroup (Tyrer & Heyman, 2016). Stratified sampling is utilised frequently when the population has a great deal of variation. The purpose of stratified random is to safeguard that every subgroup is represented adequately.

A non-probability sampling is described as having no known chance that any person or object of the population can be chosen and involved in the study (Acharya, Prakash, Saxena & Nigam, 2013). The non-probability sampling carries the advantage of being convenient as it assists investigators to gather a sample that has little or no cost, and it is perfect for studies in research that do not need population representation (Emerson, 2015). Non-probability sampling has four methods. (i) Judgmental or purposive sampling is a sampling technique where specific settings, events or persons are deliberately chosen to offer information that is crucial and cannot be found from other choices (Tyrer & Heyman, 2016). Purposive sampling is when participants or cases are included in the sample by the researcher because they believe that they should be included (Tyrer & Heyman, 2016). (ii) "Convenience sampling" is when participants are selected since they are easily and readily available (Emerson, 2015). Typically, convenience sampling is frequently used by students, as it is not costly and saves time for the investigator and it is much easier as compared to other sampling methods (Taherdoost, 2016). (iii) Quota sampling is a sampling technique that collects data from a homogeneous group (Acharya, et al., 2013). It is a two-way step process in which two variables can be utilised to filter data from the population. It can be administered effortlessly and assists in fast homogeneous comparison (Acharya et al., 2013). (iv) Snowball sampling is when researchers ask participants that they have selected to ask their acquaintances and friends to be part of the study, thereby increasing the sample size (Etikan, Alkassim & Abubakar, 2016).

Non-probability sampling with regards to the convenience and snowball sampling methods was adopted in this study. To show why the researcher adopted the snowballing and convenience methods, the advantages of sampling methods are presented. Snowballing technique has the following advantages, according to Question Pro (2022). (i) It makes it quicker to get hold of samples- referrals make it quick and easier to find subjects as they originate from sources that are reliable. (ii) Cost effective- snowballing costs less as the referrals are found from a primary data source. It is not as expensive, and as compared to other methods, it is very convenient. (iii) Sample hesitant subjects- other individuals do not like coming forward to take part in research studies because they fear that their identity will be discovered. Snowball sampling helps in this situation as they ask for a reference from people known to each other. There are some sections of the target population which are hard to contact

(Dusek, Yurova & Ruppel, 2015). Advantages of convenience sampling, according to Acharya et al. (2013), are: (i) convenience sampling is an inexpensive way to collect data- it does not need much effort to start convenience sampling. (ii) It is utilised as an intermediation to rectify dissatisfaction. (iii) It saves time when data is being gathered- convenience sampling includes convenience and speed. (iv) When using convenience sampling, data is available immediately since it involves data collection from the on-hand population. This means that the researcher finds data readily available for collection.

4.5.1 Sample size

In PLS-SEM, the commonly used minimum sample size estimation is the method of the “10-times rule” (Hair, Sarstedt, Matthews & Ringle, 2016). The method builds on the assumption that the sample size must be greater than 10 times the maximum number of the outer or inner mode (Kock & Hadaya, 2018). In terms of this research, the sample was made up of individual employees of SMMEs in the city of Polokwane in Capricorn District. The total sample consisted of a maximum of 370 SMME workers. With the advantages of both snowballing and convenience methods in mind, the researcher saw it a good idea to adapt these types of sampling in this study as she wanted it to be easy to get hold of samples, make it cost effective to collect data, and wanted to save time as well.

The sample size thus enabled the researcher to know which method of collecting data will best fit this research.

4.6. DATA COLLECTION METHOD

The collection of data is a crucial part of any research study (Alshenqeeti, 2014). Data collection method is defined as the process where the investigator gets an opportunity to gather information that is needed in a research study by collecting and measuring data on the interested variables in an organised and recognised fashion that aids the researcher to answer the research questions identified, have the hypotheses tested and outcomes evaluated (Rimando, Brace, Namageyo-Funa, Parr, Sealy, Davis, Martinez & Christiana, 2015). The main goal of collecting data is to have evidence that is quality-captured, which then translates into the analysis of data that is rich and

permits the questions posed to have a good build-up of convincing and credible answers (Mpiti, 2016). Data collection that is inaccurate can affect the outcome of the study and eventually produce invalid results.

The collection of data can be carried out in a primary and secondary manner. The former is known as data that is gathered personally by the investigator via first-hand sources, the latter is data which is collected earlier by someone else for some other purpose (Mpiti, 2016; Johnston, 2017). By definition, primary data collection is the collection of data that is gathered raw from the source. It is a process where original data is gathered by the investigator for a specific research objective. Data collection can be analysed further into two sections: qualitative and quantitative data collection methods (Low, Alderson, Cecconello, Chang, Darling, D'Journo, Griffin, Hölscher, Hofstetter, Jobe & Kitagawa, 2015).

There are numerous methods that can be used when collecting data together with a wider range of information sources such as blogs and journals. According to Cooper and Schindler (2011), there are three main methods of collecting data, namely, observations, experiments and surveys.

4.6.1. Methods of collecting data

4.6.1.1 Observation

This is a method of collecting data information through observation. The observation nature could be accomplished either as a complete observer, an observer as a contestant, a contestant as an observer or as a complete contestant (Kawulich, 2012). This type of method is an important part of devising a hypothesis (Kawulich, 2012).

4.6.1.2 Experiment

The experiment data collection method is when an independent variable and a dependent variable can be manipulated to apply to dependent variables and the effect is measured (Harappa, 2021) .

4.6.1.3 Survey

A survey is described as a process that is undertaken by the researcher by giving out a list of questions to individuals who are willing to participate in a study (Cooper &

Schindler, 2011). It is viewed as a relevant strategy in scientific outcomes for business and management. It is also used to assess ideas, opinions, characteristics, feelings, needs and events or people's behaviours. In a survey, a series of questions is asked to the willing participants, and their answers will then be analysed when the participant level is reached. In research where a survey is used, a sample is selected by the researcher from the study population and the researcher administers to them a standardised questionnaire (Cooper & Schindler, 2011; Denscombe, 2017).

A survey can be divided into cross-sectional survey and a longitudinal survey:

- Cross-sectional survey

This is the type of survey where data is collected from chosen individuals at a particular point in time (Connelly, 2016). It is a single and stand-alone study. Cross sectional studies are known to effectively provide a snapshot of current behaviours, beliefs and attitudes in a population. It delivers data rapidly (Connelly, 2016). From it, a sample or samples is derived from the chosen population to be studied.

- Longitudinal survey or studies

Longitudinal studies are studies where the data is collected at particular periods over a lengthy period of time so as to measure shifts over time (Caruana, Roman, Hernández-Sánchez & Solli, 2015). This kind of data collection method of survey are employed mostly for analysis of trends. It is similarly applied in studies where the major focus is to collect and assess a set of patterns of data (Caruana et al., 2015).

This study made use of a survey as other methods of data collection like observations and experiments were inappropriate to explore the set-out hypotheses. With the motive of this research in mind, a primary data source was used in terms of a questionnaire given to the sample selected. A cross-sectional survey was seen as appropriate in this research as it delivers data in a rapid manner, while longitudinal survey was not selected because data is collected over a lengthy period and the resources to make use of such a survey were not available. Finally, the researcher did not want to compare data as well. According to Cooper and Schindler (2011), surveys have different methods of conducting data, namely, interviews (virtually and personally), mail surveys, computer-based surveys as well as self-administered questionnaires.

- Methods used to collect data in surveys
  - Interviews

An interview is a conversation done face to face or virtually with the purpose of having relevant data collected to fulfil the purpose of research (Wilson, Onwuegbuzie & Manning, 2016). Different types of interviews include unstructured, structured, and semi-structured interviews, with each having a small difference from the other (Stuckey, 2013).

- Mail surveys

Mail surveys occur when the researcher sends the questionnaire via a paid envelope postal system to the respondent. The respondent then fills in the questionnaire and send it back via the paid envelope postal system to the researcher (Ryan, Mentzakis, Matheson & Bond, 2020).

- Computer-based surveys

Computer-based surveys are surveys sent to the respondent through an email. In addition, the creation of a website can be done in which the questionnaire is placed for respondents to answer (Cooper & Schindler, 2011).

- Questionnaires

Questionnaires are defined as the process of having data collected via a tool consisting of sequence of questions and prompts to receive a reply from the individuals it is given to (Roopa & Rani, 2012). Questionnaires are specially created to collect data from a group (Opara, Brola, Leonardi & Błaszczyk, 2012). The researcher utilised questionnaires to have data collected from participants since they give assurance that the information from different participants is comparable. In addition, the responses obtained from the questionnaire can be coded easily. This eases data processing. The questionnaires were delivered personally by the researcher to the participants with no influence in their responses by the researcher.

According to Pateen (2016), the questionnaire can be used for the following reasons and the researcher used a questionnaire because of these reasons. Firstly, it can be utilised as a method in its own right. It can be e-mailed, posted or faxed. It can cover a big number of organisations or people. It covers a wide range of geographical

location. It is fairly inexpensive. No preceding arrangements are necessary. The respondent can avoid embarrassment. It gives the interviewer the inability to be bias. And lastly, the anonymity of respondents is possible.

There are disadvantages that come with utilising questionnaires (McGuirk & O'Neill, 2016). They are problem in design, questions have to be fairly simple, there can be delay in time when waiting for responses, illiteracy is not assumed, there is no control over who completes them, and some questionnaires may be incomplete. The targeted sample had to be carefully selected to avoid such disadvantages.

The study questionnaire included survey questions and questionnaire questions:

- Survey questions

Survey questions can be carried out as open-ended or close-ended questions (Dalati, Gómez, 2018), with each question designed to meet the scope and nature of the research. Open-ended questions need to be answered in full, and require the respondents' own feelings and knowledge, and have more than one correct answer (Tsang, Royse & Terkawi, 2017; Agustianingsih & Mahmudi, 2019). Close-ended questions are questions that have only one correct answer (Agustianingsih & Mahmudi, 2019). Kelly and Lesh (2012) state that close-ended questions stipulate the acceptable responses and make information readily available to participants. Close-ended questions provide respondents with possible responses. The researcher made use of closed-ended questions because they can be easily coded and analysed (Kinya, Wanjau & Omondi, 2018). They comprise dichotomous questions and Likert scale questions.

A dichotomous question is one that can have two possible answers. This type of question is generally utilised in surveys that ask for a True/False, Yes/No, Agree/Disagree or Fair/Unfair answers (Oladapo, 2014). Questions based on a Likert scale are a psychometric scale where the questions constructed for this scale are utilised in a survey (Nemoto & Beglar, 2014). Likert scale respondents do not choose between no/yes; there are exact choices based on disagreeing or agreeing on a specific survey question (Dolnicar, 2013). A Likert scale is described as a five, seven or a nine-point agreement scale utilised to measure the agreement of the respondents with numerous statements (Cooper & Schindler, 2011).

According to Cooper and Schindler (2011), Likert scales are used for the reasons that follow. A Likert scale can be utilised to assess beliefs, attitudes, perceptions and opinions. It removes the development of bias responses among respondents. Likert scales are easy to code and analyse, and their responses are easily coded and can be analysed directly from questionnaires. The bias of the interviewer is reduced, and questions can be asked quickly. The use of Likert scale ensures that the responses of the respondents are consistent and comparable.

The researcher made use of a Likert scale because of its benefits. The construction of the questionnaire was made easy, saving time for the researcher. The instrument produced a scale that is highly reliable, and was easy to complete and read for respondents. Furthermore, the researcher stated that questions based on Likert scales were easier to code and analyse. In addition, the utilisation of Likert scale questions is consistent with the method of collecting data from previous empirical data on values of voluntary PEB of employees of SMMEs.

The methods of collecting data were outlined and a survey in a Likert scale form is to be used to collect data.

4.7. DATA COLLECTION INSTRUMENT

The instruments used to collect data are a vital part of the process of research as they offer a foundation that is analytic in the search for solutions to a research problem given (Moyo, 2017). Numerous studies make use of instruments such as interviews, questionnaires and observations to collect data (Moyo, 2017). In this study as stated above, a questionnaire was utilised as an instrument to gather data. A structured questionnaire was developed, which mainly consisted of closed-ended questions. With these questions, the respondents had a range of responses they could select. According to Stols (2016), if the sample size is bigger, the questionnaire should be more closed, structured and numerical. Hence, a sample size of 370 SMME employees was used in this study. Hermans and Schoeman (2015) state that it is crucial for a questionnaire to be short and easy to interpret, but also comprises all the important information. For this reason, the wording of the questions was formulated carefully.

For any scientific tool/instrument to give measurements that are trustworthy, it must be both valid and reliable. Internal consistency (Cronbach's alpha) and the composite reliability were utilised to prove reliability. In terms of Cronbach's alpha, a rule of thumb is that it must be at least 0.7. The Fornell and Larcker test and the Heterotrait-Monotrait ratio of correlations (HTMT) were utilised to assess discriminant validity. The questionnaire was also pre-tested and had six sections in total.

The questions in the questionnaire sections are as follows:

Section A: This section included questions consisting of respondents' demographic data, which included information pertaining to their age, gender and educational level. Nominal data was utilised to classify the demographic characteristics into categories. These demographical characteristics were also utilised as a mediating variable between biospheric, altruistic, egoistic, openness to change values and employees' voluntary pro-environmental behaviour.

Section B, C, D, E: These sections encompassed scale questions that measured environmental values which are included in the theory of Value beliefs norm theory (biospheric, altruistic, egoistic and openness to change values). The items were based on scales that were used in prior research.

Section F: Section F measured the voluntary pro-environmental behaviour of employees using a scale measurement.

The questionnaire is found in appendix A of this study.

To collect data, a questionnaire was used. To test if the questionnaire would not give the researcher problems, certain data collection procedures were followed.

4.8. DATA COLLECTION PROCEDURES

4.8.1. Pilot study

A pilot study was undertaken before the initial collection of data. A pilot survey is defined as a preliminary phase of the research before the completed survey to test the efficiency of the research methodology (Roopa & Rani, 2012). To ensure that the study is not ambiguous, the questionnaire has to be tried on a small, selected group of

prospective respondents (Neff & Germer, 2013). Its advantages are that the weaknesses and strengths of the instrument (questionnaire) are known before-hand; the contents and structure of the instrument are polished in recognition of the identified weaknesses; measurement difficulties such as invasive or intrusive questions and offensive questions get corrected; and that the effectiveness of the instrument is improved by writing certain questions right, eliminating questions that are confusing and the likes (Cope, 2015; Spurlock, 2018). A pilot study was carried out on 30 SMME employees in five SMMEs in Capricorn District. These 30 SMME employees did not participate in the main data collection. Potential faults (such as complex or incorrect wording) were then removed, and the questions were altered to ensure that they are more understandable.

4.8.2 Main data collection procedure

A structured self-administered paper-based questionnaire was utilised to gather quantifiable data. The researcher asked for permission from the managers of the SMMEs through a permission letter requesting to conduct the survey. After permission was granted, the researcher approached the employees and asked for their participation in the research and for them to complete the questionnaire. After obtaining the agreement of employees, the questionnaire was presented by the researcher to the respondents. Email addresses and phone numbers of the employees were obtained to remind them to finish the questionnaire. Questionnaires that were not completed after two months were dealt with as non-responses. The researcher endeavoured to ensure that the questionnaire was not too long or complex. It was anticipated that the completion of the questionnaire would not take more than twenty minutes. The Sepedi version of the questionnaire was available for respondents who were unable to understand English. Participants were not exposed to any harm, and their identities remained anonymous throughout the data collection process. Data was gathered and analysed by the researcher.

4.9. DATA ANALYSIS METHODS

Khan and Fasih (2014) define the analysis of data as the procedure that applies logical and statistical techniques in order to describe, show, shorten, summarise and evaluate

data. The “Partial Least Square Structural equation models (PLS SEM)” was utilised to analyse the data in a statistical manner. The Covariance-Based SEM (CB-SEM) is the most well-known approach to Structural Equation modeling (SEM). Another approach that is unique to SEM is the “partial least squares SEM (PLS-SEM)” (Wong, 2013; Lowry & Gaskin, 2014).

CB-SEM allows for the assessment of how well the model fits the data with the goal of minimising the difference between the sample covariance matrix and the model covariance matrix derived from the manifested variables (Jannoo, Yap, Auchoybur & Lazim, 2014). CB-SEM necessitates a set of assumptions that are stringent like the normality of data and sample size that is adequate. When the above assumptions of CB-SEM are not met, the other PLS-SEM techniques are utilised (Jannoo et al., 2014).

PLS is a SEM technique based on an iterative approach that maximizes the explained variance of endogenous constructs (Hair Jr, Sarstedt, Hopkins & Kuppelwieser, 2014). SEM is popularly used in the social and behavioural sciences that are prepared to cope with several measures of concepts, multi-equation models, and measurement error (Hair et al., 2014). To analyse data, the Smart PLS 3 was utilised.

4.9.1. Descriptive analysis

Descriptive analysis is the beginning point to any analytic process, and its purpose is to answer what happened questions (Kemp, Hollowood & Hort, 2018). Descriptive analysis is defined as a statistical method that is utilised to explore and summarise past data to detect meanings or patterns (Zook & Pearce, 2018). The performance of descriptive data is crucial as it allows data to be presented in a meaningful way (Albertini, 2014). Although this analysis on its own will not allow a future prediction outcome or reveal the answer to questions such as why something occurred, it will leave the data in an organised form and ready for further analysis (Albertini, 2014). In this study, the collected data was examined in terms of standard deviation, mean, kurtosis and skewness.

4.9.2. Structural Equation Modelling

Structural equation models (SEMs) refer to modeling techniques popular in the social and behavioural sciences that are equipped to handle multi-equation models, multiple

measures of concepts, and measurement error (Kusurkar, Ten Cate, Vos, Westers & Croiset, 2013). SEMs differ from other modeling approaches as they test the direct and indirect effects on pre-assumed causal relationships (Fan, Chen, Shirkey, John, Wu, Park & Shao, 2016).

This model includes more recognisable models as special cases. For example, multiple regression is a special type of SEM, where there is a dependent variable that is single and multiple covariates, and the covariates are said to be measured with no measurement error (Marcoulides & Schumacker, 2013). Fan et al. (2016) state that SEM is described as a statistical approach that is broad to assessing hypotheses about relations amongst latent and observed variables.

There are two goals in SEM. 1) to comprehend the correlation patterns or covariance between variables that are a set, and 2) to have the variance explained as often as possible with the model detailed (Verner-Filion, Vallerand, Amiot & Mocanu, 2017).

Structural Equation Modeling depends on numerous tests that are statistical to determine the appropriateness of the model to fit into the data (Mueller & Hancock, 2019). The chi-square test shows the difference level among observed and expected covariance matrices (Iliceto, Pompili, Spencer-Thomas, Ferracuti, Erbuto, Lester, Candilera & Girardi, 2013). A chi-square value close to zero indicates little difference between the expected and observed covariance matrices. In addition, the probability level must be greater than 0.05 when chi-square is close to zero (Iliceto et al., 2013).

Advantages of PLS (Hair et al., 2014; Shiau, Sarstedt & Hair,2019):

1. The capability to produce helpful, vigorous equations even when the independent variables number or coefficients to be assessed exceed the number of experimental observations.
2. Predictions that are drawn from PLS models have a tendency to be more precise than those derived from MR models.
3. Models of PLS are more stable when the values of independent variable sets are connected rather than orthogonal, the situation most common in structure-activity studies.

4. Models are derived simultaneously in a PLS study for more than one dependent variable.

4.9.2.1. Evaluation of PLS-SEM

4.9.2.1.1. Assessing reflective measurement models

- Examining indicator loadings

Recommended indicator loadings are higher than 0.708 since they reveal that the construct describes over 50% of the indicator's variance, thus offering item reliability that is acceptable (Hair, Risher, Sarstedt & Ringle, 2019).

- Assessment of internal consistency reliability

To measure reliability, composite reliability is utilised, where values that are high show higher reliability levels. In exploratory research, values of reliability between 0.60 and 0.70 are considered acceptable (Viladrich, Angulo-Brunet & Doval, 2017). Values that lie amongst 0.70 and 0.90 range from "satisfactory to good". Cronbach's alpha is another measurement of internal consistency reliability, but it measures reliability less precisely (De Leng, Stegers-Jager, Husbands, Dowell, Born & Themmen, 2017).

- Assessment of convergent validity

Convergent validity is described as the degree to which the construct converges to elucidate the variance of its items (Paap & Sawi, 2014). Average variance extracted for every item on every construct (AVE) is the metric utilised to evaluate the constructs convergent validity (Ab Hamid, Sami & Sidek, 2017). For the average variance extracted calculation, the loading of every indicator on a construct must be squared and compute the value of mean. For the AVE to be accepted, it has to be on 0.50 or higher showing that the construct describes at least fifty percent of the variance of its items (Hair et al., 2019).

- Assessment of discriminant validity

Discriminant validity is the level to which a construct is empirically dissimilar from other constructs in the structural model (Afthanorhan, 2013). To analyse discriminant validity, a Fornell and Larcker metric is utilised. The Fornell and Larcker metric suggests that every construct AVE must be compared to the inter-construct correlation

squared of that same construct and all other reflectively measured constructs in the structural model (Alarcón, Sánchez & De Olavide, 2015). The variance shared for all constructs of the model must not be higher than their AVEs. Current research shows that Fornell and Larcker metric is not appropriate for the assessment of discriminant validity (Henseler et al.,2015). Henseler et al. (2015), for example, indicate that the metric does not perform well, more especially when the constructs indicator loadings show only a slight difference (e.g when all loadings range between 0.65 and 0.85).

Henseler et al. (2015) proposed the Heterotrait-monotrait (HTMT)" ratio of the correlations as a substitute. The HTMT is defined as the mean value of the item correlations across constructs relative to the (geometric) mean of the average correlations for the items measuring the same construct (Henseler et al., 2015). Franke and Sarstedt (2019) proposed a 0.90 value threshold for structural models that have constructs that are very alike in a conceptual manner. For constructs that are very similar conceptually, it is suggested that when the HTMT value is more than 0.90, no discriminant validity exists. But when constructs are more different conceptually, a threshold value that is lower and more conservative is recommended such as 0.85 (Franke & Sarstedt, 2019). To add to these guidelines, bootstrapping can be utilised to test whether the value of HTMT is significantly dissimilar from 1.00 (Franke & Sarstedt, 2019).

4.9.2.1.2 Assessing formative measurement models

To assess formative measurement models, convergent validity, indicator collinearity, statistical significance and relevance of the indicator, weights must be investigated (Hair et al., 2019).

- Convergent validity

To assess convergent validity, a correlation of the construct is utilised with other measures of the same concept. The procedure is better known as the redundancy analysis (Hair et al., 2019).

- Indicator collinearity

To evaluate the collinearity of the formative indicators, the variance inflation factor (VIF) is used often (Ford, 2017). The values of VIF which are 5 and above show

serious issues of collinearity between the indicators of formatively measured constructs. However, at VIF values of 3 issues of collinearity can happen (Rodrigues, Menezes & Ferreira, 2018). Preferably, the values of VIF should be near to 3 and lesser (Rodrigues et al., 2018).

- Statistical significance and relevance of the indicator weights

Since PLS-SEM is a method of nonparametric to determine statistical significance, bootstrapping is utilised. When the bootstrap distribution of the indicator weights is skewed, then a BCa bootstrap confidence intervals for significance testing is recommended (Hair et al., 2017). Otherwise, researchers must utilise the percentile approach to create the bootstrap-based confidence intervals (Aguirre-Urreta & Ronkko, 2018). If the confidence interval of an indicator weight includes zero, this indicates that the weight is not statistically significant, and the indicator should be considered for removal from the measurement model (Hair et al., 2019). However, if there is no significance in the indicator weight, it does not really mean that it shows a poor measurement model quality. Instead, the indicator's absolute contribution to the construct is considered, as described by its outer loading. Hair et al. (2019) postulate that indicators that have a weight that is non-significant must be removed if the loading is also not significant. Hair et al. (2019) further allude that a low but loading of 0.50 and lower proposes that the indicator should be removed by the researcher unless its inclusion has a strong support on the grounds of measurements theory.

After the assessment of statistical significance of the indicator weights, the relevance of each indicator must be examined by researchers (Wong, 2013). The indicator weights are standardised to values between -1 and +1, but, in rare cases can also take values lower or higher than this, which indicates an abnormal result (e.g., due to sample size that is small and or issues of collinearity) (Hair et al., 2019). A weak relationship is indicated by a weight near to 0, while weights that are nearer to +1 show positive strong relationships while those nearer to -1 show negative relationships (Hair et al., 2019).

4.9.2.1.3 Assessment of structural models

When assessing the structural model, standard assessment criteria must be considered (Ahmad, Zulkurnain & Khairushalimi, 2016). The criteria include the

coefficient of determination (R^2), the blindfolding-based cross-validated redundancy measure (Q^2), as well as the statistical significance and relevance of the path coefficients (Ahmad et al., 2016). In addition, investigators must assess their model's out-of-sample predictive power by utilising the PLS predict procedure.

- Coefficient of determination (R^2)

Estimating a sequence of regression equations yields the structural model coefficients for the relationships between the constructs (Nakagawa, Johnson & Schielzeth, 2017). Before structural relationships can be assessed, collinearity must be examined to ensure that there is no bias in the regression results (Nakagawa et al., 2017). The process is like that of the measurement of formative models, but the "latent variable scores of the predictor constructs in a partial regression are used to calculate the VIF values". Values of VIF that are above 5 show probable collinearity problems between the predictor constructs, but issues of collinearity can also arise at lower values of 3-5 VIF. Preferably, the values of VIF must be near to 3 and lower. When collinearity is an issue, the most used option is to create models of higher order that can be backed by theory (Hair et al., 2019).

When collinearity is not a problem, the (R^2) value of the endogenous construct(s) must be examined (Hair et al., 2019). The variance is measured by (R^2) and is explained in every single endogenous construct, and it is therefore a measure of the model's explanatory power. The (R^2) is sometimes called in-sample predictive power (Rigdon, 2012). The values of R^2 range from 0-1, where values that are higher denote a bigger explanatory power. Values of (R^2) that are 0.75, 0.50 and 0.25 can be deemed substantial, moderate and weak (Fatoki, 2021b). Values of R^2 that are acceptable are based on the context, and in some disciplines, values of R^2 that are as low as 0.10 are deemed satisfactory (e.g., when predicting stock returns).

- Blindfolding-based cross-validated redundancy measure (Q^2)

The Q^2 is based on a blindfolding technique that eliminates single points in a data matrix, imputes illuminated points with the mean, and calculates model parameters (Soniewicki, Paliszkiewicz, Koohang & Nord, 2021). As such, "the Q^2 is not a measure of out-of-sample prediction but rather combines aspects of out-sample prediction and in-sample explanatory power" (Hair et al., 2019). Utilising these estimations as input, the blindfolding procedure foresees points of data that were eliminated for all variables.

Differences that are small among the original and predicted values translate into a higher Q^2 value, thus showing a predictive accuracy that is high (Soniewicki et al., 2021). Values of Q^2 for a certain endogenous construct must be bigger than zero to show predictive accuracy of the structural model for that construct. As a guideline, Q^2 values which are greater than 0, 0.25 and 0.50 show small, medium and large predictive relevance of the PLS-path model (Hair et al., 2019).

- Statistical significance and relevance of the path coefficients

Here, on the analysis of statistical significance and relevance of the path coefficients, bootstrapping needs to be run by researchers to measure the path coefficients significance and to evaluate their values that typically falls between -1 and +1. Also, an indirect construct effect can be interpreted on a particular target construct through one or more intervening constructs (Wong, 2013). This effect is specifically utilised on the mediating assessment effects. A constructs total effect can be described as the summation of the direct and all indirect effects. To test hypotheses, you need T-values and P-values (Hair et al., 2019). T-values must be more than 1.96, while P-values should be less than 0.05 to accept the hypotheses (Hair et al., 2019).

4.10. RELIABILITY AND VALIDITY

The usage of criteria to check the quality of the study is considered a scientific merit (Cope, 2014). Reliability and validity are a few of the criteria utilised in a scientific merit (Cope, 2014). The motivation for the reliability and validity of the study are described below**.**

4.10.1. Reliability

Reliability is the accuracy and consistency of information gathered during the study. It refers to the researcher's ability to find a response that is the same every time a test is administered (Heale & Twycross, 2015). The consistency of assessments is referred to as reliability (Heale & Twycross, 2015). There are three forms of consistency (reliability), namely, test-retest reliability, internal consistency, and inter-rater reliability (Du, Fang, Nguyen, 2021).

Test-retest reliability concerns consistency of scores across two separate measurements over time and is sometimes referred to as stability or reproducibility (Polit, 2014). To assess test-retest reliability, internal consistency is needed. Internal consistency is the level in which all test items measure constructs that are identical, that is, the general factor saturation (Tang, Cui & Babenko, 2014). To have the reliability or consistency measured, and to assess how great every variable relates in a scale with other variables remaining, a Cronbach's alpha coefficient and composite reliability are utilised (Šerbetar & Sedlar, 2016). The alpha coefficient varies from 0-1, and when it starts from 0.70 and higher, it is seen as being strongly reliable. The alpha coefficient that ranges between 0.5 and 0.7 is deemed questionable and poor, while the alpha that is under 0.5 is deemed as unacceptable. An Alpha coefficient that ranges between 0.7 and 0.8 is moderate and acceptable, and one that lies between 0.8 and 0.9 is strong and good, and when an alpha coefficient is greater than 0.9, it is deemed as very strong and excellent (Šerbetar & Sedlar, 2016; Makhitha & Dlodlo, 2014). Composite reliability is utilised where values that are high reveal higher reliability levels. Inter-rater reliability is the degree to which observers that are different are constant in the judgments they make. Inter-rater reliability is usually measured utilising Cronbach's alpha (α) when the judgments are quantitative or an analogous statistic named Cohen's κ if categorical (Chaturvedi & Shweta, 2015).

This study will use internal consistency in terms of Cronbach's Alpha and composite reliability since the smart PLS 3 is used for the analyses of data of this research and the Smart PLS shows reliability utilising composite reliability and Cronbach's alpha.

4.10.2. Validity

Validity tells us whether an instrument accurately describes or measures what it is supposed to (Kelly, Fitzsimons & Baker, 2016). This means that whichever score that was found from the instrument must be meaningful, make sense, and assist the researcher to make conclusions from the sample of the population which is under investigation. To test the validity of an instrument could involve construct validity, content validity, as well as criterion validity (Yue Li, 2016).

4.10.2.1. Construct validity

Construct validity refers to how well the measurements used, which are typically questionnaires, actually test the theory or hypothesis being measured. Construct validity must show that certain test results do foresee the theoretical trait it says it does (Locke, 2012). Construct validity has two subsets, namely, convergent and discriminant construct validity (Gkargkavouzi, Halkos & Matsiori, 2019).

- Convergent construct validity

Convergent construct validity "tests the relationship between the construct and a similar measure; this shows that constructs which are meant to be related are related" (Haugan, Drageset, André, Kukulu, Mugisha & Utvær, 2020). AVE is the contrast used to have convergent validity measured. For AVE to be accepted, it must be 0.50 or greater, showing that the construct describes at least fifty percent of the variance of its items (Hair et al., 2019).

- Discriminant construct validity

Discriminant construct validity tests the relationships among the unrelated measure and construct. This reveals that the constructs are construct and an unrelated measure. This shows that the constructs are not connected to something unanticipated (Haugan et al., 2020). Discriminant validity also measures the extent of differences amongst the overlapping constructs. To have discriminant validity evaluated, "cross-loading of indicator, Fornell & Larcker criterion as well as the HTMT ratio" of correlation can be used (Hamid et al., 2017).

- Cross-loading of indicator

When looking at cross-loading, the factor loading indicators on the construct assigned must be greater than all other loading indicators, with the condition that the factor loading cut-off value is more than 0.70. (Hamid et al., 2017).

The researcher will validate the cross-loading factors by ensuring that the loadings in the measurement model in Smart PLS 3 are more than or equal to 0.70. If not, they will be rejected.

- Fornell-Lacker criterion

The criterion of Fornell-Lacker is a method utilised to have the square root of AVE compared to the correlation of latent constructs. A latent construct should explain better the variance of its own indicator rather than the variance of other latent constructs. Therefore, the square root of each construct's AVE should have a greater value than the correlations with other latent constructs (Hamid et al., 2017).

The Fornell-Lacker criterion was not used by the researcher to validate data because Henseler et al. (2015) proposed the HTMT ratio of the correlation as a substitute for the Fornell-Lacker criterion due to the sensitivity level of both.

- Heterotrait-monotrait (HTMT) ratio of correlation

Henseler, Ringle and Sarstedt (2015) proposed an excellent performance of the Heterotrait-monotrait (HTMT) ratio of correlation method through the study of simulation of Monte Carlo. The study revealed that HTMT can achieve the highest sensitivity and specificity rates (97%-99%) compared to the criterion of cross-loadings (0.00%) and Fornel Lacker (20, 82%). HTMT values nearer to 1 suggests that there is a lack of discriminant validity. Utilising the HTMT as a criterion includes having it compared to a threshold that is predefined. If the value of HTMT is greater than this threshold, then it can be concluded that a lack of discriminant validity exists (Kline, 2011). Other authors propose a 0.85 threshold (Hamid et al., 2017), but Muqadas, IIyas and Aslam (2016) suggested a 0.90 value .

The Heterotrait-monotrait (HTMT) ratio of correlation was used by the researcher to validate data because it has the highest sensitivity and specificity rates (97% to 99%) as compared to the Fornel Lacker (20, 82%). To validate the HTMT, the researcher had it that any value that is above 0.90 does not exist. Any value that is 0.85 and below will be accepted.

4.10.2.2. Content validity.

Content validity comprises any strategies of validity which focus on the contents of a test. To show content validity, testers explore the degree to which a test is a representative sample of the content of whatever specifications or objectives the test was initially created to measure (Almanasreh, Moles & Chen, 2019). To investigate the degree of match, test developers often enlist well-trained colleagues to make

judgments about the degree to which the test items matched the test objectives or specifications (Vakili & Jahangiri, 2018).

4.10.2.3 Criterion-related validity

Criterion-related validity normally comprises any validity strategies where the focus is on the test's correlation being validated with some outside measures that are respected of the same specifications or objectives (Vakili & Jahangiri, 2018).

4.11. MISSING VALUES

Missing value is a value that is intended to be obtained during the collection of data (measurement, interviews, observation) but was not because of numerous reasons. Missing values occur when data is not stored for a certain variable (Kwak & Kim, 2017). Data can go missing because of incomplete data entry, lost files or equipment malfunctions (Kwak & Kim, 2017). Data that is missing decreases the statistical power of analysis, which can misrepresent the validity of the results (Kang, 2013). There are three types of missing data, namely, missing completely at random (MCAR), Missing at Random (MAR) and Missing Not At Random (MNAR) (Newman, 2014).

In Missing Completely at random, the likelihood of data missing is similar for all the observations (Pedersen, Mikkelsen, Cronin-Fenton, Kristensen, Pham, Pedersen & Petersen, 2017). In MCAR, the data might be missing due to the mistakes done by human, equipment or system failure, loss of a sample, or the unsatisfaction of technicalities while values are being recorded (Pedersen et al., 2017). Missing at random means that the values missing can be elucidated by variables on which there is complete information as there is a form of relationship amongst the data missing and other values (Seaman, Galati, Jackson & Carlin, 2013). Missing not at random are values that are dependent on the data that is unobserved. If a particular pattern/structure in missing data is present and other observed data is unable to explain it, then it is missing not at random (Gomer & Yuan, 2021). If the data missing does not fall under MCAR or MAR, then it can be considered as MNAR (Howell, 2007). MNAR can occur due to people's reluctance to provide the information required.

Kaiser (2014) states that there are several main ways of dealing with missing data. Firstly, there is deletion of missing values- here, the missing values can be solved by deleting columns or rows with null values. If more than half of the rows in a column are null, the entire column can be eliminated (Kaiser, 2014). Rows containing null values in more than one column can also be removed. Secondly, impute values that are missing for continuous variable; in the data set, columns that have continuous numeric values can be replaced by the median, mean or mode of the values remaining in the column (Floden & Bell, 2019). This method can stop data from being lost as compared to the earlier method (Floden & Bell, 2019). Thirdly, impute values that are missing for categorical variable; here, when the missing values are from the categorical columns (numerical or string), then values that are missing can be substituted with the category that recurs more (Finch, 2010). If the number of the values that are missing is too big, then a category that is new can substitute it. Fourthly, there are additional methods of imputation, which means that the nature of the data decides if other imputation methods may be more suitable to impute missing values. Lastly, predicting values that are missing; utilising features that do not have nulls can be utilised to predict missing values. The classification or regression model can be utilised to predict missing values depending on the nature (continuous or categorical) of the feature having values that are missing (Kaiser, 2014; Floden & Bell, 2019). There were no missing values for this study.

4.12. ETHICAL CONSIDERATIONS

“Ethics, which are the principles that govern an individual’s behaviour or the conducting of an activity, are the branch of knowledge that deals with moral principles” (Mpiti, 2016). Ethical considerations are significant because they guarantee the dependability of the research results (Mpiti, 2016). Application for ethical permission from the Turfloop Research and Ethics Committee (TREC) for consent to undergo the research was obtained before data collection commenced. When the data collection commenced, the participants were given a written background and the purpose of the study on the cover page of the questionnaire.

- Informed and voluntary consent

Informed consent means to fully give permission for something to happen, while being made aware of all the risks and the other alternatives available (Hanna & Vanclay, 2013). Voluntary consent means to do something by free will and without being pressured (Henden, 2016). Written informed consent was given as part of the questionnaire. The participants of the study participated voluntarily in that they were made aware that they can refuse to take part in the filling in of the questionnaire or withdraw during the process of completing the questionnaire.

- Privacy and confidentiality of participants

Privacy means being able not to make it known that certain information was provided by who to the public (Petrova, Dewing & Camilleri, 2016). Petrova et al. (2016) further state that confidentiality is a piece of information given to a party that guarantees not to share the provided information with a third party if the first party has not given permission. The researcher ensured the participants of their anonymity in which no names appeared or mentioned in the research and that the information provided remained confidential. Personal information provided by the participants was not shared with a third party. The researcher ensured this by coding responses sequentially instead of using respondents' names. Confidentiality and privacy of the information was assured by the researcher.

- Respect and dignity

Respect is caring about how actions taken and words said will affect others (Beach, Forbes, Branyon, Aboumatar, Carrese, Sugarman & Geller, 2015). Dignity refers to a person who is honourable (Beach et al., 2015). Throughout the entire data collection process, every participant was treated with respect and dignity by the researcher by being polite and not forceful to anyone.

- Risk and harm

Risk of harm means that there is a possibility of being harmed if exposed to a hazard (Flaherty & Choi, 2016). No possible harm or risk (physical, psychological, legal, or economic) was exposed to participants as a result of participating in the data collection process.

4.13 SUMMARY

The methodology of the study was examined in this chapter. The research approach and philosophy were outlined. The use of research design was clarified as well. This was inclusive of the motivation for utilising the quantitative method, the method of data collection, the sampling method, and the method of analysing data which was made up of descriptive and Structural Equation Modelling analysis.

The research design enabled the researcher to know which research questions are to be developed. The method of research assisted the researcher to know which methods of data and analysis are important in this study to collect data. Data collection instruments and procedures were outlined as well. Reliability and validity issues were discussed. Ethical considerations were outlined to ensure that respondents knew what they were getting involved in and how they would be protected e.g., keeping their personal information unknown and remaining anonymous.

The following chapter will present the results of this study, which were generated through a questionnaire sent to SMME employees in Polokwane.

CHAPTER FIVE

PRESENTATION AND DISCUSSIONS OF FINDINGS

5.1. INTRODUCTION

This chapter reveals the findings of the study on values and employees' voluntary pro-environmental behaviour in small, medium and micro enterprises in Polokwane Municipality. The chapter presents the analysis and interpretation of the results of the empirical study. The results are presented, analysed and interpreted in accordance with the research objectives and hypotheses of the study. The chapter entails different sections. First, the response rate where the number of people that responded to the research is discussed. The normality of data is also outlined. The demographic data of the respondents is examined. Descriptive statistics analysis follows in the analysis and interpretation of data. The structural equation modelling is discussed with focus on evaluating reflective measurement models, assessing formative assessments and the assessment of the structural model. The moderation results are outlined, and lastly a summary of the hypotheses results is given.

To start off the analysis and interpretation of the study, responses of employees of SMMEs with regards to their voluntary pro-environmental behaviour at work is presented.

5.2. RESPONSE RATE

The response rate is the rate of employees that took part in this research. It shows the statistical findings of the research with reference to how the participants of the study responded. 620 questionnaires were distributed to respondents. 370 questionnaires were returned and utilised for analysis. The ten times rule was utilised to determine a suitable sample size for testing the model. According to Hair et al. (2016), when using the PLS SEM to test the model, the size of the sample must be ten times larger than the structural paths number aimed at the latent construct at any given time.

31 question items were used in the study, and a minimum of 310 respondents were required for analysis of data. However, 370 questionnaires were returned. The number of questionnaires distributed to each enterprise in terms of micro, small and medium

was drawn with the help of the South African definition of SMMEs. The number of employees in micro enterprises is smaller as compared to that of small and medium enterprises. So is the number of employees of small enterprises as compared to the medium enterprises. With this, the number of questionnaires distributed to these enterprises was determined by how many employees an enterprise is allowed to hire. Table 5.1 below discusses the response rate of the study.

Table 5.1 Response Rate

Respondents	No. sent out	No. returned	Response rate percentage	No. not returned	No. not returned percentage
Micro	105	59	56.19%	46	43.81%
Small	215	113	52.56%	102	47.44%
Medium	300	198	66%	102	34%

Source: Authors own analysis

Table 5. 1 indicates the responses of the study. 620 questionnaires were distributed. Of this number, 105 were distributed to micro enterprises, 215 to small enterprises and 300 questionnaires to medium enterprises. From questionnaires distributed to employees of micro enterprises, only 59 were returned, for small enterprises 113 and for medium enterprises 198 were returned. This makes a total of 370 returned questionnaires, making the response rate for micro enterprises 56.19%, for small enterprises 52.56% and for medium enterprises 66%.

The non-response rate for micro enterprises is 43.81%, for small enterprises 47.44% and for medium enterprises, the non-response rate is 34%. The total response rate for the SMMEs that participated is 59.68% and the total non-response rate is 40.32%.

To check if data was distributed normally, the normality of data is explained below.

5.3. NORMALITY OF DATA

The kurtosis and skewness will be used to measure the normality of the data. Skewness measures the degree to which the distribution variables is symmetrical

(Hair, Sarstedt, Ringle & Gudergan, 2017). The distribution is said to be skewed if the responses for a variable stretch toward the left or right tail of the distribution (Hair et al., 2017). A worldwide skewness guideline is that if the value is greater than +1 or less than -1, then it shows a substantially skewed distribution. If skewness ranges between -1 and -0.5 and 1, the distribution is known to be moderate. If skewness ranges between -0.5 and 0.5, the distribution is seen as approximately symmetric (Hair et al., 2017; Hair, Hult, Ringle, Sarstedt, Danks & Ray, 2021).

Kurtosis determines whether the distribution is too peaked (a narrow distribution with the majority of responses in the centre) (Hair et al., 2021). The value of kurtosis must range between ±3 to show that data was normally distributed (Hair et al., 2021). In this study, to test the normality of data excess, kurtosis and skewness were used.

5.4. DEMOGRAPHIC DATA

The purpose of this section was to get the demographic information of respondents. The demographical variables used in the data collection are age (how old the respondents are), gender as well as educational level for which data was collected.

5.4.1 Age

Age will describe the three age groups of employees of SMMEs that took part in the research. The reason for addressing the age of employees of SMMEs is to know which age group dominates and to comprehend why certain age groups make certain decisions.

Table 5.2 Age

	Frequency	**Percentage**
15-35	134	36%
36-64	177	48%
65 and above	59	16.%

Source: Own analysis

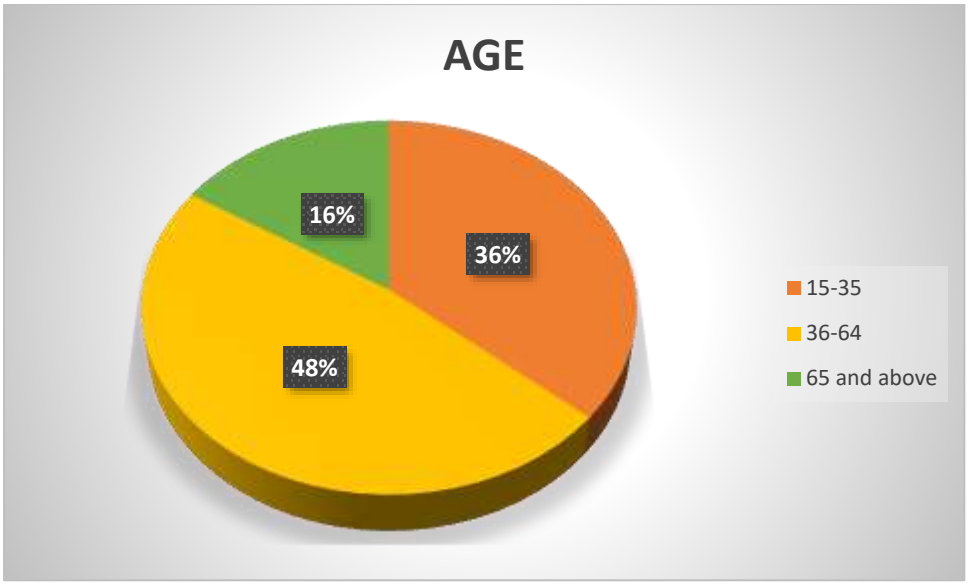


Figure 5.1 Age

Table 5.2 above shows that 131 employees between the ages of 15 to 35 participated in the study with a percentage rate of 36%. There were 175 employees between ages 36 to 64 with a percentage rate of 48%, and there were 61 employees between 65 who took part in the study with a percentage rate was 16%. This further reveals that most SMMEs in Polokwane Municipality are made up of employees whose ages range between 36 to 64.

5.4.2 Gender

It is customary in studies such as these to establish the respondents' gender. The table below shows the splitting of gender respondents in the study.

Table 5.3 gender

	Frequency	**Percentage**
Male	165	45%
Female	205	55%

Source: authors analysis

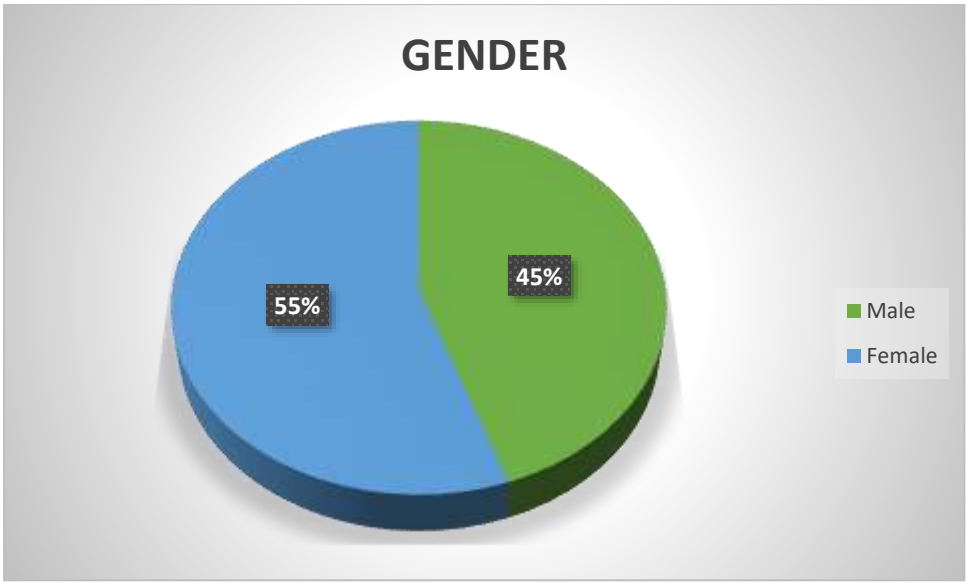


Figure 5.2: Gender

Table 5.3 reveals demographic information about gender. The table shows that 45% of respondents were males, while females represented 55% of the total respondents. This result shows that there is a noteworthy inequality amongst the genders, and that less males are hired as compared to females by SMMEs.

5.4.3 Educational level

The educational level is addressed to see if education has any importance to employees of SMMEs acting in a voluntary pro-environmental manner. It also assists employers to know which level of education they should hire if they want employees that act in a pro-environmental manner. Table 5.4 outlines the results relating to the educational level of respondents in detail.

Table 5.4 Educational level

	Frequency	**Percentage**
Below matric	27	7%
Matric	82	22%
Undergraduate	168	46%
Post-graduate	93	25%

Source: authors own analysis

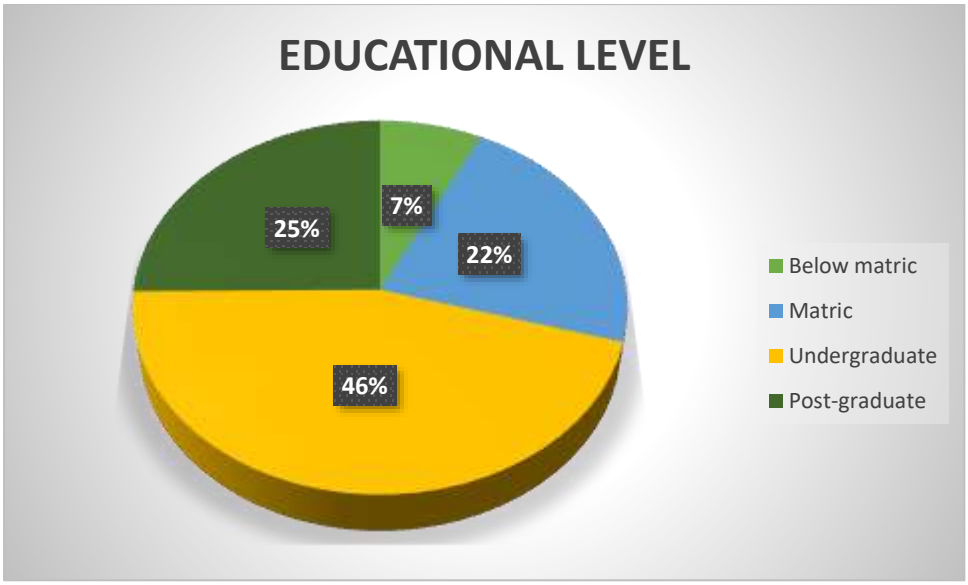


Figure 5.3: Educational Level

In terms of educational level, Table 5.4 above shows that 7% of SMME employees who participated in the study are below matric. 22% held a matric certificate, 46% had an undergraduate degree and 25% held a postgraduate degree. This reveals that the SMME sector employs more undergraduate degree holders than postgraduate holders.

5.4.4 Total number of employees

The overall number employees aim to reveal if the owners of SMMEs hire their workers on the basis of the definition of SMME, as drawn by the revised "National Small Business Act No. 102 of 1996", as amended in 2003 and recently amended in 2019 by the National Small Business Act 2019. The act describes an SMME as a different business entity, where its branches include co-operatives and organisations that are non-governmental and are managed by one or more owners, comprising its subsidiaries or branches, mainly carried out in any economic sector and which can be classified as small, micro and medium enterprise. This definition further uses the number of employees and others to define SMMEs.

Table 5.5 Number of employees

	Frequency	**Percentage**
0-10 (Micro)	59	16%

11-50 (Small)	113	31%
51-250 (Medium)	198	53%

Source: Own analysis

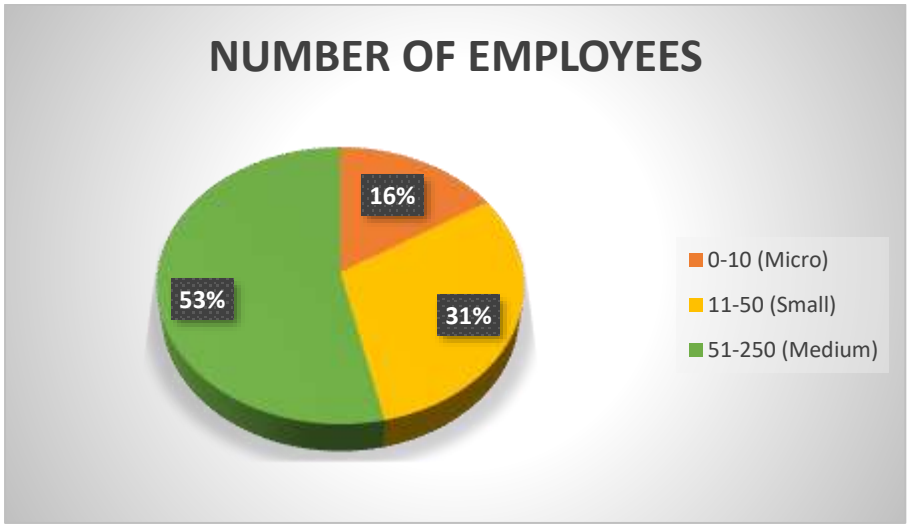


Figure 5. 4: Number of employees

Table 5.5 and Figure 5.4 illustrate the number of employees. There were 16% of employees in micro enterprises that took part in this study, 31% in small enterprises and 53% in medium enterprises.

5.4.5 Type of Industry

This section discusses the types of industries from which that the data of this study was collected.

Table 5.6 Type of Industry

	Frequency	**Percentage**
Services (e.g. education and training)	114	31%
Manufacturing	99	27%
Retail	86	23%
Other	71	19%

Source: Authors own analysis

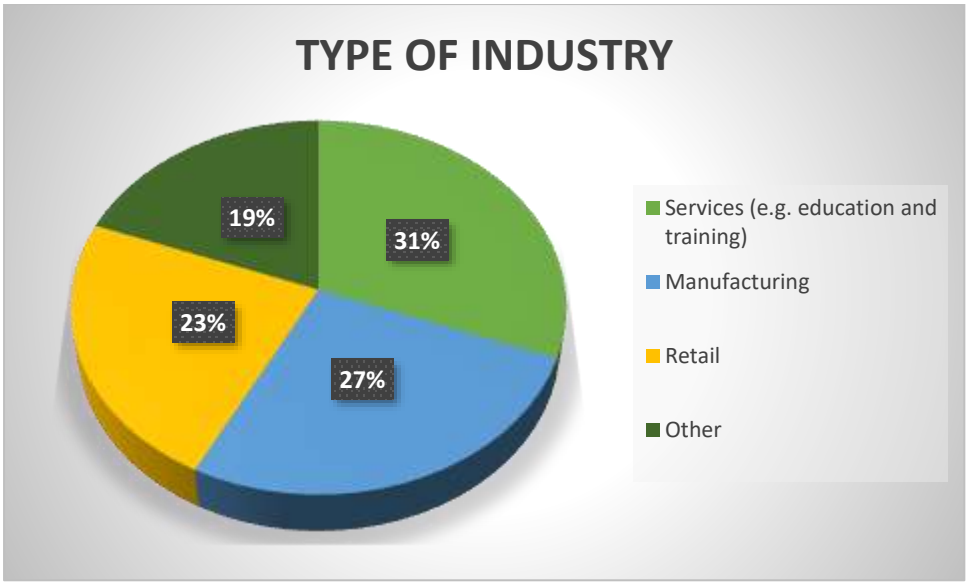


Figure 5.5 Type of industry

Table 5.6 and Figure 5.5 above depict the type of industries that the data was collected from. The service industry has a percentage of 31%, 27% of the respondents were in the manufacturing industry, 23% in the retail industry and lastly, other industries had a participation rate of 19%.

5.4 DESCRIPTIVE STATISTICS

Table 5. 7 Descriptive statistics results.

Construct	Mean	Standard deviation	Skewness	Excess Kurtosis
Altruistic Values	3.481	1.034	-0,343	-0,738
Biospheric Values	3,891	0.905	-0,632	-0,259
Egoistic Values	1.928	0.883	1,066	0,272
Openness To Change Values	3.869	0.865	-0,583	-0,206

Employees Pro-Environmental Behaviour	3.353	0.989	-0.587	-0.210

Source: authors analysis

Table 5.7 illustrates the results of descriptive statistics of the study. The results show that mean of altruistic values is 3.481, for biospheric values is 3.891, for Egoistic values is 1.928, openness to change values is 3.869 and lastly the employees' voluntary pro-environmental behaviours mean is 3.353. The standard deviation for altruistic values is 1.034, for biospheric values 0.905, for egoistic values it is 0.883, openness to change values 0.865 and lastly the standard deviation of employees' voluntary pro-environmental behaviours is 0.989.

The skewness for altruistic values is -0.343, which means that the data is substantially skewed; for biospheric values it is -0.632, which means that the data is moderately skewed; for egoistic values it is 1.066, this means the data was substantially skewed; for openness to change is -0.583, the data is moderately skewed; and for employees' voluntary pro-environmental behaviour, it is -0.587, and the data is moderately skewed.

The excess kurtosis for altruistic values is -0.738, for biospheric values -0.259, egoistic values 0.272, openness to change -0.206 and employees' voluntary pro-environmental behaviour it is -0.210. Hair et al. (2017) stipulated that data which falls in the range +-3 threshold is normally distributed. The kurtosis of this study falls under the threshold of +-3, making the data for all variables normally distributed.

5.5 STRUCTURAL EQUATION MODELLING

5.5.1 Evaluating reflective measurement models

According to Fatoki (2021), the assessment of reflective measurement models is done by evaluating "factor loadings, composite reliability, Cronbach's alpha, Average Variance Extracted, discriminant validity using Heterotrait-Monotrait (HTMT) ratio".

5.5.1.1 Examining indicator loadings

Table 5. 8 Indicator loadings

Construct	**Measurement items**	**Item loading**
Biospheric Values (BV)	BV1	0,855
	BV2	0,895
	BV3	0,896
	BV4	0,918
Altruistic Values	AV1	0,771
	AV2	0,884
	AV3	0,884
	AV4	0,861
	AV5	0,810
Egoistic Values	EV1	0,815
	EV2	0,866
	EV3	0,856
	EV4	0,872
	EV5	0,818
Openness To Change Values	OTCV1	0,720
	OTCV2	0,858
	OTCV3	0,722
	OTCV4	0,809
	OTCV5	0,831

Employees Pro-Environmental Behaviour	EPEB1	0,845
	EPEB2	0,856
	EPEB3	0,877
	EPEB4	0,792
	EPEB5	0,876
	EPEB6	0,841
	EPEB7	0,862
	EPEB8	0,742
	EPEB9	0,843
	EPEB10	0,890
	EPEB11	0,863
	EPEB12	0,856

Source: Authors own analysis

Table 5.8 above shows indicator loadings. Hair et al. (2019) suggested criteria of evaluating the measurement model. The criteria are to accept factor loadings greater than 0,708 as they describe more than 50% of the indicator's variance, thus granting an acceptable item reliability. The factor loadings of biospheric values range from 0,855 and 0,918, for altruistic values they range between 0,771 and 0,861, for egoistic values the range is between 0.815 and 0,872, followed by factor loadings of openness to change that range between 0,720 and 0.858, with employees' voluntary pro-environmental behaviour ranging from 0,742 and 0.890 loadings, and thus can be accepted as they are all greater than 0,708. It is, therefore, said that the factor loadings in the measurement model of this study offers item reliability.

5.5.1.2. Assessing reliability and validity of the constructs

This section discusses the reliability and validity of the constructs. To measure reliability, the internal consistency reliability was used in terms of Cronbach Alpha and

composite reliability. To measure discriminant validity, convergent validity and discriminant validity were discussed.

5.5.1.2.1. Assessment of Reliability

- internal consistency reliability

Table 5.9 Internal consistency reliability

	Cronbach's Alpha	Composite reliability
AV	0,898	0,925
BV	0,913	0,939
EV	0,900	0,962
OTCV	0,849	0,926
EPEB	0,964	0,892

Source: Authors own analysis

The internal consistency reliability of the study is shown above in Table 5.9. To measure internal consistency reliability, composite reliability and Cronbach's alpha coefficient was used. The values of both composite reliability and Cronbach's Alpha must be higher than 0.70. With regards to composite reliability and Cronbach's alpha value, the reliability that is higher than 0.9 is considered as excellent, if higher than 0,8 it is fine, anything higher than 0,7 is adequate, it is doubtful if it is higher than 0.6 and substandard if lower than 0,5 (De Leng et al. 2017; Viladrich et al. 2017; Hair et al. 2019).

From table 5.9, it is evident that both the Cronbach's Alpha coefficient and the values of composite reliability are more than 0,70. It can therefore be held that the data of the study was reliable. It can also be said that altruistic, biospheric and egoistic values, and employees' voluntary pro-environmental behaviour in terms of Cronbach's Alpha is excellently reliable while openness to change values is fine reliably with a 0,849 value. In terms of composite reliability, altruistic, biospheric, egoistic and openness to change values are excellently reliable, while employees' voluntary pro-environmental behaviour is "fine" reliable.

5.5.1.2.2. Assessment of validity

To assess the validity of the study, convergent validity and the discriminant validity were used. To assess convergent validity, average variance extracted was applied, and to assess discriminant validity, the Heterotrait-Monotrait ratio was applied.

- convergent validity using Average Variance Extracted

Table 5.10 Average Variance Extracted (AVE)

	Average Variance Extracted (AVE)
Altruistic values	0,898
Biospheric values	0,913
Egoistic values	0,900
Openness to change values	0,849
EPEB	0,904

Table 5.10 above depicts the results of Average Variance Extracted. For the AVE to be accepted, it has to be on 0.50 or higher, showing that the construct describes at least fifty percent of the variance of its items. The Average Variance Extracted values in Table 5.6 are all above 0,50. It therefore can be concluded that the constructs revealed at least 50% of the variance of its items. Altruistic values had 0,898 Average Variance Extracted, while biospheric values 0,913, egoistic values 0,900, openness to change values had 0,849 and lastly, employees' voluntary pro-environmental behaviour had an average variance extracted value of 0,964.

- Discriminant Validity using the Heterotrait-Monotrait (HTMT) ratio

Pugh, Clements and Hirsch (2018) recommend an HTMT criterion for the analysis of discriminant validity. Pugh et al. (2018) further state that if the HTMT value is less than 0.90, then discriminant validity is recognised among two reflective constructs.

Table 5.11 Heterotrait-Monotrait (HTMT) ratio

Construct	AV	BV	EPEB	EV	OTCV
Altruistic values					
Biospheric values	**0,770**				
Employees' voluntary pro-environmental behaviour	0,669	**0.664**			
Egoistic values	0.360	0.529	**0.546**		
Openness to change values	0,499	0,500	0,438	**0,555**	

Source: Authors own analysis

Table 5.11 depicts the values of Heterotrait-Monotrait (HTMT) ratio. The values that are diagonal signify the square root of AVEs for the constructs. The values of HTMT except for openness to change values and employees' voluntary pro-environmental behaviour in Table 5.11 are all below the threshold of 0.90, which is consistent with other studies (Pugh et al.,2018; Franke & Sarstedt, 2019). Furthermore, a study done by Henseler et al. (2015) remarks that when the HTMT value is above 0.90, it is suggested that discriminant validity does not exist. Table 5.11 further reveals that the discriminant validity does not exist between openness to change values and employees' voluntary pro-environmental behaviour since the value between the two is above 0.90.

5.5.2. Assessing formative assessments

5.5.2.1 Assessing indicator collinearity

To calculate the collinearity of the formative indicators, the use of variance inflation is used often (Ford, 2017).

Table 5.12 indicator collinearity

	Variance Inflation Factor (VIF)
AV1	**1.870**
AV2	3.017
AV3	3.050
AV4	**2.507**
AV5	1.992
BV1	**2.451**
BV2	**2.966**
BV3	3.175
BV4	3.724
EPEB1	3.497
EPEB2	3.447
EPEB3	4.354
EPEB4	4.354
EPEB5	3.946
EPEB6	3.152
EPEB7	3.771
EPEB8	**2.050**
EPEB9	4.519
EPEB10	4.285
EPEB11	4.695
EPEB12	4.136

EV1	2.043
EV2	2.749
EV3	2.636
EV4	2.721
EV5	2.053
OTCV1	1.578
OTCV2	2.423
OTCV3	1.619
OTCV4	1.853
OTCV5	2.031

Source: Authors own analysis

Table 5.12 above shows the indicator collinearity. Preferably, the values of VIF should be near to 3 and lesser. The values of VIF that are 5 or above show serious issues of collinearity amid the indicators (Rodrigues et al., 2018). The table shows that most values are closer to 3 or below. It also shows that some values are above 3 but not above 5, thus no serious collinearity issues exist.

5.5.3. Structural model assessment

5.5.3.1. Assessing Coefficient of determination (R^2)

The coefficient of determination is a measure in statistics that checks how a model explains or predicts an outcome in the linear regression setting. (R^2) shows the proportion of the variance in the dependent variable (y) that is explained or predicted by linear regression and the independent variable.

Table 5.13 Coefficient of determination (R^2)

	R^2 square
EPEB	0.808

Source: authors own analysis

Table 5.13 above reflects the Coefficient of determination (R^2). The values of Coefficient of determination R^2 range from 0-1, where values that are higher denote an explanatory power that is greater. Values of coefficient of determination (R^2) that are 0.75,0.50 and 0.25 can be deemed substantial, moderate and weak, respectively. The value of Coefficient of determination for EPEB is 0.808, which makes it substantial. The results further show that a 0.808 percentage change in employees' voluntary pro-environmental behaviour can be attributed to biospheric, altruistic, egoistic and openness to change values.

5.5.3.2. Blindfolding-based cross-validated redundancy measure (Q^2)

As previously mentioned, the Q^2 is based on a blindfolding technique that eliminates single points in a data matrix, imputes illuminated points with the mean, and calculates model parameters (Soniewicki et al., 2021).

Table 5.14 below depicts the Q^2 results of the study.

Table 5.14 Blindfolding-based cross-validated redundancy measure (Q^2)

	SSO	**SSE**	**Q^2 (=1-SSE/SSO)**
EPEB	6290.000	3304.419	0.475

Source: authors own analysis

As an existing rule, Q^2 values that are greater than 0, 0.25 and 0.50 show small, medium and large predictive relevance of the PLS-path model, respectively (Hair et al., 2019). Table 5.14 reveals that the model had predictive relevance since the Q^2 value was greater than zero (0). Table 5.14 also reveals that the Q^2 of EPEB is 0,475, which represents the medium predictive relevance of the PLS-path model.

5.5.3.3. The effect size (F^2)

F^2 is the change in R^2 when an exogenous variable is removed from the model. Table 5.15 below depicts the results of F^2.

Table 5.15 Effect size (F^2)

	EPEB
Altruistic values	**0.242**
Biospheric values	0.005
Employees' voluntary pro-environmental behaviour	
Egoistic Values	0.055
Openness to change values	1.051

Source: authors analysis

Gignac and Szodorai (2016) state that an F^2>0.15 is a good enough or moderate effect, an F^2<0.1 is a small effect, and finally, that an F^2 >0.3 is a large effect. Table 5.15 shows that the effect between altruistic values and employees' voluntary pro-environmental behaviour is 0.242, and is therefore greater than 0.15, making the effect a good enough effect. The Effect size between biospheric values and employees' voluntary pro-environmental behaviour is 0.005, which is less than 0.1. This effect has a small effect. Egoistic values and employees' voluntary pro-environmental behaviour have an effect size of 0.055, which is less than 0.1, therefore, the effect is known to be a small effect. Lastly, openness to change values and employees' voluntary pro-environmental behaviour have an effect size of 1.051, which is greater than 0.3. This shows a larger effect.

5.5.3.4. Model fit

The fit model is used to describe the relationship among a response variable and one or more predictor.

Table 5.16 Model fit

	Saturated Model	Estimated Model
SRMR	0.077	0.077

Source: authors analysis

Table 5.16 depicts the model fit using Standard Root Mean Square Residual (SRMR). Values less than 0.10 or 0.08 are considered a good fit. The SRMR value for this study is greater than 0.10 and 0.08 (=0.077), which means that the study has a good model fit.

5.5.3.5 Statistical significance and relevance of the path coefficients

Table 5.17 Statistical significance and relevance of the path coefficients

	Path-coefficients	**T-Statistics**	**P-Values**
Biospheric values-> employees' voluntary pro-environmental behaviour	-0.049	1.133	0.258
Altruistic values-> employees' voluntary pro-environmental behaviour	0.321	7.867	0.000
Egoistic values-> employees' voluntary pro-environmental behaviour	-0.123	3.946	0.000
Openness to change values-> employees' voluntary pro-environmental behaviour	0.634	17.687	0.000

Source: authors own analysis

To accept hypotheses, the T-values must be higher than 1.6 and the P-values less than 0.05.

- The biospheric value has an effect of -0.0491 on employees' voluntary pro-environmental behaviour with the P-value of 0.258. This is more than 0.05 acceptance threshold of P-value. The T-value is greater than 1.96 (2.853), which means that statistically, there is an insignificant negative relationship between biospheric values and employees' voluntary pro-environmental behaviour.
- The altruistic value has an effect of 0.321 on employees' voluntary pro-environmental behaviour with the P-value of 0.000, which is less than 0.05, and the T-value is greater than 1.96 (7.867), which means that statistically a positive significant relationship exists between the altruistic value and the employees' voluntary pro-environmental behaviour.
- Egoistic values have an effect of -0.124 on employees' voluntary pro-environmental behaviour with a p-value of 0.000, which is less than 0.05, and a T-Value of 3.946, which is greater than 1.96, which means that an insignificant negative relationship exists among egoistic values and employees' voluntary pro-environmental behaviour.
- Openness to change values have an effect of 0.634 on employees' voluntary pro-environmental behaviour with the P-value of 0.000, which is less than 0.05, and the T value is greater than 1.96 (17.689), which means that a significant positive relationship between openness to change values and employees' voluntary pro-environmental behaviour exists.

5.6. MODERATING EFFECT

Table 5.18 moderating effect of gender

Structural Path	**Path coefficient**	**Path coefficient original**	**Path coefficient (difference**	**Decision**

	original (Male) n=165	**(Female) n=205**	**Female-male)**	
Altruistic Values-Employees' voluntary pro-environmental behaviour	0.447	0.409	-0.038	Rejected
Biospheric Values-Employees' voluntary pro-environmental behaviour	-0.121	-0.020	0.101	Rejected
Egoistic values-Employees' voluntary pro-environmental behaviour	-0.192	-0.151	0.041	Rejected
Openness to change values-Employees' voluntary pro-environmental behaviour	0.389	0.439	0.050	Rejected

Source: Authors analysis

To analyse the moderating effect of gender, the multi-group analysis (MGA) utilising the permutation approach was used again because the moderating variable is not continuous. The dichotomisation technique was used because the moderating

variable gender was coded “1” male and “2” female. Table 5.18 above shows the results of the moderating effect of gender. As shown in the table, the results of the moderating effects of gender in the relationship amongst the determinants (altruistic, biospheric, egoistic and openness to change values) and employees’ voluntary pro-environmental behaviour are insignificant, making the hypothesis Ha5 to be rejected.

Table 5.19 moderating effect of age

Structural Path	**Path coefficient original (below 36) n=134**	**Path coefficient original (36 and above) n=236**	**Path coefficient (difference Below 36 and above)**	**Decision**
Altruistic Values-Employees’ voluntary pro-environmental behaviour	0.485	0.423	0.062	Rejected
Biospheric Values-Employees’ voluntary pro-environmental behaviour	0.044	-0.153	0.196	Rejected
Egoistic values-Employees’ voluntary pro-environmental behaviour	-0.029	-0.227	0.197	Accepted

Openness to change values-Employees' voluntary pro-environmental behaviour	0. 346	0.493	-0.148	Rejected

Source: Authors analysis

To analyse the moderating effect of age, the multi-group analysis (MGA) utilising the permutation approach was used because the moderating variable is not continuous. The dichotomisation technique was made use of because the moderating variable age was coded "1" below 36 and "2" 36 and above. Table 5.19 above shows the results of moderating effect of age. As shown in Table 5. 19, the results of moderating effects of age in the relationship amongst the determinants (altruistic, biospheric and openness to change values) and employees' voluntary pro-environmental behaviour is insignificant, making the hypothesis Ha6 to be rejected. Table 5.19 also reveals that the moderating effect of age in the relationship between the determinant (egoistic values) and employees' voluntary pro-environmental behaviour is accepted.

Table 5.20 moderating effect of educational level

Structural Path	**Path coefficient original (below matric and matric) n=109**	**Path coefficient original (post matric) n=261**	**Path coefficient (difference below matric and matric-post matric)**	**Decision**
Altruistic Values-Employees' voluntary pro-environmental behaviour	0.298	0.469	-0.171	Rejected

Biospheric Values-Employees' voluntary pro-environmental behaviour	0.107	-0.129	0.236	Rejected
Egoistic values-Employees' voluntary pro-environmental behaviour	-0.108	-0.196	0.087	Rejected
Openness to change values-Employees' voluntary pro-environmental behaviour	0.467	0.410	0.058	Rejected

Source: authors analysis

To analyse the moderating effect of educational level, the multi-group analysis (MGA) utilising the permutation approach was used because the moderating variable is not continuous. The dichotomisation technique was used because the moderating variable educational level was coded "1" below matric and matric and "2" post-matric. Table 5.20 above shows the results of the moderating effect of educational level. As shown in the table, the results of the moderating effects of educational level in the relationship amongst the determinants (altruistic, biospheric, egoistic and openness to change values) and employees' voluntary pro-environmental behaviour is insignificant, making the hypothesis Ha7 to be rejected.

5.7. SUMMARY OF HYPOTHESES

Table 5.16 Summary of hypotheses

	Hypothesis	**Results**
Ha1	There is a significant positive relationship between biospheric values and employees' voluntary pro-environmental behaviour of SMMEs.	Rejected
Ha2	There is a significant positive relationship between altruistic values and the voluntary pro-environmental behaviour of employees of SMMEs.	Accepted
Ha3	There is a significant negative relationship between egoistic values and the pro-environmental behaviour of employees of SMMEs.	Rejected
Ha4	There is a significant positive relationship between openness to change values and the voluntary pro-environmental behaviour of employees of SMMEs.	Accepted
Ha5	Gender significantly and positively moderates the relationship between biospheric, altruistic, egoistic and openness to change values and employees' pro-environmental behaviour	Rejected
Ha6	Age significantly and positively moderates the relationship between biospheric, altruistic and openness to change values and employees' voluntary pro-environmental behaviou	Rejected
Ha7	Educational level significantly and positively moderates the relationship between biospheric, altruistic, egoistic and openness to change values and employees' voluntary pro-environmental behaviour	Rejected

Source: Authors analysis

5.8 SUMMARY

The purpose of this chapter was to present the empirical results of the study. Firstly, the chapter presented the response rate of the study. It was reported that out of the 620 questionnaires that were distributed, only 370 were returned and filled out correctly. This was followed by the demographical data of the participants that filled out the questionnaire correctly. The descriptive statistics was also outlined. The Evaluation of Smart PLS was carried out. Firstly, the measurement model assessment was done by assessing the indicator loadings, internal consistency reliability and validity. Secondly, formative assessment was assessed, and lastly, the structural model was assessed by looking at the co-efficient of determination, blindfolding-based cross validated redundancy measure, the effect size, model fit, statistical significance, and relevance of the path coefficients. The statistical significance and relevance of the path coefficients was done to test the hypotheses of the study. The last part focused on investigating the moderating effect of the study of which the results of all moderating effect were rejected.

CHAPTER SIX

SUMMARY OF RESULTS, CONCLUSIONS AND RECOMMENDATIONS

6.1 INTRODUCTION

The previous chapter analysed and interpreted the findings of the study. Having looked at the findings, this chapter concludes the study of values and employees' voluntary pro-environmental behaviour in small, medium and micro enterprises in Polokwane Municipality based on the results of the hypotheses in chapter 5. The conclusion will highlight the objectives of the study, hypotheses as well as the problem statement. The summary of the results of the study and recommendations are outlined. Recommendations are discussed to ensure that employees of SMMEs understand the value of practicing pro-environmental behaviour in the workplace. Furthermore, recommendations are made to encourage employees of SMMEs to continue and or start participating in pro-environmental activities as it helps in sustaining the earth for future generations. The limitations of the study and future areas for this research will be discussed as well.

6.2 OBJECTIVES

- To examine the effect of biospheric values and employees' pro-environmental behaviour of SMMEs
- To determine the effect of altruistic values and the pro-environmental behaviour of employees of SMMEs.
- To investigate the effect of egoistic values and the pro-environmental behaviour of employees of SMMEs.
- To examine the effect of openness to change values and the pro-environmental behaviour of employees of SMMEs.
- To examine the moderating effect of gender level in the relationship between biospheric, altruistic, egoistic and openness to change values and employees' pro-environmental behaviour.

- To examine the moderating effect of age in the relationship between biospheric, altruistic, egoistic and openness to change values and employees' pro-environmental behaviour.
- To examine the moderating effect of educational level in the relationship between biospheric, altruistic, egoistic and openness to change values and employees' pro-environmental behaviour.

6.3. HYPOTHESES

Ha1: There is a significant positive relationship between biospheric values and employees' pro-environmental behaviour of SMMEs.

Ha2: There is a significant positive relationship between altruistic values and the pro-environmental behaviour of employees of SMMEs.

Ha3: There is a significant negative relationship between egoistic values and the pro-environmental behaviour of employees of SMMEs.

Ha4: There is a significant positive relationship between openness to change values and the voluntary pro-environmental behaviour of employees of SMMEs.

Ha5: Gender significantly and positively moderates the relationship between biospheric, altruistic, egoistic and openness to change values and employees' voluntary pro-environmental behaviour.

Ha6: Age significantly and positively moderates the relationship between biospheric, altruistic, egoistic and openness to change values and employees' pro-environmental behaviour.

Ha7: Educational level significantly and positively moderates the relationship between biospheric, altruistic, egoistic and openness to change values and employees' pro-environmental behaviour.

6.4. PROBLEM STATEMENT

Many SMMEs are known to be extremely resource-concentrated and consume a large important number of resources that are non-renewable and other goods that are non-durable during their operational actions (Banwo & Du, 2015). SMME activities negatively impact on the environment. Reducing the negative environmental effects of SMME activities will require a change in many behaviours that they normally perform (Klewitz & Hansen, 2014). A sustainable environment has many benefits, including clear air, water and spaces for recreation and regeneration, but its attainment requires a shift at the individual, business and societal levels towards pro-environmental behaviour (Gifford & Nilsson, 2014; Bayulken, Huisingh & Fisher, 2021). One of the most known ways for SMMEs to minimise their unfavourable impact on the environment is to adopt PEB (Park & Ha 2012). Although the fact that SMMEs are the main environmental problems that the world faces, studies on pro-environmental behaviour that mainly focused on households, large firms and research that focused on small firms were sparse (Chimucheka, 2013; Blundel, Baldock, Dadd, Gray & Sullivan, 2014; Du & Banwo 2015).

Additionally, the few empirical studies (such as “Understanding the link between work life balance practices and organisational outcomes in SMEs: The mediating effect of a supportive culture”; “Urban production–A socially sustainable factory concept to overcome shortcomings of qualified workers in smart SMEs”) on SMMEs have focused on the organisational level and not employees, although the latter play an important role in the workplace (Cegarra-Leiva, Sánchez-Vidal & Cegarra-Navarro 2012; Matt, Orzes, Rauch & Dallasega, 2020). While corporate involvement in pro-environmental behaviour may be linked to the government, industry and community-based assumptions, the involvement of workers in PEB is frequently of free will or to meet the standard expectations of the firm (Klockner, 2013). Values are psychological factors that can influence the PEB of employees. However, studies that have focused on the outcome of values on employees’ PEB in the surroundings of SMMEs are scarce. In addition, few studies (such as “Environmentally responsible behaviour in the workplace: An internal social marketing approach”; “Values that make employees more valuable in the organization–a conceptual analysis”) have been done in developed countries, and limited efforts have been made to validate the effectiveness of the findings of these studies in different cultural settings (Smith & O'Sullivan, 2012;

Kanchana, 2013). To reduce environmental deterioration, there is a need for more research on PEB in developing countries such as South Africa (SA). Marquart-Pyatt (2012) argues that one of the ways to better understand environmentalism worldwide is for scholars to explore investigations in a variety of contexts (e.g., developing and developed nations, southern and northern hemisphere, and large and small firms). Therefore, research that examines the PEB of SMMEs in different cultural settings are needed (Wei, Sial, Comite, Thu, Badulescu & Popp, 2021).

Previous research has it that women have a higher pro-environmental behaviour compared to men, although they look less willing to give in their lifestyle so as to act in a manner that is friendly towards the environment (Longhi, 2013). Longhi (2013) further remarks that having a university degree gives out a consistent positive correlation with pro-environmental behaviour.

Having known the above, the research will try to understand the values that influence the decision-making of employees in terms of their voluntary pro-environmental behaviour as well as how demographics such as gender, age as well as educational level influence the behaviour of employees in terms of protecting the environment.

6.5. SUMMARY OF RESULTS

The study is directed under the topic values and employees' voluntary pro-environmental behaviour in small, micro and medium enterprises in Polokwane Municipality**.** The sample size of the study comprised 370 participants, and was made up of employees of SMMEs in Polokwane Municipality, Limpopo Province. The data was analysed using the Smart PLS 3 software.

6.5.1. Summary of results on demographical data of respondents

The results based on the demographical characteristics of respondents revealed that most employees hired by SMMEs in Polokwane Municipality are aged between 36 to 64 with a total of 177 in number. The demographical data also revealed that females had the highest number with 55% of females employed, as compared to males at 45%. Demographical data of respondents also revealed that more undergraduate degree (46%) holders than postgraduate holders were employed.

6.5.2. Summary of key findings

6.5.2.1. Biospheric values and employees' voluntary pro-environmental behaviour of SMMEs

Results on biospheric values and employees' voluntary pro-environmental behaviour show that there is an insignificant negative relationship between biospheric values and employees' voluntary pro-environmental behaviour of SMMEs. Individuals with strong biospheric values care for the environment and nature and powerfully base their choices and judgements to participate in particular activities on the end results of their behaviour for the environment and nature. The more people support biospheric values, the more environmentally-friendly they act (Nguyen et al., 2016).

The results of the study with regards to biospheric values and employees' voluntary pro-environmental behaviour (insignificant negative relationship) are not consistent with those of other studies (significant positive relationship) (Van der Werff et al.,2013; Ates, 2020).

6.5.2.2. Altruistic values and employees' voluntary pro-environmental behaviour of SMMEs

The relationship between altruistic values and employees' voluntary pro-environmental behaviour of SMMEs has been accepted. People with altruistic values care about other people and their surroundings. They also feel obligated to act in a way that is beneficial to other humans. This study shows that SMME employees in Polokwane have altruistic values. These results show that individual employees are willing to respect nature so that they protect the environment for their colleagues. Lee, Kim, Kim and Choi (2014) alluded that individuals with altruistic values tend to have stronger pro-environmental beliefs and have the willingness to participate in different types of activities that are environmentally conscious as compared to those who focus their interests on individual values. A study done by Meyer (2013) revealed that there is a relationship between altruistic values and employees' pro-environmental behaviour. The results of this study agree with the outcomes of other studies, which state that there is a positive relationship between altruistic values and employees' pro-environmental behaviour.

6.5.2.3. Egoistic values and employees' voluntary pro-environmental behaviour.

The results on Egoistic values and employees' voluntary pro-environmental behaviour for this study have been accepted. Therefore, it is said that there is an insignificant negative relationship between egoistic values and employees' voluntary pro-environmental behaviour. People with egoistic values suggest that a single person's concern for the natural and built environment is in direct relationship with the benefits that a single person obtains for acting in a pro-environmental manner. In other words, a single person has their own interests. The employees of SMMEs show that a relationship among egoistic values and employees' voluntary pro-environmental behaviour does not exceed. The employees of this study do not have egoistic values: they act in manner that protects the environment. A study done by Schley (2020) hypothesised that egoism is associated negatively with pro-environmental behaviour. Therefore, the findings of this study agree with findings of a study by Schley (2020), that there exists a negative relationship between egoistic values and employees' voluntary pro-environmental behaviour.

6.5.2.4. Openness to change values and employees' voluntary pro-environmental behaviour

The results on openness to change values and voluntary pro-environmental behaviour have been accepted. Openness to change values relate to actions, thoughts and feelings, and the readiness for experiences that are new and independent. Individuals that value openness to change as a crucial principle may find happiness from being early adopters of an eco-friendly solution, which is highly innovative and conveys their pioneering and unconventional green self-identification. A study undertaken by Blok et al. (2015) hypothesised that openness to change is positively related to PEB in the workplace. Another study carried out by Barbarossa et al. (2017) hypothesised that openness-to-change values have a positive relationship with PEB. Therefore, the results of this study are consistent with that of other studies that accept that openness to change positively relates to employees' voluntary pro-environmental behaviour.

6.5.2.5 Gender as a moderator between biospheric, altruistic, egoistic and openness to change values and employees' voluntary pro-environmental behaviour

The results on gender as a moderator between biospheric, altruistic, egoistic and openness to change values and employees' pro-environmental behaviour have been rejected. It is thus, said that there is no significant positive relationship between gender as a moderator between biospheric, altruistic, egoistic and openness to change values and employees' voluntary pro-environmental behaviour. A study done by Quoquab et al. (2020) hypothesised that gender moderates the relationship between altruistic, biospheric, egoistic and openness to change values and pro-environmental behaviour. The results of this study are inconsistent with other researches as it rejected that gender significantly and positively moderates the relationship between biospheric, altruistic, egoistic and openness to change values and employees' pro-environmental behaviour.

6.5.2.6 Age as a moderator between biospheric, altruistic, egoistic and openness to change values and employees' voluntary pro-environmental behaviour

The results on age as a moderator between biospheric, altruistic and openness to change values and employees' pro-environmental behaviour have been rejected. It is thus said that there is no significant positive relationship on age as a moderator between biospheric, altruistic, and openness to change values and employees' voluntary pro-environmental behaviour.

While the results on age as a moderator between egoistic values and employees' pro-environmental behaviour have been accepted, it is said that there is a significant positive relationship on age as a moderator between egoistic values and employees' voluntary pro-environmental behaviour.

6.5.2.7 Educational level as a moderator between biospheric, altruistic, egoistic and openness to change values and employees' voluntary pro-environmental behaviour

The results on educational level as a moderator between biospheric, altruistic, egoistic and openness to change values and employees' pro-environmental behaviour have been rejected. It is thus said that there is no significant positive relationship on educational level as a moderator between biospheric, altruistic, egoistic and openness to change values and EPEB.

6.6. RECOMMENDATIONS

Recommendations for SMME employees, owners, the government and organisations are made based on the findings of the study.

6.6.1. Recommendations for SMME employees and owners on the values that affect voluntary pro-environmental behaviour of employees.

- Biospheric values and employees' voluntary pro-environmental behaviour of SMMEs.

The study showed that an insignificant negative relationship between biospheric values and employees' voluntary pro-environmental behaviour of SMMEs exists, which is different from the hypothesis of the study. A person reveals their biospheric values when they show their concern for all living things and surroundings. Employees of SMMEs need to learn more about the need for the protection of the environment so that they are able to act in a manner that saves it for future generations.

- Altruistic values and employees' voluntary pro-environmental behaviour of SMMEs.

The results of the study have corroborated previous studies, which revealed that there is a significant positive relationship between altruistic values and the voluntary pro-environmental behaviour of employees of SMMEs (Riper et al., 2020; Liu & Wu, 2021). People who embody altruistic values are those who see other people as equals, worry about the environment and feel that it is up to them to act in a manner that is beneficial to other humans (Van Riper & Kyle, 2014). It is recommended that individuals (employees) must continue to carry out activities (e.g. recycling) that protect the environment for other people and continue seeing them as their equals. It is further recommended that employees must teach each other about the necessity of protecting the environment.

- Egoistic values and employees' voluntary pro-environmental behaviour

There is a significant negative relationship between egoistic values and the voluntary pro-environmental behaviour of employees of SMMEs. The results of the study agree with its hypotheses. People with egoistic values only engage in the protection of the

environment if they will benefit from the behaviour (Prakash et al., 2019). It is recommended that employees deviate from behaviours that are self-centred to protect the environment. They must participate in activities that protect the environment regardless of what they might get in return. This is the case so that their offspring and close family members can benefit from a healthy environment.

- Openness to change values and employees' voluntary pro-environmental behaviour

The study revealed that a significant positive relationship between openness to change values and employees' voluntary pro-environmental behaviour exists. People that have openness to change values are more likely to participate in protecting the environment if they are early adopters of the concept (Barbarossa et al., 2017). It is recommended that employees should come up with concepts to protect the environment so that they own them and can still get the excitement of being an early adopter of a behaviour such as protecting the environment.

6.6.2 Recommendations for SMME owners on the values that affect the pro-environmental behaviour of employees

To create a working environment that is focused on sustainability, owners need to orient themselves about the core values that are needed for employees to behave in a way that protects the environment so that they can enforce appropriate laws into the organisation onto them. The owners of SMMEs need to make it mandatory for their employees to participate in activities that protect the environment. It is also recommended that SMME owners partner with organisations that focus solely on protecting the environment so that they learn from people with experiences about sustaining the environment. It is again recommended that the owners of SMMEs must give incentives for those employees who are practicing the protection of the environment. This should be done so that the employees can compete about being the environmental protector of the year. This on its own will increase their responsibility towards caring for the environment.

6.6.3 Recommendations for government and organisations that help SMMEs

Government agencies such as the National Development Agency (NDA), the Centre for Small Business Promotion (CSBP) in the Department of Trade and Industry (DTI),

Ntsika Enterprise Promotion Agency, Khula, the Land and Agricultural Development Bank of South Africa and the Industrial Development Corporation (IDC)" need to organise formal workshops and training to encourage SMMEs on the importance of being pro-environmentally active. It is known that many SMMEs are unaware of the existence of such organisations. As a result, the government and these institutions should raise awareness of the existence of the organisations and the services that they provide. These organisations must provide accessible and easy information with regards to the benefits that SMMEs can receive from being actively involved with the environment. These institutions and government are strongly encouraged to organise activities that bring owners of SMMEs together, such as trade fairs and seminars, thus educating SMME owners on protecting the environment and its benefits. It is further recommended that government must invest in ensuring that they force organisations to create workstations that are environmentally-friendly through strict policies. This will help employees who are motivated by ambiance to keep their workstations clean and protected.

6.7 LIMITATIONS OF THE STUDY

The sample data used in this data was collected in Polokwane Municipality, and may thus not necessarily be a true reflection of other settings. Thus, generalising the findings must be made with caution while taking into consideration potential environmental and cultural differences. In the process of collecting data, there was reluctance from some respondents who argued that the questionnaire was too long. The sample of the study consisted of SMME employees in Polokwane, but not all of them were able to take part due to the constraints of time. Furthermore, the questionnaires used in this study were written in Sepedi and English and the Municipality of Polokwane is diverse with most people speaking numerous African languages (e.g., Xitsonga and Venda). Thus it was hard to explain the questions to those employees that could not understand English and Sepedi. Another limitation was finding literature on employees' pro-environmental behaviour since most studies regarding pro-environmental behaviour focused on households.

Due to the pandemic (Covid-19), where people were advised to work from home, the time given to do data collection was insufficient because making appointments was a

problem because people were told to social distance. Due to financial and time constraints, it was impossible to have the study conducted on the entire population, thus a sample was drawn.

The utilisation of a cross-sectional data was also a limit since the opinion of respondents is boxed. It therefore did not allow the researcher to fully know how the respondent would truly act towards the environment. Another limitation is self-reported data. This can lead to results that are bias. Respondents might have not responded truthfully, especially on questions that would have made them feel like the researcher would judge them.

Despite these limitations, this study contributes to the additional insights about how values affect the voluntary pro-environmental behaviour of employees based on the assumption that the collected data is a true reflection of SMMEs in Polokwane Municipality.

6.8 SUGGESTIONS FOR FUTURE STUDIES

This study can be expanded by adding a factor that studies employees' behaviour at home so as to understand why they act the way that they do at work. Learning and understanding the way that employees act towards the environment at home would assist the organisation in terms of knowing which of them are already acting or not acting in a pro-environmental manner. They will know on who to emphasise the concept of being environmentally-friendly. The study can also be taken to other areas in the country by expanding the samples so as to improve the generalisation of the study. The study can be extended by adding the connectedness to nature as a mediating variable between biospheric, altruistic, egoistic and openness to change values, and employees' voluntary pro-environmental behaviour. The study can also be studied by extending the theory of planned behaviour.

6.9 SUMMARY

This chapter analysed the data collected through a questionnaire found in appendix A of this research. In this chapter, the summary of key findings was given, followed by

the recommendations for employees, owners and government. Limitations as well as suggestions for future study were outlined. The research achieved the objectives set out to be achieved because it was able to outline how different values influence the voluntary pro-environmental behaviour of employees in SMMEs in Polokwane Municipality. The data was analysed using Smart PLS 3. To accept or decline the hypotheses, a path coefficient was used. Almost all the hypotheses set out by the researcher were accepted.

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APPENDIX A: ENGLISH QUESTIONNAIRE

Dear Madam/ Sir

I am a student at the University of Limpopo in the Department of Business Management, conducting a study in values and employees' Pro-Environmental Behaviour (PEB) in Small Medium and Micro Enterprises (SMMEs) in Polokwane Municipality, South Africa. The study seeks to explore the effect of values on the PEB of employees of SMMEs.

For extra knowledge on PEB, Sawitri et.al (2015) define Pro-Environmental Behaviour (PEB) as conscious actions made by individuals and businesses to reduce human activities which affect the environment positively or negatively.

Please be advised that:

- Your participation in this survey is strictly confidential and anonymous, and all your answers will not and cannot be used to identify you.
- You are free, at any time to stop your participation in the questionnaire.
- The results of this study will be used for academic research purposes only. The completion of this questionnaire will only take about **20 minutes** of your time.
- You give your consent to participate in the study voluntarily.

_____ _____

Respondent's signature Date:

SECTION A: DEMOGRAPHICAL INFORMATION

1. Age

1. 15-35	2. 36-64	3. 65 and above

2. Gender

1. Male	2. Female

3. Educational level

1. Below matric	2. Matric	3.Undergraduate	4. Post-graduate

For the next sets of questions, please tick the appropriate box for each question.

SECTION B: Biospheric values

	Strongly agree 5	**Agree 4**	**Undecided/neutral 3**	**Disagree 2**	**Strongly disagree 1**

1. I take measures to prevent pollution e.g not littering					
2. I protect the environment for other species e.g through recycling					
3. It is important to me to respect nature					
4. It is important for me be in unity with nature.					

Section C: Altruistic values

	Strongly agree 5	**Agree 4**	**Undecided/neutral 3**	**Disagree 2**	**Strongly disagree 1**
1. I help my colleagues understand the importance of being environmentally-friendly					
2. I help in ensuring that the workplace has environmentally-friendly signs everywhere.					
3. I orient new colleagues about					

being environmentally-friendly even when it is not required.					
4. I willingly help others who have problems implementing or practicing nature preservation.					
5. It is important for me to give others an equal opportunity to learn about PEB.					

Section D: Egoistic values

	Strongly agree 5	**Agree 4**	**Undecided /neutral 3**	**Disagree 2**	**Strongly disagree 1**
1. I only participate in preventing pollution if I am rewarded for the deed in monetary or material possessions.					
2. I protect the environment only if it will benefit me e.g. In health terms					
3. I only engage in PEB if I am given the					

authority to lead or command.					
4. I only help people with being environmentally-friendly if it will help me have an impact on people and events.					
5. I only participate in protecting the environment if it will improve my chances of getting a higher job rank (ambition)					

Section E: Openness to change values.

	Strongly agree 5	**Agree 4**	**Undecided/neutral 3**	**Disagree 2**	**Strongly disagree 1**
1. I get excited when I learn new information about the preservation of nature.					
2. I am curious in finding out about the necessity to protect the environment.					
3. I am willing to learn new and creative					

ways of protecting the environment from harm.					
4. I am willing to teach my colleagues about the necessity of practicing PEB.					
5. I am willing to support the organisation to implement PEB in its everyday activities.					

Section F: Employees Pro-environmental behaviour

	Strongly agree 5	**Agree 4**	**Undecided/neutral 3**	**Disagree 2**	**Strongly disagree 1**
1. I recycle at work whenever possible.					
2. I assist my colleagues to be environmentally-friendly at work.					
3. At work I conserve the number of materials I use.					
4. I encourage my colleagues to switch off work-related					

equipment when they are not being used.					
5. I promote behaviour that is environmentally-friendly amongst my colleagues.					
6. I encourage my organisation to buy products that are environmentally-friendly.					
7. I reduce the level of energy I use at work.					
8. I discuss with my leader how we can make our organisation become more environmentally-friendly.					
9. I take part in events that are environmentally-friendly, which are sponsored by my organisation.					
10. I suggest to my colleagues that they reduce the level of materials that they use.					

11. I encourage my organisation to support an environmentally-friendly charity.					
12. I encourage my organisation to lessen its environmental impact.					

Thank you for your participation!!

APPENDIX B: SEPEDI QUESTIONNAIRE

THOBELA: MOHLOMPHEGI/ MOHOMAGADI

Ke nna moithuti wa Yunibesithi ya Limpopo go Lefapha la Tshepidišo ya Kgwebo. Ke dira boithuto ka boleng le boitshwaro bja Pro-Environmental Behaviour (PEB) go dikgwebo tše nnyane tša Medium le Micro (SMMEs) lefelong la Polokwane, Afrika Borwa. Phuputso ekhi e tloaetse go lekola phello ea litekanyetso go PEB ya babereki ba di-SMME.

Go hwetša tsebo ye e tseneletšego ka PEB, Sawitri et.al (2015) o hlalosa Pro-Environmental Behaviour (PEB) e le ditiro tše di hlokomelwago tše di dirago ke batho ka botee le dikgwebo go fokotša mešomo ya batho ye e sa swarego tikologo gampe goba ye e kaonafatšago boleng bja tikologo.

Ka kgopelo lemoga gore:

- Go tšea karolo ga gago go letlakalapotšišo le ke sephiri. Go tšea karolo ga gago go letlakalapotšišo le ga go tsebje, le dikarabo tša gago ka moka di ka se šomišwe go go kgetholla.
- Ka nako ye nngwe le ye nngwe, o dumeletšwe go emiša go tšea karolo go dipotšišo.
- Diphetho tša boithuto bjo di tla šomišwa sebakeng sa dinyakišišo tša thuto feela. Go dira se go tla tšea feela metsotswana e 20 ya nako ya gago.

- O fa tumelelo ya gago go tšea karolo mo boithutong ka borati le boithaopo bja gago

_____ _____

Mosaeno wa moarabi Letšatšikgwedi

KAROLO A: Boitsebišo bja palo ya batho

Ka kgopelo ngwala ka lepokisaneng la maleba ka fase.

1. Mengwaga

1. 15-35	2. 36-45	3. 46-60

2. Bong

1. Monna	2. Mosadi

3. Boemo bja thuto

1. Ka fase ga marematlou	2.Marematlou	3. Sekolo sa pele sa thuto	4. Boithuti ba pele-pele

Sebakeng sa dihlopha tše latelago tša dipotšišo, ka kgopelo ngwala ka lepokisaneng leo le loketšego potšišo ye nngwe le ye nngwe.

KAROLO B: DITEKANYETŠO TŠA LEFELO LA DIMELA LE DIPHOOFOLO

	Dumela ka	Dumela (4)	Magareng a go	Ganetša (2)	Ganetša ka maatla

	maatla (5)		dumela ganetša (3)		(1)
1. Ke tšea magato a go thibela tšhilafalo, mohlala, go lahla tšhila mebileng.					
2. Ke šireletsa tikologo sebakeng sa diphedi tše dingwe ka go e mpshafatša.					
3. Go bohlokwa go nna gore ke hlomphe tlhago.					
4. Go bohlokwa go nna gore ke be selo se tee le tlhago.					

KAROLO C: Ditekanyetso tsa boithati

	Dumela ka maatla (5)	Dumela (4)	Magareng a go dumela le go ganetša (3)	Ganetša (2)	Ganetša ka maatla (1)

1. Ke thuša bašomi-mmogo ba ka go kwešiša bohlokwa bja go boloka tikologo.					
2. Ke thuša ka go kgonthišiša gore mošomong go nale maswao a go boloka tikologo.					
3. Ke ruta bašomi-mmogo ba ka ba bafsa ka taba ya go hlokomela tikologo le ge go sa hlokagale.					
4. Ke ithaopa go thuša ba bangwe bao ba nago le mathata a go boloka dilo tša tlhago.					
5. Go bohlokwa go nna go fa bangwe monyetla wa go ithuta ka PEB.					

Karolo D: Ditekanyetšo tša boitshwaro

	Dumela ka	Dumela (4)	Magareng a go dumela le	Ganetša (2)	Ganetša ka maatla (1)

	maatla (5)		go ganetša (3)		
1. Ke tšea karolo feela go thibela tšhilafalo ge ele gore ke lebogelwa ditiro tša ka ka tšhelete goba ka dilo tše di bonagalago.					
2. Ke šireletša tikologo ge feela e tla ntšwela mohola. Mohlala, Mabapi le bophelo bjo kaonafatšego.					
3. Ke tšea karolo feela go PEB ge ele gore ke filwe maatla a go eta pele goba go fa ditaelo.					
4. Ke thuša feela batho go boloka tikologo ge ele gore e tla nthuša go ba le khuetšo go batho le ditiragalong.					

5. Ke tšea karolo feela go šireletša tikologo ge ele gore go tla oketša sebaka sa ka sa go hwetša boemo bja godimo mošomong (maikemišetšo).					

Karolo E: Ditekanyetšo tša go bulegela phetogo.

	Dumela ka maatla (5)	Dumela (4)	Magareng a go dumela le go ganetša (3)	Ganetša (2)	Ganetša ka maatla (1)
1. Ke a thaba ge ke ithuta tsedimošo e mpsha ka polokego ya tlhago.					
2. Ke labalabela go tseba ka bohlokwa bja go šireletsa tikologo.					

3. Ke ikemišeditše go ithuta mekgwa e mefsa ya go šireletša tikologo kotsing.					
4. Ke ikemišeditše go ruta bašomi-mmogo ba ka ka bohlokwa bja go diriša PEB.					
5. Ke ikemišeditše go thekga mekgatlo yeo e ikemišeditšego go diriša PEB mešomong ya yona ya letšatši ka letšatši					

Karolo F: Pro environmental behaviour ya ba bereki

	Dumela ka maatla (5)	Dumela (4)	Magareng a go dumela le go ganetša (3)	Ganetša (2)	Ganetša ka maatla (1)

1. ke mpshafagatša tikologo mošomong ge monyetla o le gona.					
2.ke thuša bo mmereki mmogo ba ka go šireletsa tikologo					
3.ke bana le šedi mošomong geke šumisa mohlagase.					
4.Ke hlohloletša bo mmereki mmogo baka gore ba time dilo tše ba berekago ka tšona ge basa di šomiši.					
5. Ke hlohlotša bo mmereki mmogo baka gore ba šireletše tikologo.					
6. Ke hlohleletša ba ba golo gonna mošomong					

gore ba r eke di product tša go šireletša tikologo.					
7. Ke fokotša mohlagase yok e o berekišang mošomong.					
8. Ke sekaseka le ba bagolo ba ka mošomong ka mokgo re ka dirago kgwebo y arena go re e šireletše tikologo.					
9. Ke tšeya karolo go mekete ye e dirago ke kgwebo ye ke e berekelago ya go šireletša tikologo.					
10. ke kgopela bo mmereki					

mmogo ba ka gore ba fokotše mohlagase yo ba o šomišago mošomong.					
11. Ke hlohloletša kgwebo ye ke ebereke lago gore e thege di kgwebo tše di šireletšago tikologo.					
12. Ke hlohleletša kgwebo ye ke eberekelago gore e hafole dilo tše di ka go batšago tikologo.					

KE LEBOGA GO TŠEA KAROLO GA GAGO!!

APPENDIX 3: PERMISSION LETTER TO CONDUCT RESEARCH

The Owner/Manager…….

Request for permission to conduct a research study at your organisation.

I am Motebejane Kabelo Nankie, a student from the University of Limpopo under the Department of Business Management. I am conducting a research titled **"VALUES AND EMPLOYEES' VOLUNTARY PRO-ENVIRONMENTAL BEHAVIOUR IN SMALL MEDIUM AND MICRO ENTERPRISES IN POLOKAWANE MUNICIPALITY"**.

This research is important because numerous organisations are now placing their focus on being environmentally-friendly and an increasing number of customers react positively to businesses that care about the environment. This research aims to explore the effect of values on the voluntary Pro-Environmental Behaviour of employees of SMMEs. I hereby request for your permission to collect data through a questionnaire that will be given to your employees. The questionnaire will consist of questions that relate to my study, where my plea is that each of your employees fill it with answers that best apply to them. Your employees' personal information and the name of the organisation will not be mentioned in the research report. The findings

will remain confidential and anonymous. The summary and findings of the research could be shared if interested.

For more information, you can contact me on: Cell: 072 697 8079 and email: motebejane704@gmail.com for my research confirmation. Or my supervisor, Prof Olawale Fatoki, tel: (015) 268-2646.

Your approval of this request will be greatly appreciated.

Sincerely

Motebejane K.N

DEPARTMENT OF BUSINESS MANAGEMENT

UNIVERSITY OF LIMPOPO

APPENDIX 4: CONSENT FORM FOR PARTICIPATION IN AN ACADEMIC RESEARCH STUDY.

Research conducted by:

Motebejane Kabelo Nankie

Cell no: 072 697 8079

Email: motebejane704@gmail.com

Dear participant

This is an invite for your voluntary participation in an academic study conducted by Motebejane Kabelo, a student at the University of Limpopo under the Department of Business Management.

Purpose of the study

The purpose of the study is to investigate the **"VALUES AND EMPLOYEES' VOLUNTARY PRO-ENVIRONMENTAL BEHAVIOUR IN SMALL MEDIUM AND MICRO ENTERPRISES IN POLOKAWANE MUNICIPALITY".**

The study is significant because theoretically, it will test and confirm the applicability of the VBN theory to employees of SMMEs in a developing country. Empirically, the study will add to knowledge regarding factors that can improve PEB by SMMEs. For policy contribution, the findings of the study will be useful to SMMEs and organisations that support sustainability in small firms in understanding how values can affect the PEB of employees.

Please note the following:

- This study will include a self-administered questionnaire, which you are requested to complete.
- Anonymity of your responses in this research will be kept. Your personal information such as names will not appear anywhere in the research report and the answers you provide will be treated as confidential.
- Your participation in this study is voluntary. You may choose not to take part in the filling in of the questionnaire or withdraw during the process of completing it without any negative attitude from the researcher. The results of the study will be used only for academic purposes and may be published in an article. If requested, the summary of the findings can and will be provided.
- You will be treated with respect and dignity by the researcher by being polite and not being forceful. Following the rules will ensure excellent communication between the researcher and participants. Any answer given will be respected and effectively used.
- No possible harm or risk (physical, psychological, legal or economic) will be exposed to you as a result of taking part in this research.
- If you have questions or comments about this study, please contact my supervisor, Professor Olawale Fatoki, tel no: (015) 268-2646 or email: olawale.fatoki@ul.ac.za.

Consent

I have read and understood the information provided above. I understand that my participation is voluntary, and I give my consent to participate in this study.

Participant's signature _____ Date_____

I believe the participant is giving informed consent to take part in the study.

Researcher's signature_____ Date_____

APPENDIX 5: EDITORIAL LETTER

507 Caledon Village, Cell +27794848449, Email: kubayij@yahoo.com

20 May 2022

Dear Sir/Madam

SUBJECT: EDITING OF DISSERTATION

This is to certify that the dissertation entitled 'Values and employees' voluntary pro-environmental behaviour in small, medium and micro enterprises in Polokwane Municipality' by **KABELO NANKIE MOTEBEJANE** has been copy-edited, and that unless further tampered with, I am content with the quality of the dissertation in terms of its adherence to editorial principles of consistency, cohesion, clarity of thought and precision.

Kind regards

Prof. SJ Kubayi (DLitt et Phil)

APPENDIX 6: PLAGIARISM REPORT

nankie

ORIGINALITY REPORT

14%	11%	8%	8%
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