

**An exploration of the views of manufacturing
small medium enterprise owners with regards to
green tax incentives in the EThekweni region of
Kwa Zulu - Natal**

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DECLARATION

I, Uveer Kalidin declare that the content within this dissertation is my own work. All sources that I have used or quoted have been acknowledged in the text by the means of completed references. This study has not been previously submitted in any form to the Durban University of Technology or to any other institution for assessment or for any other purpose.

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DEDICATION

This dissertation is dedicated to my mother, Mrs Kay Kalidin, who has given me the chance and providing me with the best education opportunities from the best institute and the love and support throughout my career. She has taught me that hard work and determination does not go unrewarded and it was through her love, motivation and inspiration that I undertook the current study and will attempt my future endeavours. I wish to thank my Dad and brother Rivaaj for their unconditional love, support and motivation.

My mother was the most beautiful woman I ever saw. All I am I owe to my mother. I attribute all my success in life to the moral, intellectual and physical education I received from her.”

George Washington

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I would like to thank God for granting me the patience, tolerance and determination for the duration of this study.

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Cultivate the habit of being grateful for every good thing that comes to you, and to give thanks continuously. And because all things have contributed to your advancement, you should include all things in your gratitude

Ralph Waldo Emerson

ABSTRACT

The study was to explore the awareness of owners of small medium enterprises with regards to green tax incentives; to identify their attitudes towards such green tax incentives and the possible impact it will have on small medium manufacturing enterprises going green. This study used a quantitative research design, specifically a descriptive survey approach. A census sample was drawn through a list provided by the Durban Chamber of Commerce. A survey questionnaire was the primary data collection tool used. A total of 152 questionnaires were distributed and 104 were received yielding a response rate of 68 %.

The data showed that small medium enterprises were concerned about the environment, and acknowledged that their business activities have a negative impact on the environment. The study also established that small medium enterprise owners are concerned with the impact that climate change will have on their business operations. A majority of the sample considered green taxation to be an important driver that would allow businesses to become eco-friendly. Owners were found to support the utilization of green taxation incentives and were considering using green taxation as part of future business decision making, thus ensuring that meet corporate social responsibility. It was concluded that there was a need for the government to put more focus into creating awareness of global warming and climate change. There was also a need to find more innovative ways of promoting eco-consciousness and green sustainable practices and the need to draft and identify new green taxation legislature that caters for public and small medium enterprises.

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CHAPTER ONE

1.1 INTRODUCTION

To waste, to destroy our environmental resources, to skin and exhaust the land instead of using it so as to increase its usefulness, will result in undermining in the days of our children the very prosperity which we ought by right to hand down to them amplified and developed.

Theodore Roosevelt

The turn of the century saw a quadruple escalation of the world population from 1.6 billion to more than 6.1 billion people (Chamie 2004). The United Nations Development Report estimated that the population size would rise to 9 billion in total before 2050. Of significance was that this report isolated 3 billion of the population, to endure living on an income of less than US\$2 a day (United Nations Development Programme 2006). Brown *et al.* (1994) voiced strong concern saying that the world faced grave problems in terms of population expansion. Keyfitz (1989) expressed that the population growth would be concentrated in developing countries.

During the Environmental Sustainability Ceremony of 2009, Manzo in Von Witt (2011) stated that the world was fixated with money, material wealth and consumption, to the detriment of socio-economic and environmental sustainability. The former President of the United States, Al Gore and now champion for the cause of combating climate change stated in his book “*Earth*

in the Balance” that population expansion had triggered an imbalance between man and earth’s environmental balance. The latter had suffered climate change, ozone depletion, the loss of living species and deforestation. The collective adverse impact of industrialization growth and technological advancement in the new millennium, has concomitantly fueled the escalation of global warming and climate change, which has impacted adversely the humankind’s relationship with the earth and its fauna and flora. The upsurge in population expansion throughout the decades, coupled with the rapid acceleration of scientific and technological revolution, has coalesced such that humanity has begun to organize and empower themselves to adversely impact the environment by the destruction of the earth (Gore 2006).

A report by Hopkins et al. (2011) reflected the impact of rising global temperatures that are having serious consequences for all ecological systems, particularly humankind. The report further highlighted that those most susceptible to the impact of climate change are poor communities in developing countries. The reasons for this are linked to geographic location, excessive dependence on environmental resources, and the deficiency of infrastructure within these poor communities, which increases developing countries exposure to environmental risks. The report also declared that 70% of the world’s poor reside in rural areas, and many smallholders are already struggling to survive on marginal rural land. They are thus highly vulnerable to water, temperature and weather-related crises. Furthermore, poor communities lack access to crucial assets and financial savings that provide a necessary buffer when faced with these shocks.

The decline of greenhouse gas emissions has been an imperative mission for OECD governments, and many have adopted long-term frameworks and targets alongside the Kyoto Protocol to tackle global warming. Interestingly, the current economic crisis facing OECD countries has raised public expectations for greater industry efforts to achieve sustainable development. In the current economic crisis, a “Green New Deal” or a

“green recovery,” policy is being considered in several countries, and public investment in environmental technologies and other sustainability projects are a core part of their economic stimulus strategies (Stosic and Milutinovic 2014). Watts (2010) reinforced this saying that there has been consensus among statesmen, business leaders and consumers that climate change is a grave issue. The challenge of dealing with climate change must be a synergistic relationship between companies as well as by governments and citizens. The influence of globalization has fashioned complications for many companies, as their mind set is no longer focused on the business financial aspects but on rather a holistic view. Moreover, the Internet has exposed companies worldwide to more intense scrutiny, making them more aware of their image, as corporate citizens.

Business has a responsibility to the various stakeholders. These priorities reflect a commitment to the environment, thus replicating the values that the King 3 Report have instilled in terms of business obligation, which is not just a vested interest in profits and shareholders but also the environment and environmental sustainable practices.

The Banking Association of South Africa has perceived that small and medium enterprises (SME) are innovative drivers of economic growth and development in South Africa and around the world. SME's are considered an important contributor to the economy as strategies for reducing unemployment, especially as the formal sector continues to decrease jobs (Banking Association South Africa 2013). A study done by Atawodi and Ojeka (2012: 94) made similar findings to that of the banking association of South Africa. They asserted that, in developing countries especially, SME's have a vital role to play in creating growth and developing economies. It has been noted that SME's account for nearly 70% of total global pollution (Smith and Kemp :1998) and 60% of total carbon emissions (Marshall 1998).

SME's are generally owner-managed businesses. Therefore decisions are taken primarily by the owner, thus making the owner solely responsible for prioritizing resolutions taken (Simpson, Taylor and Barker 2004). It has

become increasingly clear that there is a need for environmental awareness and that businesses need to acclimatize themselves to environmental challenges.

Small medium enterprises are identifying the need to become proactive in terms of facilitating solutions towards environmental issues in order to survive and compete in a market where environmental standards also play an important role. The reason for small medium enterprise changes is due to the fact there is growing pressures of growing social environmental concerns and of the strategic interests of enterprise companies, who are now required to draw a sound environmental compromise with the use of environmental resources. The more qualified human resources are in environmental issues, the stronger the commitment of the company to its environmental surroundings and the greater the benefits accrued by the firm (Simpson, Taylor and Barker 2004).

Consequently it can be expected that the environmental attitudes of small medium enterprises may emerge from the environmental attitudes of small medium enterprise owner-managers (Cloquell-Ballester *et al.* 2008). Prior research on small medium enterprises (Friedman, Miles and Adams 2000; Hillary 2000; Rutherford, Blackburn and Spence 2000; Gunningham 2002b; Revell and Rutherford 2003; Revell and Blackburn 2007) found that the environment is not identified as an important business threat and that small medium enterprises also do not consider energy-saving technologies as they are not viable to invest in. Their research also discovered that many of the environmental economic measures policies which are used in addressing the challenges of climate change are mainly developed and provided for by larger businesses. Hence they are not well applied to small medium enterprises as financial constraints prevent small medium enterprises from utilizing them.

Environmental tax is a catalyst that has the ability to inspire and stimulate pro- environmental attitudes and behaviors. Environmental taxes have become popular tools of environmental policy for many countries, thereby reinforcing the belief that taxes create stronger incentives than regulation

(Pearce 1976; O'Riordan 1989; Pearce, Markandya and Barbier 1989; Turner 1999). The popularity of going green has extended to smaller businesses as well, especially given the number of available tax benefits. Governments routinely utilize tax policy to encourage companies to engage in sustainable practices by offering tax credits, exclusions and deductions for making their operations more environmentally friendly. Some organizations may be surprised to discover that they are already engaged in activities that qualify for advantageous tax treatment, which emphasizes the importance of good communication and the coordination of efforts across business divisions (Schultz and Heitger 2011). There are several motives behind the implementation of environmental taxes. Firstly, the government benefits from the revenue generated through these taxes (Pearson and Smith 1990). However most of the studies are outdated and, also, none have focused on environmental taxes which have become a key economic instrument for environmental protection in the UK (Snape and Souza 2006).

Secondly, they provide a continuous incentive for innovation to develop less polluting products or processes (Verbeke and Coeck 1997). Thirdly they are designed to motivate people towards pro-environmental behavior. Moorthy *et al.* (2012: 78) argued that financial incentives for SMEs are very important drivers to ensure environmental improvement as the importance of going "green" is rarely questioned. However, the returns from these investments are often in doubt.

The returns of capital investment in "green technology" must reflect monetary and investment sense when compared to the outlay. Besides non-monetary returns derived through saving the environment, the South Africa Government will through tax savings and allowance, introduce incentives to obtain a monetary return. Given the scarcity of funds during economic downturns, the SA Government needs to reflect on various ways to increase the returns on "green" investments (Matthews 2011:35).

A study by KPMG (2013: 2) revealed that economic uncertainties have resulted in a decrease in the introduction of new incentives for clean energy in many countries. However, governments still offer a variety of tax incentives to support renewable energy investment.

Globally, it has been established that the small business sector plays a significant, if not critical, role in the economic and social development of a country. This sector, however, has regularly reported that complying with taxation regulations, is detrimental to their growth, due to the costs that are incurred to remain tax compliant (Smulders 2008). Several other patterns were evident in multiple local and international studies undertaken, with the most salient being that tax compliance costs comprise a much larger proportion of total compliance costs for smaller firms (Killian *et al.* 2007). A friendly tax policy has a positive impact on the survival and growth of SMEs. However, normal tax implications have a negative impact on SMEs by increasing their running costs and decreasing their business growth (Atawodi and Ojeka 2012: 94).

Environmental tax or green tax and incentives are salient drivers of ensuring environmentally sustainable business practices. Although environmental taxes will permit small medium enterprise owners to turn green and benefit from incentives and deduction, the initial monetary investment in pollution reduction technology is absorbed by small medium enterprises, thus not allowing them to invest. Researching the attitudes and awareness of small medium enterprises towards environmental taxes, will determine and guide how they are meeting the demands and challenges of these taxes. Small medium enterprises are recognized as businesses that are deficient in resources and expertise, with a failure to envisage many of the problems encompassing environmental issues which will eventually have major ramifications for their businesses. The primary goal of small medium enterprises is to ensure their survival and profitability.

Restricted monetary resources means that, if additional new taxes are

introduced or if taxes are increased, it will be challenging for new businesses to continue to exist as it will place serious strain on small medium enterprises limited financial resources. In some instances small medium enterprises are ignorant of the extra levy they are paying for negative environmental practices, thereby not awarding themselves the opportunities to change their practices and behavior, which will remedy the situation and prevent them from wasting financial resources. The current study explored small medium enterprise owners' views on green tax incentives and the potential impact of these incentives on manufacturing SME's sustainability and profitability in the EThekweni region. No prior study has been conducted in terms of green taxation and incentives and its potential impact particularly in Kwa-Zulu Natal.

1.2 HISTORICAL BACKGROUND TO GREEN TAXATION AND INCENTIVES

To respond to the call of "saving the environment", many governments have introduced environmental taxes. They have periodic increases in fuel duty, vehicle excise duty, and air passenger taxes. Many of these taxes are primarily to achieve environmental benefits, which include encouraging people to reduce private vehicle use, purchase "greener" cars, and in large cities to make greater use of rail transport and other public transport. Taxation is utilised by many governments as the best way to protect the environment since it is an effective policy tool that is easily implementable (Avi-Yonah and Uhlmann 2009). Green taxes also commonly known as environmental taxes or pollution taxes, are among the policy tools implemented by many countries, including South Africa (Bashmakov and Jepma 2001). In general, most people have little or no interest in paying taxes; however, their gradual increase provides a modest environmental benefit.

Avi-Yonah and Uhlmann (2009) also argued that a carbon tax or green tax would be easier to implement and enforce. They posited that it is simpler to adjust such taxes in the event that the resulting market-based changes are either ineffective or too extreme. Such taxes are capable of producing revenue

that could be used to fund the research and the development of alternative energy and tax credits. Such alternatives could then be used to offset any regressive effects of the carbon tax. They added that when green taxes are implemented, they could serve as a more effective measure for reducing greenhouse gas emissions than a cap and trade system.

Green taxes are excise taxes on environmental pollutants or on goods whose use produces such pollutants (Tol 2005). From the economic theory point of view, green taxes could be used to reduce environmental harm in the least costly manner. This can be achieved by encouraging changes in behaviour by companies and households that can successfully reduce pollution at the lowest cost (Bailey 2002). This study explored green tax implementation in the EThekweni region among manufacturing owners, in an attempt to understand the impact of this.

Global environmental degradation is a major challenge facing most countries. Regardless of the root cause of this global challenge, all nations need to jointly undertake a concerted effort to ensure a beneficial reduction. This should be mandatory for all countries so as to avoid the possibility of catastrophic environmental impacts. Bailey (2002) asserted that determining the exact influence of environmental taxes and business behaviour is a difficult task. This is due to the fact that companies could succumb to environmental taxes, they first need to evaluate the numerous external and internal factors when responding to environmental policies viz green tax incentives, and it is often difficult to differentiate the exact relationship between economic instruments and polluter behaviour.

He added that when the pressures mount on a company they may decide to change the nature of their business, hence leading to unemployment. If applied to South Africa it could exacerbate the existing high unemployment rate and increase the loss of jobs (Hugh 2009). Hence government would need to make informed decisions if such laws are to be effectively implemented.

The European Union were the first to introduce environmental policies. The policies contained the fundamental philosophies of sustainable development initiatives. The initial Environmental Action Programme was established in November 1973. The program that identifies with the ideas of economic growth, prosperity and the safekeeping of the environment are mutually interdependent (European Environmental Bureau 2005). The Bureau supported the need for environmental protection and stated that this must be a joint effort from all stakeholders. In terms of this imperative being recognised are issues of prevention, reduction and containment of environmental damage as well as the conservation of an ecological equilibrium and the proper use of environmental resources (European Environmental Bureau 2005). Based on the Bureau objectives it can be established that a salient foundation for current policies have been put into practice.

The European Environment Agency (1996) argued that it is beneficial to utilize environmental taxes for the following reasons:

- Environmental taxes are effective mechanisms for the internalisation of external factors, as the prices for environmental services and damages are a direct factor in the environmental tax for goods. Hence what the polluter pays is linked to economic and environmental policies and non-polluters benefit from incentives that supports goods and services that have a positive effect on the environment;
- Environmental tax incentives have the ability to convince consumers and producers to change their outlook towards utilizing resources in an eco-efficient manner, thus creating innovation and strengthening regulations;
- The revenue raised through environmental taxes raise can be utilized to advance environmental expenditures and lessen taxes on labour; and
- They can be effective policy tools to change present environmental priorities from pollution sources e.g. transport emissions and chemicals used in agriculture.

The Organisation for Economic Co-operation and Development (2010) reported that, most environmental taxes generate poor revenue. Low revenue being generated is the consequence of the tax bases being very low. Therefore small medium enterprises are challenged, to generate revenue from these taxes, despite the fact that consequential incentives can be beneficial from an environmental point of view. In other cases, tax rates can be quite low. Additional revenues from carbon taxes and from the selling of permits however may increase the role of environmentally related taxation in government budgets.

In addition to encouraging and implementing environmentally friendly practices, environmentally associated taxes can effectively help to cater for incentives for improvement. Customers can pursue new solutions in response to the increased taxes as a result of pollution. The incentives have the capacity to allow commercially viable reforms in research and development engagements, which will advance inspired technologies and consumer products, that will help decrease environmental footprints (Organisation for Economic Co-operation and Development 2010). The European Environment Agency (2006) divided environmental taxes into three categories, according to their goals. These categories are depicted in Table 1 below.

| Type of environmental tax | Goal |
|-----------------------------------|--|
| Cost-covering taxes | Used to incur costs related to environmental facilities such as water purification (user taxes) and which can be used for similar environmental costs (earmarked taxes). |
| Incentive taxes | These are used to influence the actions of consumers and producers. |
| Fiscal environmental taxes | Used principally to generate revenues. |

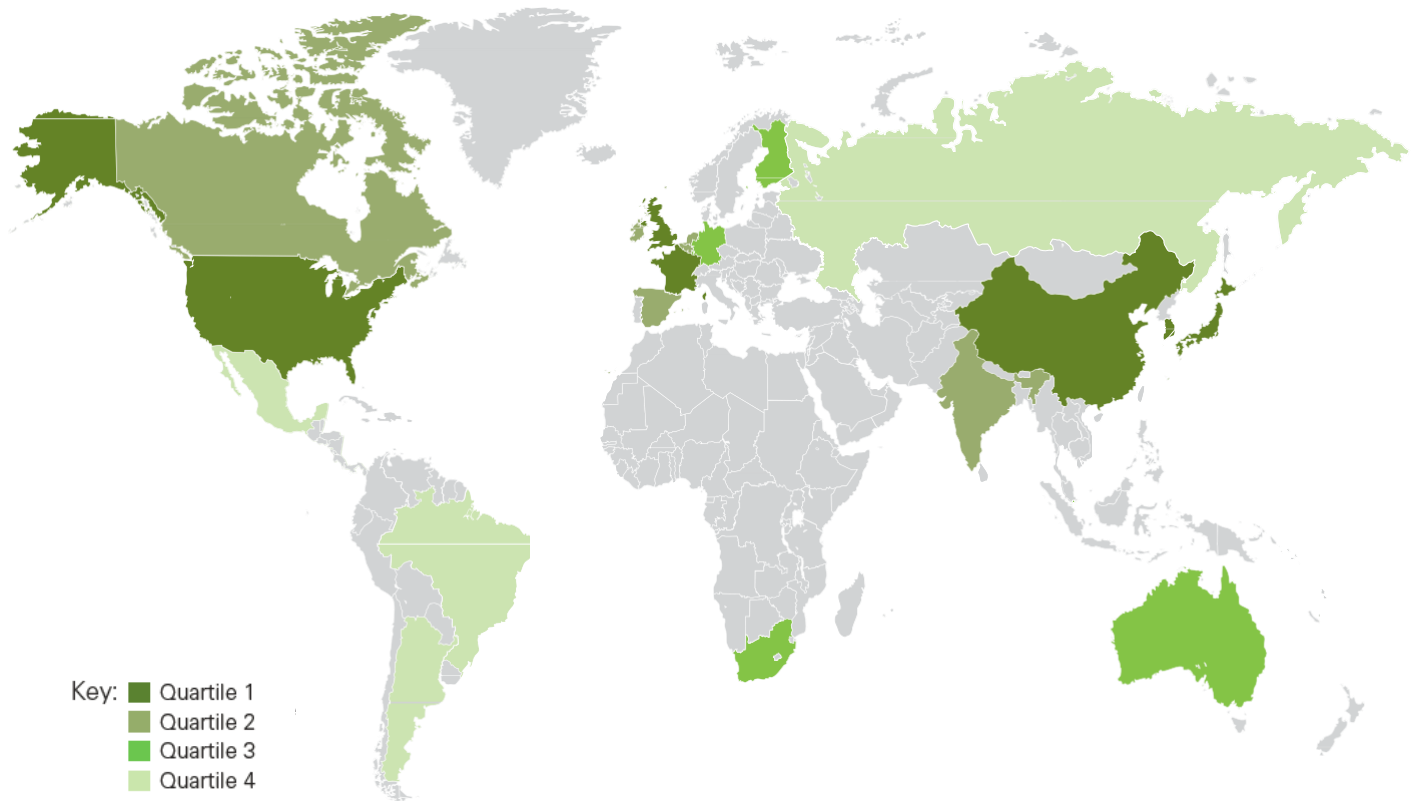
Table 1: Three categories of environmental taxes

The progression of environmental taxes has progressed from expenditure taxes in the 1960s and 1970s, to a blend of incentive and economic taxes in the 1980s and 1990s and more recently into environmental and “green” movements where taxes on the bad, will be used to set off taxes on the good, such as labour taxes (European Environment Agency 1996).

Currently in South Africa there are two main environmental taxes utilised viz. electricity and the fuel levy. These two taxes have been hugely criticized for failing to acknowledge the bulk of the current environmental tax system, resulting in a call for their review and a revised tax framework to address the ever-increasing greenhouse gas emissions (Deloitte 2009). Some approaches that have seen to be absent in the current South Africa green taxes system, are the inclusion of financial incentives that encourage clean technology and the shifting of the economy away from its current energy and capital-intensive basis. These gaps have necessitated research in this area, to address these growing concerns (Naidoo 2005 and Deloitte 2009).

South Africa, like several other countries, has tax gaps. These emanate from factors like tax avoidance and evasion (Naidoo 2005; Deloitte 2009). This may result in organisations evading environmental taxes, if such taxes are seen to be absent, thus prompting an inquiry into gaps. Contemporary trends involving greening taxes can be divided into taxes on energy. Other environmental taxes can be summarised as follows:

THE KPMG GREEN TAX INDEX



| | | |
|------------|--|--|
| Quartile 1 | US, Japan, UK, France, South Korea, China | Highest use of green tax High number of incentives and penalties places in Quartile 1 US and South Korea weighted towards incentives France weighted towards penalties |
| Quartile 2 | Ireland, Netherlands, Belgium, India, Canada, Spain | Moderate to high use of green tax Wealth of wind, solar and water resources to can encourage investment in green |
| Quartile 3 | Australia, South Africa, Germany, Finland, Singapore | Moderate use of green tax Strong use of non-tax funding, e.g. significant grant programs in Australia (ARENA), Finland (Tekes) and |
| Quartile 4 | Brazil, Argentina, Mexico, Russia | Relatively low use of tax as a green policy tool Only one of the four has a green tax penalty (Russia's water tax) Other funding programs may be used, e.g. Argentina's feed-in- taxations program, Brazil's FUNTEC R&D grants. |

Source: The KPMG Green Tax Index, 2013.

Figure 1: The use of green taxation across the world

Environmental taxes have generally been announced without revenue generation where taxes have focussed on pollution and taxes on employment have been decreased. Generally, most governments that have implemented environmental tax reforms have amended the tax on employment, so as to allay the country's unemployment calamity. This tax shifting is known as the "double dividend," where the environment has benefitted and the second dividend (employment), occurs as a result of reduction in labour taxation (Organisation for Economic Co-operation and Development 2000).

In the last two decades there has been a concerted effort to investigate and stymie the consequence of global warming. In South Africa environmental taxes and the application of other measures/incentives to reduce emissions have not been implemented, as compared to the global context. Therefore reform is needed to identify the best way to price carbon (Van Schalkwyk 2013). Courtelis (2012) explained that South Africa signed and formalized its membership through the Kyoto agreement in 2002. Since it is a developing country, it has been exempted from decreasing its greenhouse gas emissions, as it is anticipated that the enforcement of greening taxes will hamper, rather than prompt economic growth (Van Schalkwyk 2013). Courtelis (2012) identified the current South African environmental deductions or allowances in the Income Tax Act as per Table 2 below

| Income tax section | Identifying the deduction |
|---------------------------|--|
| Section 11D | Deduction for research and development costs |
| Section 12B | Deductions in respect of certain machinery, plant, implements, utensils and articles used in framing or production of renewable energy |
| Section 12K" | Exemption for certified emission reductions Section 12L Special allowance for energy efficiency savings |
| Section 37B | Deductions in respect of environmental expenditure |
| Section 37C | Deductions in respect of environmental conservation and maintenance |

Table 2: Types of green taxation incentives in South Africa

1.3. BACKGROUND TO PROBLEM AND PROBLEM STATEMENT

1.3.1 Climate change

Climate change has had a debilitating effect on the world (Gregory, Ingram and Brklacich 2005: 3). The exploitation of environmental resources by humankind has created an “ecological crunch,” that is worse than the current financial crisis (Jowit 2008: 1). The state of South Africa’s environment is adversely affected due to human – induced changes, thus affecting the health and quality of life in South Africa (Department of Social Development 2009).

1.3.2 Importance of small businesses

The triple bottom line encourages businesses to meet the following obligations: social responsibility, economic performance and environmental performance (South African Institute of Chartered Accountants 2009), which ensures that future generations are not negatively eroded by unsustainable practices. Hence responsibility towards the environment and resources is restricted, to large corporates but applies equally to all businesses. Environmental taxes have generally been announced without revenue generation where taxes have focussed on pollution and taxes on employment have been decreased. Small medium enterprise owners and managers have a pivotal role to play in conserving the environment and limiting the factors causing climate change (Visser 2009).

A study by Kabiraj, Topkar and Walke (2010: 10) found that environmental and energy conversation has dominated the business sector, due to increasing energy costs and environmental problems. The preservation and protection of the environment by business becoming green, has ensured that businesses benefit by becoming healthy. There is also growth; the creation of a competitive niche; the creation of a profitability niche; and long-term growth and viability. If small medium enterprises become green, it benefits both the organisation and the country. Greene and Braathen (2014: 12) stated that environmental

taxation has a major role to play in addressing environmental challenges. Taxes can be extremely effective when they are properly designed. Green Economy Sub secretariat United (Ribeiro n.d.: 3) confirmed that the country will benefit through the green economy.

1.3.3 Importance of environmental sustainability and responses of SME's

Mainstream business practices in many sectors acknowledge and ascertain the significance of environmental sustainability. The complications relating to resource depletion and the production of greenhouse gases, has resulted in increased responsiveness due to regulatory, supply chain, reputational and consumer pressure. However, whilst there is indication of some consciousness and good environmental practice amid small and medium-sized enterprises (SMEs), this sector of the business community has always been difficult to influence. Given that the vast number of private enterprises are small and medium- sized (with 250 or fewer employees), and are accountable for over half of employment and business revenue, their businesses cannot be ignored (Spence, Agyemang and Rinaldi 2012). A study by Revell, Stokes and Chen (2010) acknowledged that strategies in the UK targeted larger businesses rather than smaller business. Consequently it is important for SMEs to reduce their environmental influences. Regulations have the potential to enable environmental management become more cohesive in terms of long-term business strategies. Regulations also need to be easier to support and allow SMEs to find solutions that are appropriate relative the nature of their business. The obligations regarding regulators and SMEs warrants action, as it will assist business owners to understand their governing obligations and to ascertain techniques of decreasing regulator cost (Revell, Stokes and Chen 2010).

1.3.4 Importance of green tax incentives

Green tax incentives aim to internalise the cost caused by processes or actions that cause harm to the environment and incentivises the cost for environmental

rectification (Green Taxation 2006: 1). During the Copenhagen summit on climate change, a blueprint was conceived using legislation, including tax legislation, to help enforce the reduction of greenhouse gases (Climent *et al.* 2011: 6).

1.3.5 The role of green tax incentives

A study by Spang, Abahoonie and Hayes (2009: 2) found that efforts to curb climate change have resulted in governments creating and expanding tax incentives for renewable energy. The initiative can have a significant impact on operations, project funding, investment strategies and financial reporting. Tax incentives will help encourage investment in sustainable equipment, thus increasing the rate of green investment by companies.

1.3.6 The problem business has to go green

Hopkins *et al.* (2011: 5) stated that small medium enterprises have a pivotal role in enabling climate change response. Jarvis (2004: 3) added that small medium enterprises are at the core of the economy, hence, it is crucial that social responsibility underpins the business strategy. There are many challenges facing small medium enterprises from becoming green. Revell and Blackburn (2004: 3) argued that small medium enterprises are not certain of that they should practise environmental management, to reduce cost and win customers. They added that voluntary environmental action will be resisted if owners/managers think that there will be a detrimental effect, on their competitiveness and businesses lack resources and support to make environmental improvement. The benefits and objects of the green economy, re to stimulate green gross domestic product, create green jobs, promote low carbon economy and energy efficiencies and help reduce poverty.

1.3.7 The need for environmental taxes

Carbon accounts for most of human made nursery gas emanations (Department of Energy & Climate Change 2012). Ecological assessment can

be used to change ways that the legislators may accept as alluring. It has been found that by forcing assessments, governments can ensure that nature successfully takes care of contamination (Institute for Fiscal Studies 2011). Assessment is the most influential monetary instrument at the Government's disposal, to alter mass citizen behaviour. It is accepted that the presentation of ecological taxes can possibly alter the taxes framework, by raising money that can be used as a part of different types of assessments. In creating an environmental tax framework, it is important to keep at a distance unintended or negative impacts, on citizen's choices with regards to the sum and way in which to work, spare, contribute and spend. The reason for environmental taxation assessments is that contamination strengthens society, to tolerate the taxes of the introductory polluter, thereby shifting obligation. Upholding assessments will force the polluter to recognize that there will be more taxes when deciding the amount to contaminate. Hence it is important to reduce discharges to levels that envelop the taxes.

According to the Institute for Fiscal Studies (2011) taxes influence the costs paid by polluters, thus making them more earth aware. When the taxes make an alteration in business practices it will successfully aid in reducing carbon emission, only if these alteration are less expensive to execute.

This is more beneficial than driving elements to cause unreasonable taxes to decrease emanations. It is best to expand the assessment on discharges and contamination, until the peripheral taxes to the firm is the same (Institute for Fiscal Studies 2011) .However this still does not decrease contamination to the point of non-presence.

As Bohm *et al.* (1998) wrote the ideal level of emissions are when marginal costs of the abatement are equivalent to the marginal benefits of the abatement. This is how social taxes of the contamination are minimized. Policymakers however don't have the data to achieve the optimal assessment arrangement, as it is difficult to situate too high or low tax goals and subsequently poorly composed or inordinate tax frameworks.

Fullerton, Leicester and Smith (2008) emphasized that the path to effective environmental tax execution does not rest, within presenting taxes with a subtle justification for using ecological assessments. They argued that the arrangement rests in the arrangement of environmental concerns with proper financial instruments.

The commitment of ineffectively formed environmental taxes frameworks lend itself to further superfluous taxation, whilst minimising ecological advantages. It is a challenge to ascertain assorted tax designation and the instruments to gauge this, as data prerequisites are very broad which, limits the appropriateness of the tax instrument. Emanations are not measured or exchanged as they are a by-result of the generation process and in this way tax concentrated components should be produced and derived to encourage the assessment process. Another type of environmental tax is the assessment of quantifiable business exchanges, specifically identified with contamination, for example, taxation on products that are a piece of the contamination process e.g. batteries, fills and composts. These taxes may be more practical, but are not linked to the primary contaminating exercises, hence effecting unintended and ineffective reactions for the polluter's e.g. less expensive batteries and polystyrene glasses which are not conducive to nature (Fullerton, Leicester and Smith 2008).

1.4 A COMPARISON OF TAXES AND INCENTIVES

There are multiple environmental taxes and environmental incentives already implemented or implementable in South Africa. The challenge rests in determining which is most effective in changing the behaviour of big businesses. Studies reflect that taxes are often perceived in a negative light and as an obstacle to doing business (Alm and McClellan (2012: 8). The environmental taxes already legislated in South Africa, discussed under "deemed taxes" as well as the proposed carbon emissions tax (introduced in 2015), will in most instances, be charged to the consumer (Styan 2010; Van der Merwe 2010). The challenge is whether companies will change their

production and consumption patterns, if these additional taxes were passed onto the consumers. Additional taxes will effect income distribution and international industrial competitiveness.

A further concern regarding environmental taxes, is its use after collection. It is unclear if the government will channel the money to the research and design of energy-efficient technologies, or use the revenue collected in other ways. With regard to the plastic bag taxes, Styán (2010), reported that although Treasury brought in about R360 million between 2004 and 2009, only R65 million was to be used for environmentally friendly projects.

The introduction of environmental taxes, contrary to most research, has resulted in increased economic output growth (Nakada 2010: 561). According to a study by Fredriksson (2001: 78), incentives increase pollution and reduce net revenues. In his study net revenue is defined as “the aggregate pollution tax revenue minus aggregate pollution abatement subsidies (a subsidy on the inputs used for pollution control).” Hence net revenue will be reduced, as pollution abatement subsidies increase. This implies an increase in pollution related to tax policy reform in the American context. On the positive side, environmental incentives may result in new (green) jobs. “Sectors with green jobs potential include renewable energy, building and construction and natural resource management” (Gordhan 2011).

1.4.1 The impact of taxation on SME's

The expense compliance and authoritative cost that SMEs need to uphold are proportionately higher, than those for substantial organizations (Killian *et al.* 2007: 19). In addition, compliance with tax legislation is beyond the accounting competences of many small businesses (Stern and Barbour 2005: 12). It is the high compliance and administrative costs that prevent informal small medium enterprises from amalgamating with the formal sector (Stern and Barbour 2005: 9). Assessments constitute a substantial segment of the expense structure of a SME. Small business organizations practice tax avoidance and operate in the informal sector of the economy without disclosing all business

transactions. (International Finance Corporation 2007: vii). Taxes are an essential component of the expense structure of SMEs, given that they do not have the monetary and human ability to create advanced duty shirking systems (Nam and Radulescu 2007: 101). Interestingly, big organizations (and affluent people) have admittance to complex duty counsel to create charge shirking methods that decrease their expense liabilities, by using exchange evaluating systems (International Finance Corporation 2007: vii).

The mortality rates of small and medium enterprises which comprise 95% of the economy are very high. According to the Small and Medium Enterprises Development Agency of Nigeria (SMEDAN), 80% of small businesses perish seven years of establishment. The factors responsible for this are tax related issues, ranging from taxations to enormous tax burdens etc. Therefore, in dealing with small and medium enterprises, these unique qualities must be considered. The importance of small businesses as a mechanism of economic growth and development is often ignored. They are perceived as small establishments that have minimal effect on the state of the economy.

However, if a proper environment is created for these small businesses to grow through proper regulation, the small medium enterprise sector has the highest ability to transform the economy.

1.5 THE TAX COMPLIANCE OF SME'S

Being tax compliant is an obligatory duty whether natural or corporate. As part of civil duty, every citizen is expected to voluntarily comply with such an obligation; although some don't always comply with the law. Tax compliance can be described as the degree to which a taxpayer abides by the tax rules and regulations as laid out by the law (Ariff, Mohamed. and Zubaidah 1997). In South Africa, non-compliance by taxpayers is one of the main causes of the tax gap (Venter *et al.* 2010: 64).

The tax gap is defined as the difference between tax collected and the tax that theoretically should be collected. Hence tax which is actually supposed to be

collected is lost through non-payment, use of avoidance schemes, complex transactions, errors on assessment, evasion, the hidden economy and organised crime (HM Revenue and Customs 2012). In an Australian study conducted by McKerchar (1995: 40), it was found that small business taxpayers lacked sufficient tax knowledge to comply with the tax law. In another study conducted on the New Zealand tax system, Caragata (1998: 214) indicated that small businesses, the self-employed and individuals in general, represent the highest percentage of tax evasion. In an American study Hite, Stock and Cloyd (1992: 26) found that approximately one-fifth of small businesses either understated their taxable income or overstated their tax deductions.

1.6 PROBLEM STATEMENT

Much of the world's human and animal population and plants will suffer, due to the impact and consequence of global warming and climate change. When the Kyoto protocol was formalized, a road map ascertaining a blue print on how to combat the effects of climate change was established. At the Summit it was established that government is not the only stakeholder in combatting the effects of climate change, but rather a partnership between government private and public sector needs to be established in dealing with climate change challenges. Empirical research has shown that small medium enterprises have a vital role to play in addressing climate change and global warming as they are seen to be the pillars of many economies around the world including South Africa. Green tax incentives also known as environmental tax reform are also seen as enabling tools that have been created to help businesses to become green, thus minimising the effects of climate change and global warming.

Research conducted in other countries established that of all the available economic instruments used to address environmental challenge, green tax and green tax incentives are the most favoured methods to address climate challenges. Despite this international research has shown that businesses have negative sentiments towards the taxation system, thereby failing to

utilize and benefit from green tax incentives. Although there is evidence of some research on green taxation locally, little has been done to identify the attitudes and awareness of small medium enterprise owners towards green tax incentives locally.

Courtelis (2012) stated that there are inadequate greening taxes statutes in South Africa. Environmental taxes are taxes that have the ability to endorse environmentally sustainable actions, subsequently applying economic incentives which are preferred by business. They deliver extensive tax deduction, exemptions and tax penalties that have the potential to assist South Africa's environmental sustainable policies and allow the country policies to coincide with policies of other countries. The deficiency in green taxes has the effect of environmental damage being ungoverned. The doctrines of the King 3 report could also be used to develop the environmental tax framework in South Africa. The principle of sustainability is considered an important aspect of King 3, as it forms part of businesses ethos. The King Report further alludes that independent assurance over important aspects of sustainability reporting must be carried out. Small medium enterprises are major role players in dealing with preventing the effects of climate change. Environmental policies such as green taxation and incentives are seen to be effective policy tools to help business to meet the climate change challenge. However small medium enterprises fail to utilize these tools thus preventing them from fulfilling their obligation to decrease the effects of climate change and reduce their carbon footprint. They also fail to reap the monetary benefits from green taxation and incentives.

1.7 AIM AND OBJECTIVES OF THE STUDY

AIM:

To investigate the views of the owners of manufacturing small medium enterprises towards green taxation and the implementation of green tax incentives.

OBJECTIVES:

- To investigate owners' knowledge and awareness of environmental issues.
- To explore their understanding of and support for environmental taxation.
- To investigate owners' attitudes towards green tax incentives;
- To inquire about the potential impact on business sustainability and profitability if green tax incentives are used.

1.8 RATIONALE FOR THE STUDY

The current study is salient as small medium enterprises who choose to go green will benefit from tax incentives and eco-friendly business practice. This will ensure that they meet their corporate social responsibility requirements in terms of the King 3 report. Climate change has a major negative impact as it creates a ripple effect affecting humanity and the economy. A study conducted by Abrie and Doussy (2006: 10) found that tax compliance places a huge administrative burden on small medium enterprises. It is for this reason that most small medium enterprises do not take full advantage of the tax incentives and services available to them. Venter and De Clerq (2007: 87) agreed with the tax compliance burden placed on small medium enterprises.

As businesses grows, taxation becomes important as business aims to increase profits by improving taxation skill and knowledge which will lead to effective management of taxation, which, in turn, results in cost savings (Venter and De Clerq (2007: 87). Consequently, long-term viability of the business will be ensured. Palazzi and Starcher (2001: 12) concluded from their study that corporations are no longer primarily responsible to shareholder's, but also have a responsibility towards society, the environment, and humanity. Environmental and social responsibility makes good business sense as it influences investment decisions of consumers and investors.

Green tax incentives and eco-friendly business practices are new concepts/measures that have been implemented to help in the transition of small medium enterprises becoming green. However, the problem lies in them

understanding these concepts and identifying the benefits that they will receive for becoming green. This study will contribute to exploring the views and concerns of owners of small medium enterprises, with regards to green tax incentives, in an attempt to contribute towards promoting a green economy. Organisations that are aware of the tax incentives that are available may plan strategically with the intention of utilising available incentives for the advancement of the business. As far as is aware this is a first time inquiry in the EThekwini region and the study could shed light that will direct small medium enterprise to become more eco-friendly.

1.9 LIMITATIONS OF THE STUDY

The study was restricted to only manufacturing small medium enterprises in the EThekwini region in Kwa Zulu- Natal region. Hence the findings cannot be generalised to all manufacturing small medium enterprises throughout South Africa.

1.10 RESEARCH METHODOLOGY

The research design used was quantitative and descriptive in nature. The study centred on exploring manufacturing small medium enterprise owners' views regarding green tax incentives. Data was collected using a self-administered, closed-ended questionnaire that was developed around the research objectives. A three and four point Likert scale was used to explore the views and attitudes of respondents.

1.11 OPERATIONAL DEFINITIONS

The section provides an overview of definitions of terms that are relevant to this study.

1.11.1 Climate change

Climate-change relates to change in terms of, temperature and rainfall patterns, rising sea levels, and environmental disasters that bring new risks

that must be professionally managed in order for their companies to stay competitive (Bossard 2012).

1.11.2 Global warming

This refers to increases in global temperatures due to the accumulation of “greenhouse gases” in the atmosphere. Greenhouse gases consist of carbon dioxide and methane that traps heat closer to the Earth and does not allow it to radiate away. (Public Agenda nd: 1).

1.11.3 Green taxation

Daugbjerg and Pedersen (2004: 1) stated that green taxation is a tool to reduce emissions that cause pollution.

1.11.4 Tax incentives

Tax incentives refer to deductions, exclusions or exemptions from tax liability. Tax incentives are offered as an enticement to engaged business or individuals in a specified activity (such as investment in capital goods) for a certain period of time (Business Dictionary.Com 2016).

1.11.5 Tax exemption

Stiglingh *et al.* (2013: 89) described tax exemption as gross income that is not subjected to normal tax. Items that qualify for exemption initially form part of gross income, but are then excluded when ‘income’ is calculated. Exemption from normal tax is granted for reasons, for example, because of the special character of the taxpayer or the special nature of the income or to prevent income from being taxed twice.

1.11.6 Tax deduction

This refers to a fixed amount or percentage permitted by the taxation authorities that allows a tax payer to subtract from his or hers adjusted gross income to arrive at a taxable income (Business Dictornary.Com 2016).

1.11.7 Small medium enterprises

The National Credit Regulatory (2011) report done for the National Credit Regulator, indicates that small medium enterprises, hereafter to as SME are firms. A firm is regarded as small if it meets the following three criteria: it has a relatively small share of their market place; it is managed by owners, or part owners, in a personalised way and not through the medium of a formalised management structure; and (3) it is independent in that it is not part of a larger enterprise.

1.11.8. Manufacturing

Australian Bureau of Statistics (2012: 1) defined manufacturing as the process of producing goods or wares by manual labor or by machinery, especially on a large scale. The activity of manufacturing includes any activity that fits the definition of manufacturing, irrespective of whether the activity relates to private individuals.

1.11.9 Business sustainability

Labuschagne, Brent and Van Erck (2005: 1) stated that business sustainability entails the incorporation of the objectives of sustainable development, namely social equity, economic efficiency and environmental performance, into a company's operational practices. Companies that compete globally are increasingly required to commit to and report on the overall sustainability performances of operational initiatives.

1.11.10 Business profitability

The Investopedia (2012) defined profitability as a class of financial metrics that are used to assess a businesses' ability, to generate earnings as compared to its taxes and other relevant costs incurred during a specific period of time. For most of these ratios, having a higher value relative to a competitor's ratio or the same ratio from a previous period is indicative that the company is doing well.

1.11.11 Environmental sustainability

Moldan, Janoušková and Hák (2012:2) stated that environmental sustainability “seeks to improve human welfare by protecting the sources of raw materials used for human needs and ensuring that the sins of human wastes are not exceeded, in order to prevent harm to humankind.

1.12 STRUCTURE OF THE THESIS

The dissertation has been structured along the following 5 chapters:

Chapter 1 introduced the research topic, rationale and provided the background to the study. The problem statement and aim and objectives of the study were also highlighted.

Chapter 2 contains the literature review. It was structured along the objectives of the study particularly identifying green tax incentives that are in place for businesses to go green, and on small medium enterprise owners’ measures towards going green and utilizing green incentives. It also identified the challenges faced by small medium enterprises in implementing green business practices.

Chapter 3 focusses on the research methodology utilized in this study. It provided information on the research paradigm viz. quantitative research methodology, the research instrument, sample and the procedure for data collection and analysis.

Chapter 4 presents the findings made through the research inquiry. The data from questionnaires were analysed, interpreted and presented alongside relevant literature.

Chapter 5 contains the conclusions drawn based on findings from the previous chapter. This chapter also offered recommendations to SMEs.

1.13 CONCLUSION

This chapter presented the introduction and background of the study and the research problem. The chapter also focussed on the aim, objectives of the study and its limitations. The next chapter will present the literature review related to green tax incentives and its impact on business.

CHAPTER TWO

LITERATURE REVIEW

“The earth will not continue to offer its harvest, except with faithful stewardship. We cannot say we love the land and then take steps to destroy it for use by future generations.”

Pope John Paul II

2.1 INTRODUCTION

A literature review is the synopsis of past research and forms a crucial segment in helping the researcher build up the groundwork for the study (Blumberg, Cooper and Schindler 2008). The goal of the literature review is to help with formulating a context for the study being investigated. Analyzing previous literature, based on the research question, permits the researcher to identify the "gap" that exists. The researcher is then able to reveal through an extensive examination of past literature how to uncover information needed to remedy the missing link in the study. A comprehensive examination of literature helps to identify the limitations in the existing literature and also guide the methodology which must be utilized in the current study (Gabula 2012).

This chapter focusses on small and medium-sized enterprises (SMEs) and highlights important literature which is linked to proprietors of small medium enterprises and their responsiveness to green taxation incentives. The focus of the research study is small medium enterprises and the effect of green tax incentives on them. Hence the literature embraces a synopsis of issues pivotal

to the territories of green tax incentives and small medium enterprises research.

The chapter starts by examining the effect of environmental taxation and the significant role small medium enterprises have in tending to environmental issues. There is also a focus on green tax assessment motivators as being a catalyst for transforming business into a friend of the environment. Thereafter the review focuses on the current context of small medium enterprises, with regard to environmental change, green tax incentives and the effects thereof. It then focusses on global and national conditions of environmental taxation and green tax incentives (green taxation) and its effect thereof, before investigating different perspectives on SMEs and green tax incentives.

Presently there is a dearth of scholarship on manufacturing owners' attitudes towards and awareness of South Africa's environmental taxation and its incentives. However, research on business owner's attitudes and awareness with regards to environmental taxation and incentives has been conducted in other countries. The literature from these studies will be reviewed in the sections that follow.

2.2 DEFINITIONAL AND CONCEPTUAL ISSUES

This section focusses on definitional issues around climate change, small medium enterprises and green taxes. Climate change is a long-term shift in the statistics of the weather (including its averages). For example, it could show up as a change in climate normal (expected average values for temperature and precipitation) for a given place and time of year, from one decade to the next. Global climate is currently changing rapidly. The last decade of the 20th Century and the beginning of the 21st have been the warmest periods, in the history of global instrumental temperature record, starting in the mid-19th century (NOAA National Weather Service 2007). Climate change occurs when the sun radiates solar energy, which when not fully absorbed by the earth's atmosphere, results in some of the energy being absorbed by clouds that assists in the formation of rain. The residue of the

energy is also absorbed by the earth's surface such as forests, deserts, city roads, buildings and the ocean. The energy that is absorbed by the earth's surface is later radiated and is referred to as thermal infra-red energy. When fossil fuels are burnt to produce energy (electricity) they emit CO₂ and other greenhouse gases. When greenhouse gases are absorbed by the thermal infra-red energy, this results in solar heat being trapped. The consequences are an escalation of average temperatures around the world. This increase is known as the greenhouse effect or global warming. Climate change can thus be attributed to global warming (Karrappan 2011).

The Organisation For Economic Co-Operation And Development (2007) defined small medium enterprises as non-subsidary, independent firms that employ a set number of employees. Small firms are generally those with fewer than 50 employees, while micro-enterprises have at the most ten, or in some cases five workers. Financial assets are also used to define small medium enterprises. According to the national statistical systems the number of employees employed varies, in terms of defining a SME. The European Union's limit is set at 250 employees, while the USA indicated that their firms are set at 500 employees in order to be viewed as a small medium enterprise.

Levinson (2007) stated that the terms green taxes and environmental taxes are used interchangeably in the literature. Taxes are payable by pollutants or the end users of environmental products or on goods that emit pollutants. Taylor, Jaccard and Olewiler (1999) explained that environmental tax policy is a mechanism used to address environmentally damaging emissions and effluents. When environmentally damaging goods and services do not include environmental restoration cost (tax), it will result in over consumption of these goods and services. This will have a negative impact on future generations. The introduction of environmental taxation will have a ripple impact on the economy and allows firms and households to alter behavior and technology in order to minimize their tax liability (Taylor, Jaccard and Olewiler 1999). The notion that government should levy environmental tax to address

environmental issues has gained prominence over the last decade. The Government has noted that it would be difficult to determine the correct cost price that would accurately match the estimated value of environmental damages. The following sub-section explores small medium enterprises in terms of the challenges they face.

2.3 CHALLENGES FACED BY SMALL MEDIUM ENTERPRISES

In the Organization for Economic Cooperation and Development countries, small medium enterprises play a vital role in terms of economic growth and job creation. Small to medium enterprises in OCED countries account for 95% of business enterprise in operations and also account for 60% to 70% of the employment market (Organisation For Economic Co-Operation And Development 2007).

Many large businesses downsize and outsource work, thus strengthening the salience of the role small medium enterprises play in the economy and job market. In SA, small to medium and micro enterprises play a crucial role in resolving the issue of job creation and economic growth. Over the years the growth in employment by small medium enterprises has exceeded the growth point with contributions to GDP potential, as a job creator in this sector of the economy (Organisation For Economic Co-Operation And Development 2007).

Small medium enterprises face major threats as they lack financing, have poor management/business skills, low productivity and responses to regulatory burden. Since small medium enterprises play a significant role in the economy of many countries, governments now place emphasis on the development of the SME sector to promote growth. Post-apartheid South Africa has a high unemployment rate, with about 24, 5% of the country economically active population being unemployed. A study by Fatoki and Odeyemi (2010) found that to resolve the high unemployment rate, there is a need for the creation of small businesses and that SME's, have the power to absorb the unemployed population. Herrington *et al.* (2003) stated that the creation of new SME's will play a significant role in resolving South Africa's developmental issues. The

economic prosperity will be governed by the creation and sustainability of new small medium enterprises.

2.4 THE IMPACT OF SMALL BUSINESSES ON THE ENVIRONMENT

Small medium enterprises can no longer avoid their commitment to environmental and financial performance. The issue of climate change poses a major threat to SME's, given that SME's when compared to large enterprises are not well equipped and lack financial resource in terms of meeting the requirements of a clean and green economy (Schroeder, Burch and Rayner 2013).

Since SME's lack time, resources and environmental expertise, they do not have the capacity to resolve environmental issues. The actions implemented by SME's in terms of recycling and environmental policy changes, to go green have yet to be successful. SME's have distinctive features that may cause barriers in terms of the application of environmental measures and cause the absence of environmental awareness and expertise. This will result in small medium enterprises failing to integrate environmental management decisions into business strategies (Merritt 1998). SMEs pose a huge threat to the environment due to their large numbers and cumulative effects on the environment. The impact of manufacturing SMEs is acknowledged, as they consume energy and natural resources, and generate waste and pollution economy (Organisation For Economic Co-Operation And Development 2007). Weerasiri and Zhengang (2012) concurred with findings from other relevant studies that there are major gaps between the attitudes of owners and managers towards environmental issues and their behavior. They also mentioned that pro-environmental attitudes are poor predictors of pro-environmental behavior. Research on small medium enterprises have supported these findings, as it has been reported that business owners are insufficiently motivated to adopt pro-environmental attitudes.

2.4.1 The role of small medium enterprises in addressing climate change

Two decades ago during the earth summit in Rio de Janeiro world leaders signed the first global treaty to address climate change issues. At the time nations and economy had just begun to understand the salience and effects of climate change. During the summit it was established that the private sector had a responsibility to meet the challenges of climate change (United Nations Global Compact *et al.* 2011). One of the major findings of the earth summit in Rio, was that to address climate change, responsibility could not rest solely with the government, as government needed to partner with business, to counter the impact of a changing climate. According to several writers (Friedman, Miles and Adams 2000; Revell and Blackburn 2007; Webster and Ayatakshi 2011), SMEs have the impression that they do not need to deliberate climate change as it is not a major concern and therefore do not implement any low-carbon or going green strategies. However going green strategies are considered, if they are an energy-intensive business or wish to present a clean and green image. Hence there are major concerns regarding the impact of environmental attitudes and behavior of small medium enterprises. Although SMEs have the understanding that they should become more environmentally aware, they are motivated primarily by financial concerns. However they have come under increased pressure recently, to consider their stance towards environmental issues from the government, supply chain, trade associations and customers.

2.5 INCOME TAX AND SME'S

Engelschalk (2007) asserted that small businesses are one of the most difficult groups to regulate in terms of the tax system. In most developing countries small businesses function in the informal rather than in the formal economy. Ramusetheli (2011) stated that South African small businesses, find complying with the tax laws to be a constraint on their growth. Compliance cost has a greater negative influence on small businesses compared to larger

businesses, and compliance cost liability appears to be rising over time.

Junpath (2014) explained that taxation is deliberated as a high regulatory cost and has a negative impact on small-scale entrepreneurs. It is therefore expected that micro-enterprises are not inclined to enter the formal economy as the mandatory requirement that needs to be met, is the tax system. Hence because small-scale entrepreneurs fail to enter the formal sector, there will be a loss to the economy and state revenue, since small-scale entrepreneurs trade on a cash basis scheme, therefore they don't have a 'paper trail', thus making it difficult for SARS to enforce compliance.

Junpath (2014) highlighted the principal drawbacks of being registered for tax in his study as follows:

- A substantial portion of SMEs alleged that the current tax levies are too high and if they met the tax burden, it would consequently have a negative effect on business returns and prospective growth and success.
- Owners identified that the cost of compliance would be very challenging and beyond the scope of their business to meet. The cost related with record keeping and employing professionals was a lot to deal with and the compilation and filing of the tax returns.
- Owners were of the opinion that if they registered for tax, their actions would impact negatively on their business. They felt that if they registered the following could be potential complications viz. prosecution for past non-compliance, threat of unwarranted scrutiny and intervention by SARS and the threat of having to deal with possibly corrupt tax officials.
- Owners also assumed that tax compliance was of concern, as proceeds collected by the government could be misused or abused. Van Schalkwyk (2013) stated that most small businesses are faced with tax

compliance burdens. Several studies (Chamberlain and Smith 2006); Killian et al. 2007; Smulders and Naidoo 2013) are aligned with that of Van Schalkwyk (2013) which found that the government has to identify and implement new tax relief initiatives, to address some of the tax compliance burdens faced by small businesses.

2.6 THE ROLE AND SALIENCE OF GREEN TAXATION AND INCENTIVES

2.6.1 The concepts of green taxes and incentives

Van Stolk *et al.* (2006) wrote that the initiatives of green tax policy were to apportion the cost of pollution or the cost of the externality of economic activity to the polluter. Hence, it was a vital tool in encouraging business and individuals to internalize external costs. Specific green taxes and green tax systems are being considered and used in many countries globally. Naturvårdsverket (2004) explained that green taxes have had a beneficial influence on the pockets of all taxpayers, although the shift in the tax burden was budget-neutral. The reason for this is that the advantage of tax reductions has been almost entirely confined to consumers. Kosonen and Nicodème (2009) indicated that green tax transformations could also be seen as part of wider tax reforms that aim at shifting the tax burden. The revenues collected from environmental taxation could be used for the advancement of the environment or the economy. The government could then allocate part of tax revenues, solely for environmental purposes, such as funding eco-efficiency or eco-innovation ventures.

2.6.2 General effectiveness of green tax instruments

Ashiabor's (2005: 295) study found that economic mechanisms are beneficial in limiting pollution, especially mechanisms such as fiscal incentives and tax instruments. He also identified favorable fiscal policy mechanisms, such as tax incentives, tax subsidies, tax credits and grants, as being the principal instruments utilized to in remedy issues of fuel security and environmental

protection since the 1970s (Ashiabor 2005). Environmentally-related taxes and charges have the capacity to resolve certain environmental apprehensions more proficiently than traditional regulatory approaches (Republic of South Africa. National Treasury 2006). According to Cargill (2012) market based instruments are known to be the best cost effective methods to accomplish environmental goals. Bierbaum and Friedman (1992) agreed that market-based approaches, such as carbon taxes or marketable permits, can be helpful in decreasing emissions in the electricity producing sector. According to Niesing (2012: 16) government legislature on its own, cannot reduce the demand for energy and energy prices and incentives have a significant role to play. There is no one-size-fits-all government method to successfully form a green economy and often an amalgamation of policy instruments, which might include tax instruments, is necessary to reduce emissions (Bierbaum and Friedman 1992; Republic of South Africa. National Treasury 2006; Niesing 2012; Nteo 2013). According to Winkler (2005: 31) studies have indicated that an integration of policy instruments is likely to be the most effective way in achieving environmental and economic benefits (Wiser, Hamrin and Wingate 2002: 3).

When considering the efficiency of tax incentives specifically, certain researchers regard them as effective, but only when used in combination with other instruments (Clement *et al.* 2005: 25). Although there are mixed opinions regarding the use and effectiveness of tax incentives, they still steer much of the tax policy in both developing and developed countries (Calitz, Wallace and Burrows 2013: 3).

Green taxes incentives can be effective in preventing climate change. These tax principles are to increase revenue and decrease pollution and improve the circumstances of societies and lessen the effects of global warming (Anjum 2008).

2.6.3 Importance of SME's using green taxation and incentives

Environmental challenges have burdened governments to find methods to reduce environmental damage, whilst having little or no impact on economic growth. Governments have a variety of implements on hand, such as regulations, information programs, innovation policies, environmental subsidies and environmental taxes (Organisation For Economic Co-Operation and Development 2007). Taxes specifically form a crucial part of this strategy. Environmental taxes have many benefits, such as environmental effectiveness, economic efficiency, the ability to raise public revenue, and transparency. Also, environmental taxes have been effective in dealing with waste disposal, water pollution and air emissions. Irrespective of the policy area, the design of environmental taxes and political economy deliberations in their application, are salient factors in terms of their overall success (Organisation For Economic Co-Operation And Development 2007).

2.7 OVERVIEW OF GREEN TAXATION AND INCENTIVES AROUND THE WORLD

Numerous countries have begun to levy environmental taxes. These frameworks have been established by the International Energy Agency (IEA), the Organisation for Economic Cooperation and Development (OECD) and the European Commission (Vermeend, van der Ploeg and Timmer 2008). According to the OECD, the chief revenue from environmental taxes consists of taxes derived from automotive fuels and taxes on light fuel oils. Over the past decade European countries have been operationalizing and re-defining their green tax mechanisms. The other type of tax bases includes tariff on plastic bags, landfill waste, batteries, Sulphur dioxide and greenhouse gas emissions that are not energy related. These taxes are just as effective as energy-related taxes. European countries knowledge of such taxes has enabled their use effectively and eradicate exemptions with the use of increased taxes. Hence countries that have been executing environmental taxes have managed to reduce CO₂ emissions and the consumption of natural

resources (Milne 2007). Green Taxes involve both adverse and progressive incentive schemes.

The table below reflects what different nations have to date done to implement green taxes and green tax motivators

| OVERALL RANKING | | TAX INCENTIVES ONLY | | TAX PENALTIES ONLY | |
|-----------------|----|---------------------|----|--------------------|---------|
| US | 1 | US | 1 | France | 1 |
| Japan | 2 | South Korea | 2 | Japan | 2 |
| UK | 3 | China | 3 | UK | 3 |
| France | 4 | India | 4 | Finland | 4 |
| South Korea | 5 | UK | 5 | China | 5 |
| China | 6 | Canada | 6 | Ireland | 6 |
| Ireland | 7 | Netherlands | | Spain | |
| Netherlands | 8 | Japan | 8 | Australia | |
| Belgium | 9 | Ireland | 9 | Netherlands | 9 |
| India | 10 | Belgium | 10 | South Korea | |
| Spain | 11 | Singapore | 11 | South Africa | |
| Canada | | Brazil | 12 | Belgium | |
| South Africa | 13 | South Africa | | 14 | Germany |
| Singapore | 14 | Argentina | 14 | US | 14 |
| Finland | 15 | Spain | 15 | Singapore | 15 |
| Germany | | France | 16 | Canada | 16 |
| Australia | 17 | Germany | 17 | Russia | 17 |
| Brazil | 18 | Mexico | 18 | India | |
| Argentina | 19 | Australia | 19 | Argentina | 19 |
| Mexico | 20 | Russia | 20 | Brazil | |
| Russia | 21 | Finland | 21 | Mexico | |

Table 3: The table above ranks countries based on their implementation of green taxation policy Source: KPMG: 2013

2.7.1 Overview of green tax and incentives in South Africa

The South African government has offered environmental tax incentives to assist in resolving the adverse effects of climate change. Quoting Eskom and

Robertson, Harris (2012) stated that there are a number of taxes and charges that have already been announced in South Africa, to stimulate business and consumers to contemplate utilizing more environmentally friendly practices or becoming more energy-efficient. Currently there is an environmental levy charged on the production of electricity from non-renewable sources. The levy rate escalated from 2.5c per kWh to 3.5c per kWh on 1 July 2012. The revenue sourced from this levy is apportioned to sustainable development plans. Revenues from this levy will then be allocated to the rehabilitation of the roads used to haul coal to coal-fired power stations.

An environmental levy was also announced on incandescent light bulbs, so as to encourage energy efficiency and reduce electricity demand. The levy was fixed at a rate of R3 per light bulb in 2009. The State has also implemented a number of fuel and vehicle-related taxes aimed at promoting fuel efficiency and the sale of less carbon-emission-intensive vehicles. Currently fuel is taxed at a rate of R2.44 for 93 per octane per litre and R2.29 per litre of diesel (Harris 2012). New passenger cars are taxed at R75 per g/km for each g/km above 120 g/km. This emissions tax will also be extended to commercial vehicles, once agreed upon CO2 standards have been set.

2.7.2 Available green taxation and incentives for SMEs

The literature was reviewed and summarized into the following Figure to identify the accompanying green levy and motivators accessible for SMEs to use.

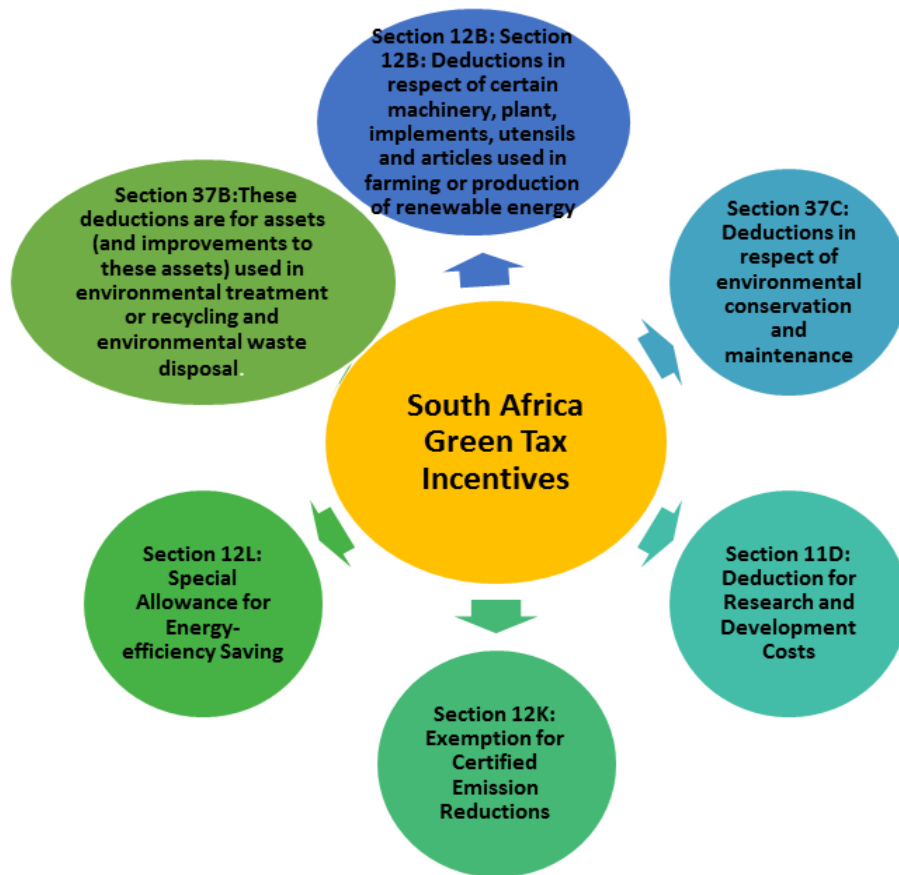


Figure 2: Current green tax incentives in South Africa

Each Section identified in the Figure reflects the following:

- Section 12B: These are deductions in respect of certain machinery, plants, implements, utensils and articles used in farming or production of renewable energy.
- Section 37C: Deductions in respect of environmental conservation and maintenance.
- “The non-capital costs incurred by a taxpayer to maintain and conserve land are deductible, if the expenditure is incurred in terms of a biodiversity agreement that has a period of 5 years which has been entered into by the taxpayer in terms of Section 44 of the National Environmental Management Biodiversity Act. Any

expenditure that exceeds the income of the taxpayer must not be deducted in the current year. It is rather seen as expenditure incurred in the following year of assessment. If the taxpayer is in breach of the agreements required above, the full deduction will be included as a recoupment in the taxpayers' income for the current year of assessment (South Africa, 1962c: section 37C (1) (a), 37C (4))" (Courtelis 2012: 62).

- Section 11D: Deduction for Research and Development Costs
- "This section of the Act identifies what research and development means in order to qualify for a deduction. It involves the systematic experimental activity of discovering scientific knowledge or inventing according to the Patents Act, or designing according to the Designs Act a computer program or improving existing knowledge. The deduction allowable is equal to the expenditure incurred by the taxpayer in the production of income and the carrying on of a trade. In addition to the deduction allowed, the taxpayer is allowed to deduct a further 50% of expenditure if certain further requirements of the various Acts are met (South Africa, 1962d: section 11D (1) (a), 11D (3))" (Courtelis 2012: 62).
- In this case environmental research conducted under section 11D can be classified as environmentally friendly and therefore qualifies for a deduction under this section.
- Section 12K: Exemption for certified emission reductions
- "An exemption from normal tax is given to taxpayers who have received an amount relating to a certified emission reduction in the continuance of a qualifying Clean Development Mechanism project carried out by those people. The amount is included in the taxpayers' gross income and then exempted. Therefore it is not taxed (South Africa, 1962e: section 12K (1))" (Courtelis 2012: 62).

- Section 12L: Special allowance for energy-efficiency savings

“For purposes of section 12L a concurrent benefit is allowed. This is an allowance granted by any sector of the government for participating in energy-efficiency savings. The taxpayer who claims the allowance must in the year of assessment and register the energy-efficiency savings which the allowance is claimable for with the South African National Energy Development Institute (hereafter SANEDI). A verification professional must be appointed to draft a report containing the energy-efficiency savings, which the taxpayer has claimed in the year of assessment. The certificate from SANEDI must be submitted and a claim for the allowance made from to SARS. It can be deduced that the type of allowance provided for under this section relates to large deductions based on the fact that there needs to be an eight-member committee in place by SANEDI which consists of industry specialists who evaluate all reports claimed by the taxpayer (South Africa. Department of Energy 2011). (Courtelis 2012: 62).

- Section 37 B: Deduction assets (and improvements to these assets) used in environmental treatment or recycling and environmental waste disposal. “This refers to deduction assets (and improvements to these assets) used in environmental treatment or recycling and environmental waste disposal. These plants must be used for air, water or solid waste treatment. It is required that these plants are set up for the purpose of protecting the environment” (Courtelis 2012: 62).

2.8 ENVIRONMENTAL TAXATION-COMPLIANCE AND SME’S

Ayatakshi (2012) cited multiple authors saying that environmental tax legislation relates to all organizations regardless of their size. Given the lack of resources to meet the demands of the environmental program such as

environmental taxation, one of the consequences is non-compliance behavior due to a lack of time. SMEs need to adapt to these challenges by altering their behavior. However, for this to happen SME resource limitations should be deliberated as the literature indicates that SMEs regularly have a positive environmental mind-set which does not decipher into positive environmental behavior, as the result of absence of finance, knowledge, manpower, time and source of information etc. In attempting to comprehend the issue of taxation on SMEs, the encumbrance of costs, administrative complexity and complexity of tax laws, must be taken into account as they all impact upon the compliance with taxation within SMEs. In understanding taxation compliance it is important to note that not all favor the standard neoclassical financial methodology, which focusses on the choice of revenue and profit enhancement, as being the key concern of businesses-taxpayers' resolutions, and not just about a cost-benefit calculation in determining whether or not to pay the taxes. It should also deal with the attitudes of the taxpayers.

In the neoclassical economic approach, tax compliance is perceived as an issue of economic rationality in individuals who consider the financial advantages or disadvantages linked to compliance or non-compliance. Ayatakshi (2012) described tax compliance as being based on the tax gap, which refers to the variance between the actual revenue collected and the amount that would be collected if there was 100% compliance. Hence compliance should be undertaken willingly rather than the fear of being penalized, for it to be full compliance (Ayatakshi 2012). In terms of environmental taxation, compliance can be seen as issues of tax evasion and tax avoidance. Tax avoidance refers to decreasing taxation by lawful means and tax evasion is trying to diminish tax liability by prohibited means. Environmental taxation focuses on behavior change in order to 'avoid' or 'lessen' the tax burden so the intention of environmental tax is that it should be avoided and environmental tax incentives should be utilized in order to lessen the tax burden of business (Ayatakshi 2012). Variations in behavior thus increase energy efficiency through capitalizing on newer technologies in

manufacturing SMEs, which could lead to tax avoidance. This is one of the objectives of environmental taxation. Ayatakshi (2012) stressed that the issue of compliance with taxation for smaller business is difficult due to tax regulations being difficult. Although it is expected that tax regulation is to be simplified in order to minimize tax compliance costs, simplification is not easy to achieve (Ayatakshi 2012). There are always concern about what is owed by taxpayers, as the government draws its own assessments and the tax payer does the same (Ayatakshi 2012). The complications for SMEs stems from the fact that tax laws fail to differentiate between SMEs and larger businesses. Tax regulations are drafted and applied to businesses, regardless of their size and this results in their ineffectiveness to cope with the difficulties of cost and other administrative burdens associated with compliance (Ayatakshi 2012). Therefore the convoluted nature of the tax law can influence the taxpayer to comply with the taxes. The consequences of increased costs alter the process of tax compliance by creating an undesirable influence on the taxpayers (Ayatakshi 2012). The cost of tax compliance is made up of two aspects in relation to businesses viz. the amount of money that taxpayers need to pay the government to meet their tax liabilities and the amount of administrative costs to comply (Ayatakshi 2012).

Hence tax compliance is a cost factor that cannot be underestimated especially in the case of financially constrained SMEs. Compliance costs influences the economic position of business by negatively impacting their business growth (Ayatakshi 2012). There are other adverse influences related with the costs of tax compliance which includes viz. absence of knowledge of SME owner-managers; absence of external help and also tax avoidance (Ayatakshi 2012). There are numerous changes in tax legislation that authorities have acknowledged as one of the complications for SMEs to comply with. The European Commission 2007 requested the need to distribute material, related to the tax system to allow SMEs to streamline their tax compliance burdens (Ayatakshi 2012).

Decreasing tax compliance costs would lessen the general tax burden on SMEs and would influence obedience to tax laws. Environmental taxation was developed with the objective of encouraging conversion in behavior, but when compliance costs are extreme and coupled with limited understanding and awareness, this taxation will fail to achieve its key objectives. However, in the context of environmental taxation, compliance is not the primary issue, instead behavior change and a consequential reduction in tax is the goal (Ayatakshi 2012).

2.9 IMPACT OF GREEN TAX INCENTIVES ON BUSINESS SUSTAINABILITY AND PROFITABILITY

Administration is now using tax incentives to motivate corporates towards going green. The government has increased the need to improve and expand tax credits, incentives and grant programs to assist companies in producing energy from renewable sources and to inspire businesses to “go green.” Many of these tax credits and incentives are intended to encourage business to foster renewable energy sustainable programs (Thornton 2010). Tax incentives are one of the most salient forms of incentives to promote beneficial practices. They are suitable primarily for green building developments, since they can be offered for specific levels of green certification and for both short- and long-term goals. One study found in the building sector, that the implementation of green tax incentives had positive impacts on sustainability and profitability (American Institute of Architects 2014). Shortt (2012) explained that in addition, firms that participate in environmental initiatives may evade future fines, crises, and liabilities. The reduction of waste associated with green activity can decrease costs and increase profitability. Tax subsidies are an imperative factor in corporate environmental investment decisions.

2.10 FACTORS IMPACTING SME's USE OF ENVIRONMENTAL POLICIES IN TERMS OF GREEN TAXATION AND INCENTIVES

The literature reviewed indicated that SME's face considerable difficulties with regards to the utilization of environmental policies viz. green taxation and impetuses. SMEs frequently indicate that keeping abreast with environmental requirements is difficult, especially in respect of understanding which prerequisites relate to their own individual setting (Mazur 2012). Securing direction and counsel and disclosing what they needed to do, in abiding with given regulations is challenging (Mazur 2012). They felt that they are not supported enough and there is the expectation that they can adapt to the same levels of paperwork and duties that bigger organizations can meet (Mazur 2012). Organizations for the most part express support for a client centered relationship amidst regulators with the chief objective being compliance, rather than enforcement. Enhanced data for regulated entities have been reliably recognized as the most critical component for diminishing the administrative burden on businesses (Mazur 2012).

The Organisation For Economic Co-Operation And Development (2007) argued that SMEs consist of the most vulnerable segment of the regulated community. Their compliance susceptibility originates from a few components, including an absence of resources which is heightened by higher compliance costs and poor access to funding; the lack of awareness of regulatory commitments and environmental impacts, and of technological solutions for their environmental issues; poor reconciliation of environmental administration actions into essential business doings; and an absence of presentation to public investigation.

Most importantly SMEs however appear unfamiliar about legislation that regulates their activities or don't comprehend what is needed. The expansion of laws or numerous amendments to enhance them are therefore challenging to comprehend in terms of what compliance involves. Inaccessible and incomprehensible regulation especially influences small business compliance

rates. Numerous studies demonstrate that small business cannot keep up with the volume of regulations developed by various government authorities. A key element influencing the compliance conduct of SMEs is their constrained competence level and their ability to embrace methods of environmentally sustainable development (Organisation For Economic Co-Operation And Development 2007).

Numerous SMEs do not have data about current managerial and technical solutions that may help them improve environmental performance. They experience the negative impact on their business due to the lack of administrative and specialized skills and human resources to perform certain tasks, particularly if these assignments are expected to be outside of the SMEs core business. Additionally they have limited budgetary resources to participate in management and technological solutions that could assist their operations in becoming environmentally sustainable. Finally, SMEs are considerably less attentive to their image, as a positive environmental resident rather than a large enterprise (Organisation For Economic Co-Operation And Development 2007).

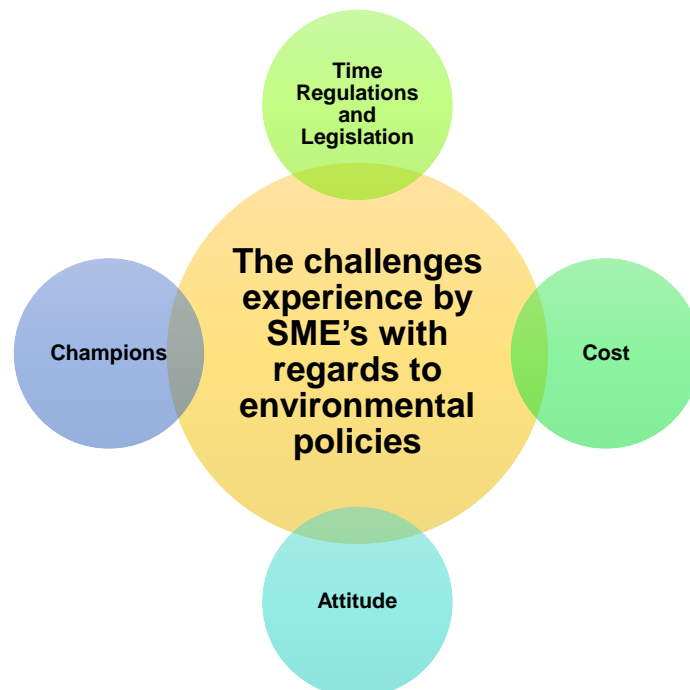


Figure 3: The challenges experience by SME's with regards to environmental policies

Herren (2010: 6) clarified that economic instruments, for example, emissions trading are difficult to develop and execute for SMEs. This is due to the concern of monitoring and implementing such permits where there are countless different polluters (Gunningham 2002a). Although it was felt that SMEs have a reasonable inclination for tax-based incentives (Gunningham 2002a), for example tax motivators, such as the Enhanced Capital Allowances (ECA) “are not justifiable for business to consider as the initial investment to apply for these allowance are too expensive for business to meet (Herren 2010: 6). By hiding most of the environmental externalities, “in the cost of products and services, ensures that businesses are aware that environmental taxes allows for sustainability” (Herren 2010: 6). Environmental taxes, for example, the landfill tax have been unhelpful in enhancing eco-efficiency efficiency, due to the costs involved in recycling and reusing material. Measures such as recycling and waste collection fees are often seen as laborious and financially difficult (Herren 2010).

Herren (2010) stated that SMEs do not support direct regulations. However they tend to view direct legislative action as the best way, to guarantee that organizations change their overview towards environmental issues (Rutherford, Blackburn and Spence 2000). In an investigation of regulatory compliance employment and environmental regulations of SMEs, Herren (2010) found that on account of environmental regulations the SMEs studied, referred to components of cost such as, intricacy of the regulations as being obstructions to compliance. SMEs in Britain expressed dissatisfaction despite considering environmental regulations to be preferred over employment regulations. However they voiced concern about the vagueness of the dialect used as part of environmental regulations (Herren 2010). Often, policy-makers in Britain have emphasized voluntary initiatives to encourage environmental transformation in SMEs. Voluntary programs are however inappropriate substitutes for government intervention (Herren 2010).

Herren (2010) noted that legislation is the crucial motivator for environmental

action. Legislation has been identified as an important factor because there are consequences for non-compliance. Studies conducted found that most SME owner-managers remain unaware of the degree to which environmental legislation impacts on their business. Whilst legislation is a driving force for environmental action, often difficulties arise due to inconsistent and poorly imposed legislation due to the high costs of implementation and SMEs focusing only on legislation due to their negative environmental practices as a result of penalties being sanctioned on them (Herren 2010) .

Several research studies have discovered that an absence of information is the impediment to implementing environmental practices inside SMEs. In one investigation of 220 small firm owner-managers, about 33% of the sample, referred to absence of information as a hindrance to environmental reform, and around 57% needed more information on how their business could help nature. Two research studies indicated low eco-literacy and the absence of comprehension or proficiency about laws, environmental administration, and best practices as obstructions. When confronted with environmental regulations, a few organizations, especially in the UK restaurant industry, experienced difficulties, in understanding regulations or did not see how regulations affected their business time.

Herren (2010) said that SMEs referred to the lack of time as an issue for going green. A study conducted found that around 53% of organizations reviewed indicated an absence of staff time, as a limitation for implementing environmental measures. Another study established that there are major obstacles to corporate social obligation which included time and resources and few workers (Jenkins 2006). An investigation of designers and developers in the UK also unearthed time and effort as constraining components, especially when the organizations had just a couple staff members who work extended working hours at a development site.

2.10.1 Regulations and Legislation

Herren (2010: 8) quoted several research studies which indicated that regulations or legislation created complications and prevent achieving environmental practices. Two studies discovered that voluntary approaches to environmental regulation have been inadequate. One of the studies identified that deliberate voluntary standards can be successful when implemented due to personal values or when external demand to comply occurs. Herren (2010: 8) noted that the issues preventing progression of environmental practices for SMEs is the absence of awareness about environmental regulations. Numerous organizations have not seen legislation as being significant to their business. A study conducted on restaurant owners in the UK identified that restaurant owners indicated an absence of information about new or overhauled regulations made by government. In addition it discovered a deficiency of legal regulations specific to environmental practices in restaurants and more lawful regulations on nourishment cleanliness. The volume and complexity of legislation, however, prevented most from being aware of environmental regulations.

2.10.2 Cost

Herren and Hadley (2010:10) reported that many studies found that financial concerns and elevated taxes rates, compel businesses to employ environmental practices, which have resulted in a negative impact on SMEs. Prior studies of SMEs identified that a high percentage of businesses would be environmental friendly, if business costs declined. The study also identified that increasing the cost to implement environmental practices would be detrimental and would have adverse impacts.

2.10.3 Attitudes

Herren (2010: 11) pointed out the attitudes of SME owners and managers play a diverse role in the application of environmental practices. He said that a few organizations have accepted that their operations have an insignificant effect

on the environment, whilst others accept that they have to act ethically. Businesses have differing views regarding whether consumer satisfaction would be enhanced by good environmental practice. There was the additional view with regards to whether environmental enhancements could provide businesses with a competitive edge. A few organizations expressed reservation regarding making environmental enhancements and did not see them as gaining a competitive advantage in the business market.

2.10.4 Business owners as champions

Herren (2010) stated that many authors believed that a pledge towards environmental improvements could only be accomplished in SMEs, if the owner or manager drives this. The owner or manager is the champion of actions and can impact the values of the business. Accordingly, business management responsibility is a vital component in achieving good environmental practices. Research studies conducted on SME's found that a relationship existed between the time spent on environmental issues and a dedicated environmental manager. In most organizations without an environmental manager, the executive level staff are responsible for environmental issues by default, because of a lack of resources to hire dedicated staff, and because they are responsible for legal environmental compliance.

2.11 SUCCESS FACTORS FOR GREEN TAXES

There has been a considerable international effort to reduce countries carbon foot print and greenhouse gases. However new occurrences of climate change issues persist. The Organization for Economic Cooperation and Development stated that member countries must still assist and promote in designing carbon reducing campaigns that will help developing countries to undertake emission reducing activities (Organisation for Economic Co-operation and Development 2012). Such campaigns incorporate the development and transfer of environmentally friendly technologies, policies and various economy-wide packages and policy instruments, and the identification of all potential issues

and factors that could contribute technically or economically to greenhouse gases reduction. One of the potential solutions is the introduction and implementation of green taxes. This section therefore categorizes factors that are vital for the accomplishment of green taxes in developed and developing countries (Maphosa 2013: 79).



Figure 4: The success factor to improve green taxes

2.11.1 Policy design

Maphosa (2013: 79) stated that there is a need for environmental measures like green taxes. In first and third world countries the general view is that business have restricted input in government decisions making process. There is great difficulty in terms of business opposing government officials that are presiding over matters related to green taxes. However if business has a political ally with government officials that are presiding over matters that are related to green taxes, this will result in green taxes favoring business that has this relationship. Hence the business fraternity will rally against government if they attempt to sanction polices that are unfavorable (Heine, Norregaard and Parry 2012).

2.11.2 Application across the board

Several researchers (Association of Chartered Certified Accountants 2009; Muller and Mendelsohn 2009; Blackman, Osakwe and Alpizar 2010; Lewis 2012) identified environmental tax to be an effective tool in decreasing, the carbon foot print and limit the effects of climate change. They also acknowledged that the amount of tax levied against a polluter should be equivalent to the environmental damages that the polluter creates. They also established that the tax should be proportionally levied. Hence businesses need to buy in and support the fact that green taxes have been introduced to help curb the impact of climate change, and that green tax initiatives are within the boundaries of reducing climate change. Their study also identified that even though businesses support green tax initiatives, there are still some businesses that have apprehension toward green tax policy. If businesses are forced to comply with green tax legislation, this will result in businesses leaving the country and relocating to countries where the green tax policies are more relaxed.

2.11.3 Consultation

Maphosa (2013: 80) stated that the reactions towards green taxes globally has

been met with mixed reactions (Tax Policy Center 2007). There has been a great deal of skepticism towards third world countries recognizing green tax mechanisms as a means to achieve a neo-liberal economic model, which obscures sustainable development. Many 3rd world countries are aware and have indicated that they will not be intimidated by 1st world countries to reduce their carbon footprint (Hoyng, Kloosterhof and Macpherson 2010). Hence the Association of Chartered Certified Accountants has indicated that administrators need to negotiate and consult extensively before they decide on policy with regards to implementing green tax legislation.

Consultation should occur at all stages of policy creation and application. Moreover consultation should encompass tax professionals, businesses and other key stakeholders (Association of Chartered Certified Accountants 2009).

2.11.4 Measurement and analysis of results

Economically, green taxes are recognized as an important factor in measuring and reducing pollution. Green tax incentives are more favored compared to other regulations and environmental subsidies (Avi-Yonah and Uhlmann 2009). However, this economic perception may overlook the political aspects with regard to the use of green taxes. If the government view remains unconsidered then viable policies will not be sanctioned. The economic view of green tax incentives focuses on their technical design and does not consider political attractiveness and feasibility. Thus there is a huge need to thoroughly and regularly analyze green tax results. They should also be prepared to amend or reverse the green policies in cases where they are seen to have politically negative effects (Maphosa 2013: 80).

2.11.5 Raising awareness

Maphosa (2013: 81) described awareness as a vital factor when considering green taxes. If government creates awareness of green taxes through active campaigns it will result in business and citizens reducing their negative attitude towards green taxes and realizing its economic benefits. Undertaking the

responsibility of the green tax stance, results in an improved chance of being perceived as rational by stakeholders. The Association of Chartered Certified Accountants (2009) explained that fairness and equity are crucial drivers among citizen and politicians, when environmental taxes are levied against business and when benefits are evident, they change their behavior. Hence there is an urgent need to create awareness with regards to green taxes and to establish their resolution and reimbursements (Association of Chartered Certified Accountants 2009).

2.11.6 Participatory approach

According to the Organisation for Economic Co-operation and Development (2012) in order to promote the green economy every nation has to promote dialogue. Negotiations and discussions needs to start within each country and has to include politicians, business and civil society. If everyone is included in the discussion, it will allow for individuals to understand and participate in the greening of the environment. Clear dialogue will allow business and society to be keen participants in their own environmental policy engagements, rather than mere unreceptive beneficiaries.

The Department of Environment Affairs (2013) suggested that since all people contribute to environmental pollution, there is a need to include everyone to help contribute towards identifying and developing of green economy and environmental taxes. There is a need for rules to be set in place in terms of the level of involvement of business and citizens towards environmental decision-making processes and in the implementation of environmental programs. The Department of Environment Affairs confirms that if all sectors are involved in environmental protection change will occur.

2.11.7 Clear allocation of authority and responsibilities

According to Cock (2001) South Africa environmental taxes have been challenged by poor administration. According to the DB Climate Change Advisors *et al.* (2012) there is a dire need for allocation of power to various

levels of society with regards to green tax. There is also a need for natural resource governance in respect of the realization of a pollution free environment and green economy. There is also a need for decentralization of administrative and governance, with lower levels of administration and local communities should be given legislative powers to enable them to enact by-laws as part of environmental conservation and land use planning. This will help citizens to integrate greening the environment into their day-to-day undertakings thereby leading the way towards the easy administration of green taxes.

2.11.8 Agreed values

McAuslan (1980) stated that effective legal frameworks are best established on the belief and value of the societies whose behavior they govern. Haring and Jagers (2013) noted that positive environmental conduct, including pro-environmental policy approval, has its origins from an individual's personal values. They declare that from the value-belief-norm (VBN) hypothesis, individual personal values will lead a person to accept and appreciate the general environmental principles. This will likewise impart a feeling of consciousness of environmental consequences so that people can link moral obligation with negative environmental conduct. From this understanding, it can be presumed that individuals' political trust, interpersonal trust, and individual qualities substantially affects their attitudes toward the tax on CO₂ discharges (Maphosa 2013: 82).

2.11.9 Accepted rules and institutions

Maphosa (2013) stated that the viable operative transaction of green taxes, requires that many countries put in place new institutional strategies. This will give direction to the improvement of green development strategies. In the case of developing countries, including South Africa, such a method will enable capacity building. It will also help in the integration of environmental issues with broader national development planning processes (Department of

Environment Affairs 2013). According to the OECD, such guidelines are instrumental in the foundation of governance structures and to guarantee harmony between different levels of government (Organisation for Economic Co-operation and Development 2012). This is vital as it will entrench green growth into policy processes.

Green taxes are not simply taxes on emissions only, but have other general environmental governance benefits. Specific rules should therefore be put in place to guide different tax levels and will include tax bases, revenue distribution, and tax collection (Deloitte 2009). Hence, to avoid unnecessary competition between nations, and to avoid opposition within individual countries, clear international rules and guidelines should be put in place. Association of Chartered Certified Accountants (2009) advised on the need for international rules and standards for green taxes. In this vein Deloitte (2009) emphasized that, in the absence of internationally uniform green taxes, competition from economies with lower (or no) green tax burdens will prevail thereby defeating the purpose of green taxes.

2.11.10 Negotiation processes when different views exist

Research by Maphosa (2013: 84) showed that instituting green taxes to groups which are less structured, can be less challenging. However, when such groups are well-structured (economic sectors like industries and business), the use of such taxes may be more difficult. According to Pigou (1920) there are diverse views that may require lengthy negotiations in order to accomplish set goals. DB Climate Change Advisors *et al.* (2012) noted that governments could find it difficult to accurately gauge the social cost in order to apply an equivalent tax on offending producer. Hence, there is a need for appropriate consultations between the stakeholders, so as to identify an agreement as to establish what should be assessed and examined (Heine, Norregaard and Parry 2012).

2.12 CONCLUSION

This chapter reviewed both international and local literature on the effectiveness of green tax instruments, the different types of green taxation and incentives around the world, the available green taxation and incentives for South African based SME's. Literature related to the challenges SME's have in terms of their economic role, the role of SME'S in addressing climate change, the impact of income tax on SME's was also reviewed. Aspects included in the review were environmental taxation-compliance of SME's, the impact of green tax incentives on business sustainability and profitability and the factors impacting SME's use of environmental policies in terms of green taxation and incentives. Chapter 3 will provide a discussion on the research methodology of the study.

CHAPTER THREE

RESEARCH METHODOLOGY

“What we are doing to the forests of the world is but a mirror reflection of what we are doing to ourselves and to one another.”

Mahatma Gandhi

3.1 INTRODUCTION

Business research is the ability to use scientific methods to search for the truth about business phenomena (Zikmund *et al.* 2013: 5). This chapter describes the research methodology used in this study. It describes the target population, sampling techniques, sample size; data collection and analysis procedure. It also covers the issues related to the validity of the instrument used in the study. The study proposed to explore the views of owners of manufacturing small medium enterprises towards green tax incentives. It is descriptive in nature and used a survey questionnaire to collect data.

3.2 RESEARCH METHODOLOGY

3.2.1 Research Design

Polit and Hungler (1991) described a research design as a blue print that is prepared in advance to assist in obtaining a result to a research problem. The research design helps the researcher to accomplish the intended objectives. Jankowicz (2005) supported this saying that a research design purposefully helps the researcher plan and identify effective methods for the investigation and collection of data, thus ensuring the accomplishment of the study objectives. According to Collis and Hussey (2003 : 13) a research design is

“the science (and art) of scheduling procedures for piloting studies so as to get the most valid findings.”

3.2.2 Quantitative research methodology

Trochim (2005) described quantitative research, as an objective procedure which is followed when investigating a phenomenon. The findings of the research are given numerical values and the researcher uses mathematical and statistical methods to assist in appraising the results. Leedy and Ormrod (2010) explained that quantitative research is the process of investigating theories by identifying and specifying hypotheses and gathering data to accept or repudiate these hypotheses. They added that the method is descriptive in nature and creates numerical data through survey research. Goddard and Melville (2001) further stated that quantitative research comprises of information or data in the form of numbers, thus allowing the researcher to measure or to quantify the variables under investigation.

Houser (2013) described descriptive research as a method of examination, by which the researcher attempts to identify what, why, who, or where. In this vein Malhotra (1999) wrote that descriptive research is decisive research, with the chief objective being to provide a distinctive and clear statement of the problem.

According to Fink and Kosecoff (2006) cross-sectional surveys are studies, which take place at a single point in time. These surveys are viewed as a snapshot of a group of people or organisations. Cross-sectional studies are inexpensive and are used most frequently in descriptive design in marketing research. Collis and Hussey (2003) added that cross-sectional studies are often used to investigate the economic characteristics of large numbers of people or organisations when there are constraints of time or resources.

The research design used in this study is a quantitative, cross-sectional and descriptive design. Quantitative research studies detect associations among variables that are measured numerically and use statistical techniques. It

regularly integrates controls to warrant validity of the data, as in an experimental design. It is imperative to make certain that questions are articulated clearly so that they are interpreted correctly. This methodology will use a census sampling procedure. The researcher is generally at a distance from those being researched, who are designated as respondents (Saunders, Lewis and Thornhill 2012) in quantitative studies. This study focused on exploring small medium enterprise owners' knowledge, awareness and attitudes towards the environment and environmental issues; their understanding of environmental taxation and green tax incentives in relation to their business. In cross-sectional studies, data is collected in order to answer the research question. The purpose of most cross sectional studies is to accumulate data once off and to ensure that the data is pertinent to finding answers to the research question (Sekaran and Bougie 2013), a single data collection instrument was used to investigate and address both issues. The survey questionnaire focussed on issues surrounding the research objectives set out in Chapter one. Sekaran and Bougie (2013) stated that the aim of a descriptive study is to depict occurrences and events. Descriptive studies are often designed to collect data that describe the characteristics of persons, events, or situations. This study sought to describe issues pertaining to the following questions: what type of green tax incentives are available to SMEs to implement?; what is the level of awareness of owners of SMEs to such incentives; what are the attitudes of owners of SMEs to these green tax incentives?; how would sustainability and profitability be impacted if SMEs elect to utilize green tax incentives and what effect would the introduction of other green tax incentives have on SMEs going green?

3.3 THE DATA

Data refers to evidence that the researcher gathers first hand through tools such as surveys. Secondary data refers to data that already exists, and was not collected by the researcher. Secondary data can be obtained from statistical bulletins, government publications, and data available from previous research. It is often beneficial to simultaneously gather both primary and

secondary data (Sekaran and Bougie 2013) this study used primary data as follows:

3.3.1 Primary data

Primary data was collected from questionnaires that were distributed to manufacturing SMEs in the Durban region. This was to establish:

- The level of awareness of owners of SMEs regarding green taxes;
- The attitudes of owners of SMEs to such green tax incentives;
- Whether sustainability and profitability would be improved if SMEs elected to utilize green tax incentives, and
- The effect of other green tax incentives on SMEs.

3.4 RESEARCH SETTING

The study was conducted with manufacturing SMEs in the greater region of eThekweni. The sample comprised of small medium enterprises, that was located in the greater eThekweni region and whose primary operating activity was manufacturing.

3.5 SAMPLE AND POPULATION

According to Saunder, Lewis and Thornhill (2003) the financial implications of a survey, made it difficult to examine the whole population. Diamantopoulos and Schlegelmilch (1997) further stated that a minimum sample size, has the capability to produce significant results.

The objectives and scope of a research study however are vital drivers in defining the target population to be examined. Blumberg, Cooper and Schindler (2008) wrote that the target population is the set of respondents who are pertinent and relevant to a particular research investigation. The target population is the comprehensive assembly of objectives or elements significant to the research project. They are relevant because they possess

the information the research project is designed to collect (Hair *et al.* 2003: 208). The target population for this study was 152 manufacturing SMEs, which was established from the data base received from the Durban Chamber of Commerce.

3.5.1 Sampling method and size

3.5.1.1 Census sampling

A census is an examination of all the individual components that make up the population (Zikmund 2003). In a census study, data is collected at a specified time from the entire population (Siniscalco and Auriat 2011). The researcher decided to examine the entire population of 152 manufacturing SMEs that were on the Durban of Chamber of Commerce, list. White and McBurney (2013) stated that a census study is advantageous in that it allows for feedback from the entire population. Its disadvantage however is that there is high possibility of participants declining to participate.

In this study the population and sample was the same. It included all manufacturing SMEs based in the Durban area that were on the Durban of Chamber Commerce list. This researcher was interested in exploring the views of owners with regards to aspects related to green tax incentives. It was intended that the owners answer the survey questionnaires that were distributed.

3.6 DATA COLLECTION

There are several data collection approaches that can be used when collecting data using a quantitative research design. It is however crucial to select an approach that allows collecting rich data that is significant to the objectives of the study.

In this study a questionnaire was deemed most appropriate. Questionnaires are generally used for descriptive or explanatory research (Sekaran and

Bougie 2013) it was therefore an appropriate method of data collection for this study.

3.6.1 The questionnaire

A questionnaire is a pre-formed written set of questions, on which respondents record their answer. It usually has closely defined alternatives. Questionnaires are an efficient data collection mechanism when the researcher knows exactly what is required and how to measure variables of interests.

Questionnaires can be administered personally, mailed to the respondents, or electronically distributed (Sekaran and Bougie 2013) Literature together with sections of survey instruments used in previous research studies formed the basis of the questionnaire used in the current study.

According to Hair *et al.* (2003) the questionnaire design, is the first step in several research steps that are interrelated. The questionnaire used in the study is presented in Appendix A, as the primary data collection tool for this study. It includes questions regarding small medium enterprise owners' awareness of green tax incentives, their attitudes towards green tax incentives, how sustainability and profitability is influenced if SMEs elected to utilize green tax incentive and what effect the introduction of other green tax incentives had on SMEs going green.

3.6.1.1 Data collection tool: questionnaire

The questionnaire comprised of eight sections and 85 questions. It used some open ended questions that allowed respondents to allow for open-ended responses. However there were more fixed type or close ended type questions.

There were also several Likert scale questions. It allowed for responses on a continuum from strongly disagree (1); disagree (2); neutral, (3) agree (4) and (5) strongly agree. The Likert scale is designed to examine how strongly

subjects agree or disagree with statements along a continuum of five points (Sekaran and Bougie 2010)

The respondents were allowed to remain anonymous and the letter of information indicated that participation was voluntary. The self-administered questionnaire consisted of eight parts as follows:

- Section 1: This focussed on demographic details of the sample. It also included questions pertaining to the type of ownership of the business.
- Section 2: focussed on exploring the level of knowledge, awareness and attitude of SME owners with regards to the environment and environmental issues.
- Section 3: focussed on identifying SME owners' awareness and attitudes towards the South African income tax system.
- Section 4: this focussed on aspects of environmental taxation. It dealt with businesses awareness of governments' environmental policy, environmental taxation and the purpose of environmental taxation
- Section 5: dealt with identifying the level of awareness of SME owners with regards to green tax incentives. Questions focussed on what SME owners thought of green taxation, their awareness of green tax incentives and their views on different government environmental tools.
- Section 6: focussed on the level of support for or against green taxation and attitudes with regard to application of green tax incentives.
- Section 7: focussed on the perceptions of SME owners with regards to business sustainability and profitability in relation to green tax incentives.
- Section 8: explored the implications of manufacturing SMEs going green.

3.6.2 The covering letter

A covering letter was attached to Appendix A. The letter informed the respondents of the nature and purpose of the research. The letter explained that if they chose to answer the survey, their identities would be kept anonymous and their responses confidential. They were also assured that the

answers they provided would be used for research purposes only. Other important information on available green tax incentives, together with what section was available in the Income Tax Act in term of green tax incentives was also provided in the letter of information and consent. Hence Appendix B consisted of a covering letter, with information pertaining to the study and a letter of consent.

3.6.3 Pilot study

Saunders, Lewis and Thornhill (2012) emphasized that questionnaires used to gather data need be to pilot tested. The pilot test is done to enhance the final version of the questionnaire so that respondents will have minimal problems in answering the questions. The pilot study also assists the researcher in ensuring face validity of the questionnaire.

A pilot study was conducted on the questionnaire before being finalised. The questionnaire was tested on owners of manufacturing small medium enterprises that did not fall within the sample population but that had the same characteristics of owners that comprised the sample population. This assisted in filtering and averting statements that were either ambiguous or confusing. It was also fundamental in improving the quality of the statements. Thus the pilot study allowed for an enhanced version of the survey questionnaire, which prevented ambiguities and uncertainties which could have arisen when respondents answered the survey questionnaire.

3.6.4 Reliability and validity of the study

Validity and reliability is discussed in the sub-sections that follow.

3.6.4.1 Validity

There are different aspects of validity that need to be considered during the research process.

Sekaran and Bougie (2010: 158) identified the following types of validity:

- Content validity highlights whether the survey encompasses items that are applicable to the domain of the measurement of interest
- Face validity refers to the fact that the items intended to measure a concept on the face of it, do look like as though they measure the concepts being investigated.
- Construct validity supports how well the result obtained from the use of the measurement fits the theories around which the test is designed,

Validity as described above was addressed in the current study.

3.6.4.2 Reliability

Reliability raises issues of whether the data collection methods and analytic processes would be able to replicate the same outcomes if they were repeated during a different inquiry or replicated by another researcher (Saunders, Lewis and Thornhill 2012: 192). Given that several of the scales used showed good reliability in other studies, reliability was to some degree achieved

3.6.6 Data collection procedure

Data collection proceeded after ethics approval was received from the Durban University of Technology Institutional Research And Ethics Committee. There are several ways to collect data for the purposes of a survey. This may include self-administering them, through the post or on-line.

One of the greatest concerns with regard to postal surveys is the possibility of an insufficient response rate. It also restricts the researcher from in terms of being available to answering possible queries. Hence a personal approach to distributing the surveys was adopted. Using the Durban Chamber of Commerce list, the researcher called every business on the list and set up a convenient time to meet the owner and discuss the study. All were willing to accommodate the researcher's visit.

Once the meeting to meet each owner was set up, the researcher visited the owner to explain the purpose and value of the study. The details in the letter of information was explained and the consent letter as well. A self-addressed

stamped envelope the researchers' details were also given to each owner, with the choice that they could also post the completed questionnaires back. Several owners agreed that the researcher return to collect it personally. Where this occurred the researcher negotiated when to collect the survey questionnaires. It ranged from between 1 to 2 weeks. Prior to collecting it a call was made to ascertain if it had been completed. After this process only 104 completed questionnaires were received through the mail of after negotiating to personally pick them up. After 3 months formal analysis began.

3.6.7 Data preparation

After receiving the questionnaires data was prepared to be coded and hence a categorization structure was set up before entry. This enabled inconsistencies and blank responses to be handled in some way (Sekaran and Bougie 2010).

3.6.8 Data entry

The data was inputted on to Microsoft Excel Spreadsheet which consisted of columns containing variable or question responses. Thereafter the data entry was undertaken using the computer software program SPSS statistical version 20.0 for data analysis.

3.7 QUANTITATIVE DATA ANALYSIS

Wegner (2010) wrote that data has no value in itself until all individual data values are collected, collated, summarised, analysed and presented. Only then does it become useful for decision-making. Sekaran and Bougie (2013) noted that data analysis and interpretation of results must be meaningfully done in relation to answering the objectives of the study.

3.7.1 Descriptive statistical analysis

McDaniel and Gates (2002) stated that descriptive statistics are regarded as effective means of summarising the characteristics of large sets of data. The analyst draws conclusion based on calculations done on the data and discloses findings based on the data characteristics. Wegner (2010) wrote that

that descriptive statistics condenses large volumes of data into a few summary measures.

According to Leedy and Ormrod (2005), the use of descriptive statistics may assist in the following ways: it can indicate the central point around which the data revolve; it may indicate how broadly the data are spread; and it may show the relationship of one kind of data to another kind of data.

Saunders, Lewis and Thornhill (2003) reported that a frequency is a numerical value which represents the total number of observations for a variable under study. In this study, descriptive statistics were employed for these purposes. Saunders, Lewis and Thornhill (2003) concurred with McDaniel and Gates (2002) and Leedy and Ormrod (2005) that descriptive statistics are the most useful techniques to present and review data in the form of tables, charts, graphs and other diagrammatic forms.

3.7.2 Inferential statistical analysis

Inferential statistics are used to draw inferences about a population from the sample (Zikmund *et al.* 2013). Inferential statistics are utilized to evaluate characteristics of the total population from sample data, or to test various hypotheses about relationships between different variables, thus allowing the researcher to assess the probability that an observed difference is not just a chance finding. Inferential statistics is about carrying out statistical tests that can show statistical significance (O'Leary 2004). According to Leedy and Ormrod (2005: 30) inferential statistics draw conclusions about a complete population by quantitative data collected from a sample. Inferential statistical analysis is used when ideas, hypotheses or predictions need to be tested. These were applied in the current study to ascertain relationships between variables.

3.7.3. Chi –square test

Hair *et al.* (2003: 263) stated that chi square tests are used to test the statistical significance between the frequency distribution of two or more groups. This test examines whether or not the observed data is distributed in the way one would expect it to. Chi-square testing uses nominal and ordinal data at usual level of significance of 0.05 or 0.01. Chi testing of independence determines if the variables being investigated are independent or related.

3.7.4 Factor analysis

Sekaran and Bougie (2010) described factor analysis as helping to reduce a vast number of variables to a meaningful, interpretable and manageable set of factors. Hair *et al.* (2003: 263) stated that factor analysis has the ability to reduce data and to identify a small number of factors that explain the most variance that is observed in a much larger number of variables.

Factor analysis is a statistical procedure with the essential outcome of data reduction. A typical use of factor analysis is in survey research, where a researcher wishes to represent a number of questions with a small number of hypothetical factors.

3.8 PRESENTATION OF QUANTITATIVE DATA

Quantitative findings were presented in the form of tables, graphs and bar charts.

The type of tables, cross tabulation and figures used in the study are briefly described below:

3.8.1 Tables

Tables in data analysis assist the researcher in exhibiting vast amount of information concisely and clearly; establish associations between variables; recognise deviations in formation; and condense the amount of discussion and interpretation in text (Grove, Burns and Gray 2012).

3.8.2 Cross- tabulation

Cross tabulation is regarded as one of the simplest methods of describing sets of relationships. Cross tabulation is a frequency distribution of responses on two or more set of variables. This means that one tabulates the responses for each of the group and compares those (Hair *et al.* 2003). In this study, the relationship of gender and attitude to green tax incentives, were investigated.

3.8.3 Graphs

In this study, bar graphs were used in the presentation of data. The bar graphs showcased findings horizontally and vertically.

3.9 ETHICAL CONSIDERATIONS

Welman, Kruger and Mitchell (2005) noted the importance of adhering to research ethics in the research processes (i.e. when recruiting, measuring and publishing). Ethical clearance was granted for this study by the Institutional Research and Ethics Committee of the Durban University of Technology (Ethics number: IREC 62/13). The researcher undertook to protect the rights of the respondents by ensuring that their identities were kept anonymous and participation was voluntary. They were fully informed of the benefits and risks of the study as well.

3.10 CONCLUSION

In this chapter the guiding research methodology was discussed. The data collection tool was described and procedures for data collection and analysis discussed. Attention was also given to the ethical considerations of the study. The next Chapter presents the data collected.

CHAPTER FOUR

ANALYSIS AND DISCUSSION OF FINDINGS

Saving our planet, lifting people out of poverty, advancing economic growth... these are one and the same fight. We must connect the dots between climate change, water scarcity, energy shortages, global health, food security and women's empowerment. Solutions to one problem must be solutions for all.

Ban Ki-moon

4.1 INTRODUCTION

This chapter presents the data collected from the survey and discusses the findings made. Data was collected by distributing survey questionnaires to manufacturing SME's in the EThekweni region of Kwa Zulu-Natal. The data collected was analysed with SPSS version 22.0. The data will be presented as descriptive statistics in the form of graphs, cross tabulations and other figures. Inferential techniques included the use of correlations and chi square test values; which were interpreted using the p-values.

The broad aim of this study was to investigate manufacturing small medium enterprise owners' attitudes towards and awareness of green tax incentives and to identify what impact these incentives have on their businesses' sustainability and profitability.

4.2 THE SAMPLE

Census sampling was used to select the sample. The sample consisted of manufacturing small medium enterprises SMEs, based in the greater Durban region in KwaZulu-Natal. The population consisted of 152 SMEs which was verified by the Durban Chamber of Commerce. In total 152 questionnaires were distributed and 104 were returned resulting in a response rate of 68, 42 %. Sekaran and Bougie (2010) stated that an entire population need not be surveyed, for data to be meaningful and hence the response rate, which was above 65 %, was acceptable for analysis to begin.

4.3 DATA ANALYSIS

4.3.1 The research instrument

The research instrument consisted of 82 items. It was divided into the 8 sections which explored the following aspects in relation to the objectives:

- 1 Demographic data
- 2 Level of knowledge, awareness and attitude of owners of SME's in regards of environment and environmental issues
- 3 Business owners' awareness and attitude in terms of South Africa income tax
- 4 Owners understanding of environmental taxation
- 5 Level of awareness of the owners to green tax incentives
- 6 Attitudes of the owners to green tax incentives
- 7 The perceptions of SME's owners with regard to business sustainability and profitability, if green tax incentives are used
- 8 Perceptions regarding the introduction of other green tax incentives and its implications for manufacturing SME's going green

SECTION 1

4.4. DEMOGRAPHIC DATA

In this section information pertaining to the age of the owners of the SME's, their highest educational qualification, the type of business they own and the number of years that the business has been in operation is presented.

4.4.1 Type of ownership

Figure 5 below indicates the graph based on the type of business in operation. The study reflects that 73 % of the respondents operate their business as a sole propriety or a private company. A further 12.5 % and 14.4 % of respondents operate their business as a partnership or close corporation respectively.

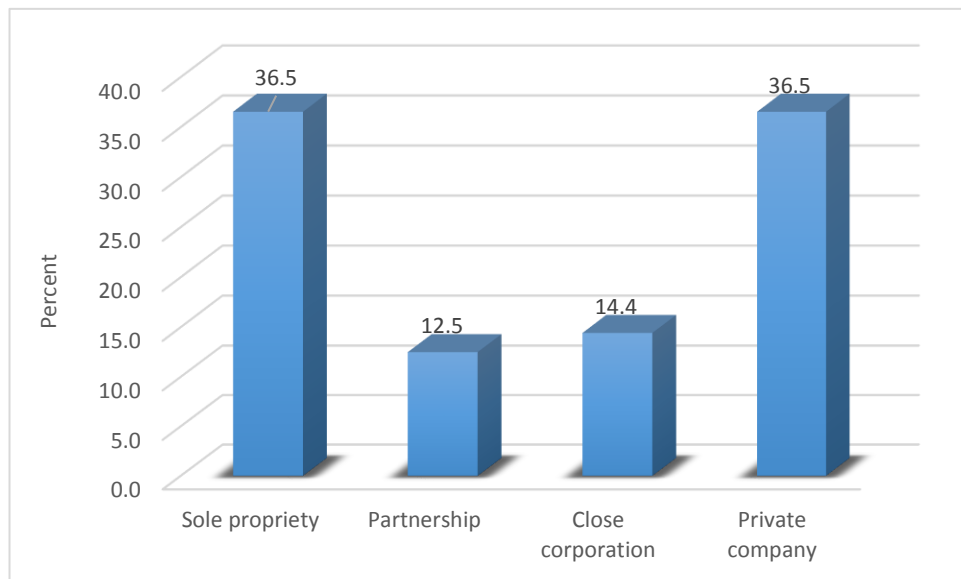


Figure 5: Type of business in operation

4.4.2 Years in operation

The number of years that the business has been operating is reflected in Figure 6. Almost a third (31.7%; n=33) of the sample, indicated that the business had been in operation, for about 12 to 17 years. A further two-thirds

indicated that it had been operative for more than 12 years. The latter was important as it indicates that these SME's have been in existence for a while, which suggests that the responses received were from owners who had rich experience and knowledge about the business world. More importantly they could contribute richly to the current research inquiry.

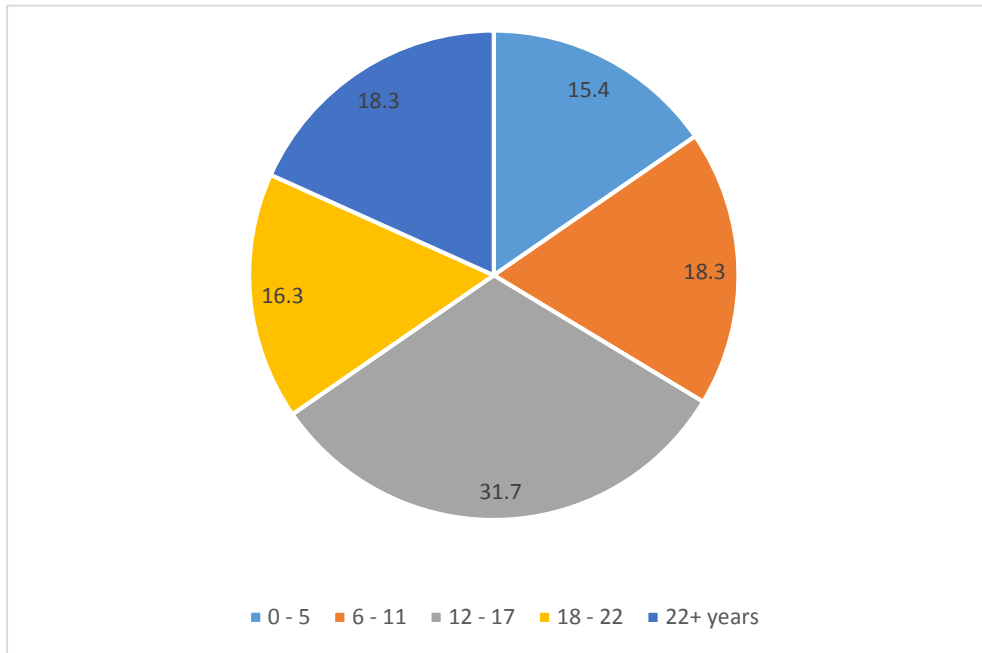


Figure 6: Years in operation of business

4.4.3 Age of respondents

Almost 38.5% (n=40) of the sample were in the age group between 31-40; 23.1% (n=24) were between 20-30 years of age; 18.3 % (n=19) were between 51-60, 16.3% (n=17) between 41-50 and 3.8% were 61 years and older. As reflected in Figure 7, most of the respondents are middle aged. This concurs with the number of years the SME's have been in operation.

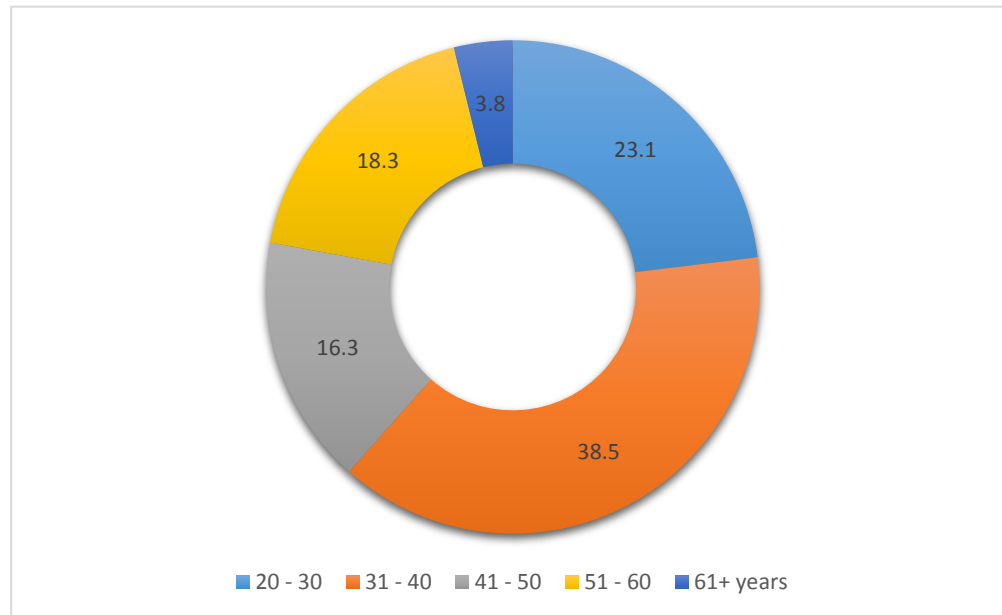


Figure 7: Age of the respondents

4.4.4 Qualifications of the respondents

As can be seen in Figure 8 below almost half of the sample have obtained a Senior Certificate (45.2%; n=47), which represents a secondary school qualification. The other half (43.3%; n=45) have a Diploma and 9.6% (n=10) have a Degree qualification. Only 1.9% (n=2) have a post-graduate qualification.

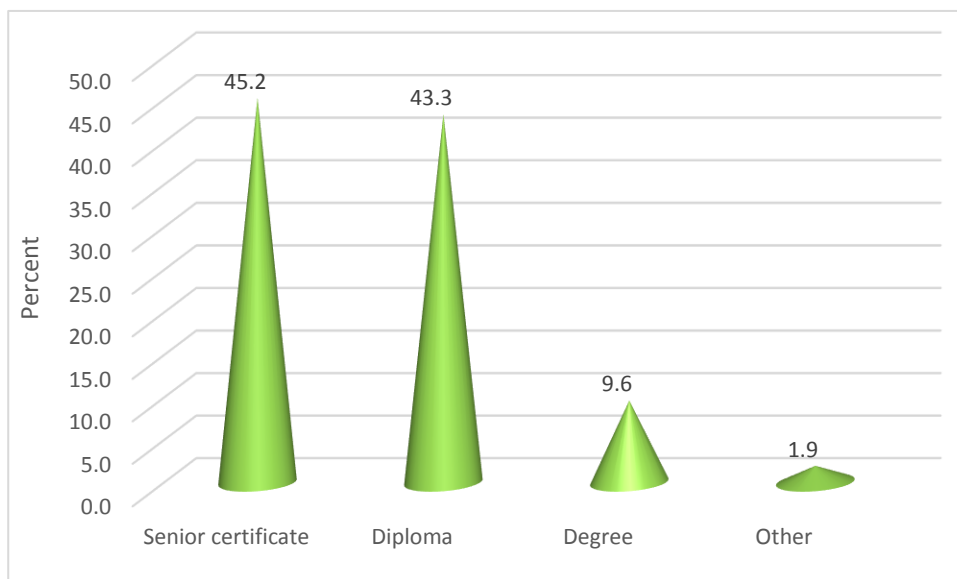


Figure 8: Qualification of the respondents

SECTION 2

4.5 AWARENESS OF AND ATTITUDE OF OWNERS TOWARDS ENVIRONMENTAL ISSUES

This section explores the views of respondents with regard to whether climate change is a challenge, for both themselves and their business. The following issues were explored:

4.5.1 Awareness of climate change and environmental issues

The entire sample 100% (n=104) indicated that they understood the concept of climate change. Respondents' level of awareness and attitude with regards to the environment and environmental issues was explored using a five point Likert type scale. The scale ranged from 1=strongly disagree to 5= strongly agree and included 8 positively worded statements. A mean score of 87.98% suggested that respondents were aware of the environment and environmental issues and were able to identify the impact the business has had on the environment and the role it needs to play in curbing the impact of climate change.

Figure 9 indicates a high level of agreement with the 8 statements on the Likert scale used. Respondents agreed that "climate change is a huge challenge to mankind" (98.08%; n=102) and that "efficient energy use is important for my business" (93.27%; n=97). The respondents also agreed that that "my business has a responsibility to help manage the impact of climate change" (92.31%; n=96). Climate change however was low on their priority (79, 81%; n=83) in comparison to the economic meltdown being experienced, as they were more concerned with the economic viability of the business as opposed to climate change resolution. Respondents also indicated that small medium enterprises were major contributors to pollution viz. "SMEs are responsible for more than 70% of the total pollution" (77.88%; n=81).

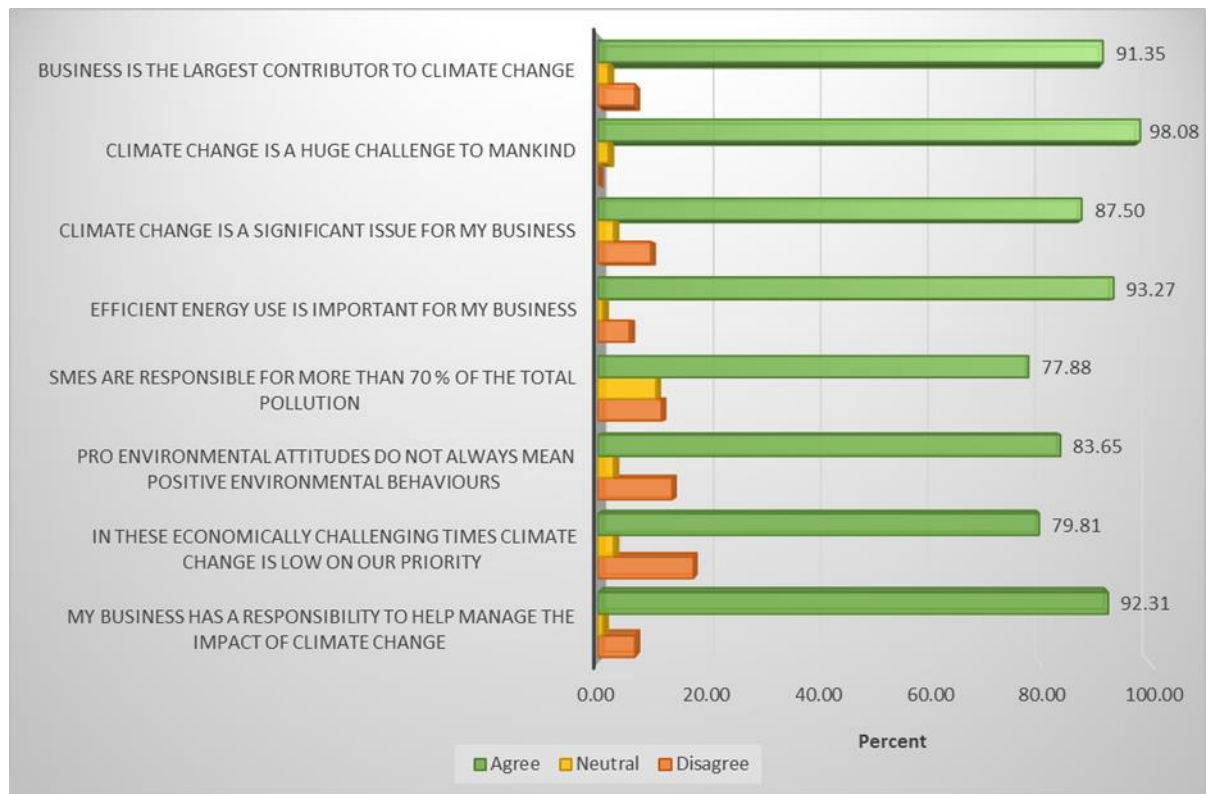


Figure 9: Attitudes of SMS owners to environmental issues

SECTION 3

4.6. OWNERS' ATTITUDES TOWARDS SOUTH AFRICA INCOME TAX

This section presents data in respect of the owners' awareness and attitude towards the South Africa income tax system. This section investigates the following aspects in terms of respondents' awareness and attitude of income tax, how they feel about the income tax system as well as their compliance with same.

4.6.1 Views with regard to the income tax system

This section explored the views of the sample with regards to how fair the South African tax system is. A 3 point Likert scale ranging from 1=unfair to 3=fair, that used 3 positively worded statements was used.

There were mixed feelings with regards to the levels of disagreement and agreement with the statements. This suggests that respondents were undecided about the current tax system impacting other business and individuals. Almost half of the sample (48 %; n=50), indicated dissatisfaction with the current system impacting other business and individuals, whilst 45% (n=47) thought that the current system was fairly impacting other business and individuals. Asked about how the current tax system personally impacted them and whether it was fair or unfair to them personally, about half of the sample (52.9%; n=55) expressed that the income tax system was unfair while 42.3 % (n=44) stated that the system was fair. About 6.7 % (n=6) indicated that it was neither fair nor unfair. The data also reflected that there is an inadequate manner in which the income tax burden is distributed across taxpayers as 48.1 % (n=50) respondents, indicated that the tax system was impartial.

The data reflects that the sample was divided with regards to whether they considered the income tax system in South Africa to be fair or unfair.

| Statement | Unfair | Neither unfair nor fair | Fair |
|--|--------|-------------------------|-------|
| For the average taxpayer, I think that the income tax system is ... | 48.1% | 6.7% | 45.2% |
| For me personally, I believe that the income tax system is... | 52.9% | 4.8% | 42.3% |
| Generally, I believe that the manner in which the income tax burden is distributed across taxpayers is ... | 48.1% | 8.7% | 43.3% |

Table 4: Views regarding income tax and the income tax system

4.6.2 Views regarding income tax and the income tax system

This section focuses on presenting data related to how respondents felt about the income tax system. See Table 5 for a list of the statements. A Likert scale was used to ascertain their views towards the taxation system, with responses ranging from strongly disagree=1 to strongly agree=5.

Eighty nine percent (n=93) of the respondents, have the impression that there are a large number of businesses that are profiting by operating illegal businesses and under reporting their profits. Sixty seven percent (n=70) of the sample, have believed that the tax system is not well designed. Seventy one percent (n=74) of the respondents felt that the income tax rules are inconsistently applied. A majority of the sample however (93.3%; n=97) felt that it is a moral obligation to pay their taxes and 92 % (n=96) of the sample felt that paying tax was a responsibility, that should be willingly accepted by all tax payers.

| Statement | Disagree | Neutral | Agree |
|---|----------|---------|-------|
| I feel that the income tax is a fair tax | | | |
| There is high number of business profiting by operating illegal business and under reporting of profits | 9.6% | 1.0% | 89.4% |
| The tax system is well designed | 67.3% | 2.9% | 29.8% |
| I feel rules are applied inconsistently | 27.9% | 1.0% | 71.2% |
| I feel a moral obligation to pay my tax | 6.7% | 0.0% | 93.3% |
| Paying tax is a responsibility that should be willingly accepted by all tax payers. | 6.7% | 1.0% | 92.3% |

Table 5: Views about income taxes and the income tax system

4.6.3 The tax compliance of business owners

A Likert type scale was used to determine the tax compliance of respondents. It ranged from strongly disagree=1, to strongly agree=5 and focussed on 7 positively worded statements.

The data revealed that 87.5% (n=91) of the respondents always filed their tax returns without the assistance of a tax expert or accountant. About 85 % (n=88) of the sample, indicated that the tax system was easy to understand i.e. rate of tax, filing and paying dates.

A majority of the participants (93.3%; n=97) of the respondents indicated that they have not exaggerated the amount of deductions in their income tax return. About 90 % (n=93) of the respondents were also absolutely confident about

the legitimacy of the claims in their income tax return. More than 97 % (n=100) of respondents indicated that they have declared all their income earned for tax purposes. A majority of the sample (97.1%; n=101) believed that it is everyone’s responsibility to pay the correct amount of tax and almost the entire sample (98.1 %; n=102) felt it was every persons responsibility to comply with the tax laws.

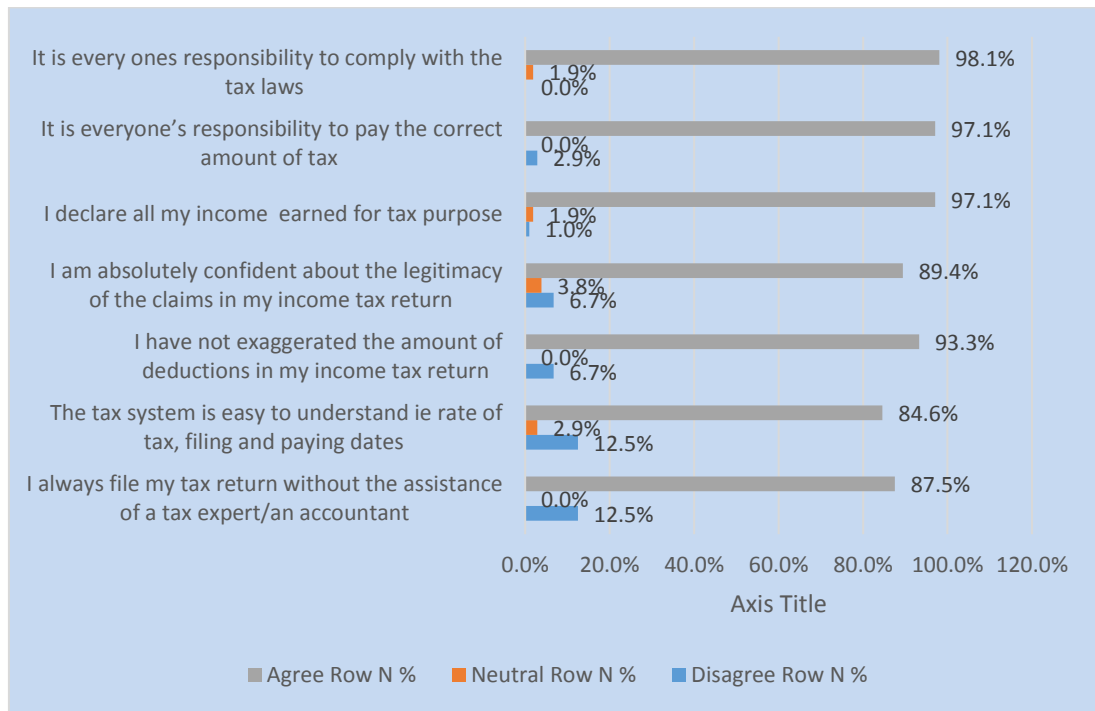


Figure 10: The tax compliance of business owners

SECTION 4

4.7 OWNERS’ UNDERSTANDING OF ENVIRONMENTAL TAXATION

This section presents data in respect of identifying owners understanding of environmental taxation

4.7.1 Awareness of South African environmental policy

This section describes respondents' views with regard to South Africa's environmental policy. Table 6 below indicates that almost 82.7% (n=86) of the sample have knowledge of the South African governments environmental policy. About 87.5 % (n=91) understood what environmental taxation was.

| Statement | Yes | No |
|--|-------|-------|
| Are you aware of South Africa government's environmental policy? | 82.7% | 17.3% |
| Are you aware of the term environmental taxation? | 87.5% | 12.5% |

Table 6: Awareness of the South African governments' environmental policy

4.7.2 Views on environmental taxation

Twenty six percent (n=27) of the sample agreed that environmental tax was regarded as tax to encourage good environmental behaviour.

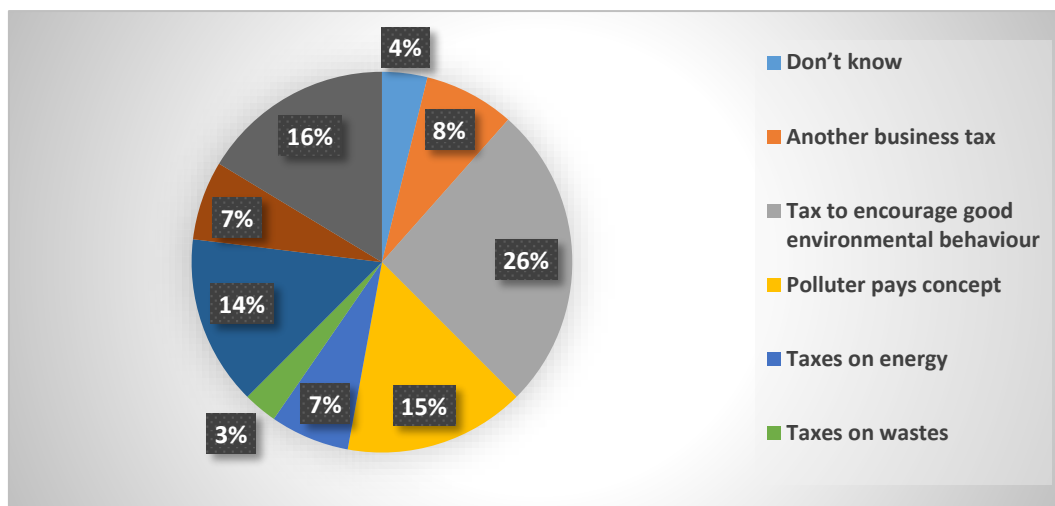


Figure 11: Views on environmental taxation

4.7.3 Views regarding the purpose of environmental taxation

About half of the sample (50 %; n=52) agreed that the purpose of environmental taxation is just another business tax for government to raise revenue. The data indicates that respondents have mixed views about environmental tax which may impact on them applying for green tax incentives.

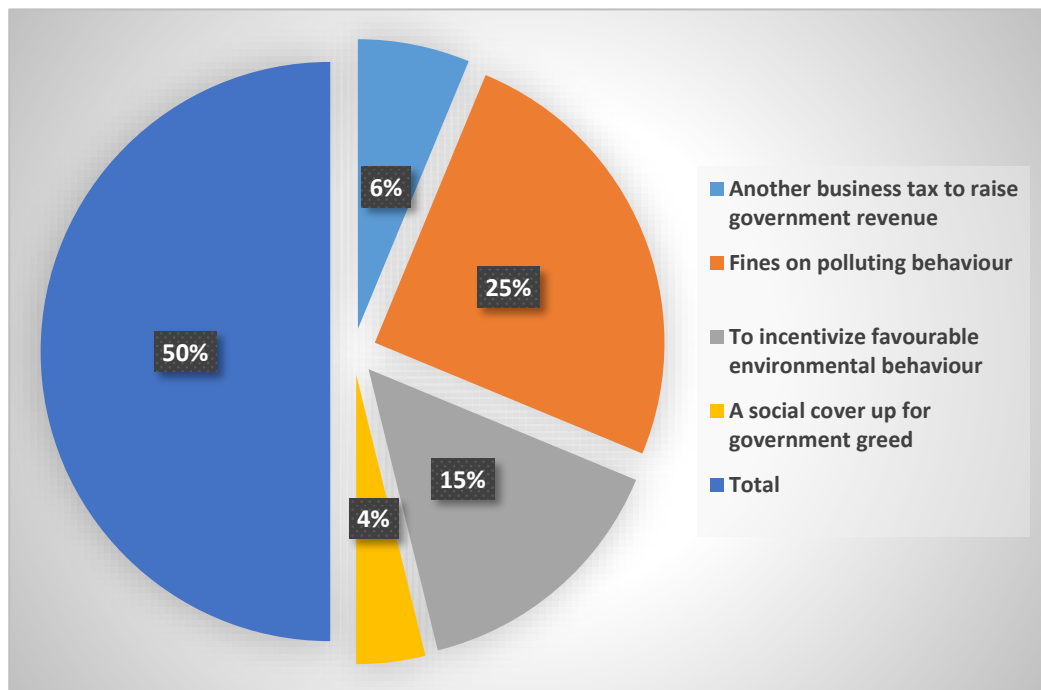


Figure 12: Views regarding the purpose of environmental taxation

SECTION 5

4.8 OWNERS' AWARENESS OF GREEN TAX INCENTIVES

This section in the questionnaire dealt with the owners' level of awareness with regards to green tax incentives. The questions focussed on their views regarding green taxation, their awareness of green tax incentives and the effectiveness of different government environmental tools.

4.8.1 Views regarding environmental tax incentives

A Likert type scale was used to determine owners' attitudes towards and problems with regards to environmental taxation. Figure 13 below reflects findings made.

Eighty percent of the sample (n=83) agreed that “the government needs to offer more incentives to support investment in environmentally beneficial activities, processes & new technologies.” Just more than 76% (n=79) disagreed that the current tax incentives were not appealing for business to change their behaviour. Also 70% (n=73) disagreed in terms of it been not evidently obvious in establishing what are the current tax incentives that exist and how to apply for them. Seventy seven percent (n=80) of reported and agreed that meeting criteria required by current tax incentives is too onerous to make the incentives worth applying for. The study also found that more than 80.8% (n=85) of the respondents agreed that the government needed to offer more incentives to support investment in environmentally beneficial activities, processes and new technologies.

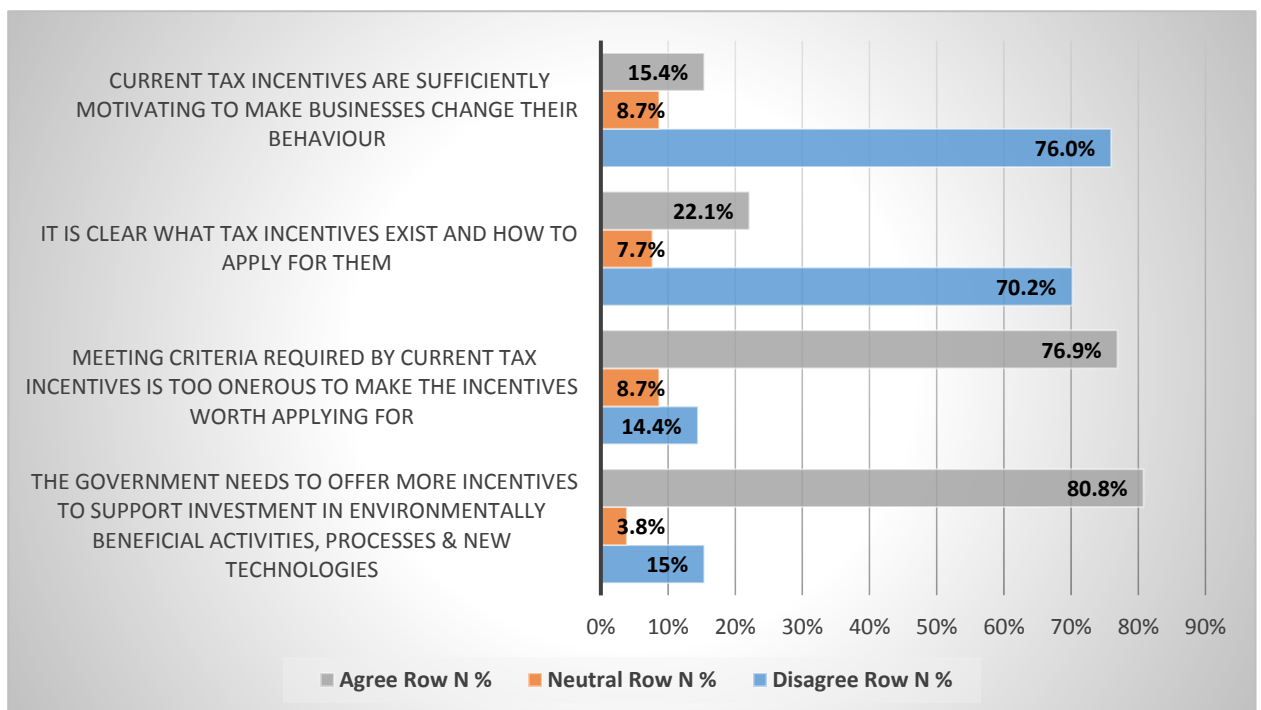


Figure 13: Views regarding environmental tax incentives

4.8.2 Owners' awareness of green tax incentives

A Likert type scale was also used to determine awareness of green tax incentives. The results are presented in the Table below. As can be seen 92.3% (n=96) of the respondents agreed that the government should offer tax incentives. Almost 99.0% (n=103) of respondents felt that the government should encourage environmentally friendly business practices, by means of tax incentives. Also 76.0% (n=79) of the sample disagreed that the government had done well to communicate green tax initiatives. They also disagreed (76.0%; n=79) that the current tax incentives were motivating enough to make businesses change their behaviour.

| Statement | Disagree | Neutral | Agree |
|--|----------|---------|-------|
| If government offered tax incentives, a business like ours would significantly accelerate its green investment | 4.8% | 2.9% | 92.3% |
| The government should encourage environmentally friendly business practices by means of tax incentives | 1.0% | 0.0% | 99.0% |
| I am aware of green tax as government has done well to communicate this initiative | 76.0% | 8.7% | 15.4% |
| Current tax incentives are sufficiently motivating to make businesses change their behaviour | 76.0% | 8.7% | 15.4% |
| My business will support carbon taxes as a means of encouraging more efficient use of energy and reducing carbon emission | 5.8% | 3.8% | 90.4% |
| I am in favour of green tax even if it increases the price of the products that my business uses for manufacturing | 76.0% | 8.7% | 15.4% |
| I would make long-term business decisions or investments, taking government's existing environmental tax and regulation framework into account | 5.8% | 8.7% | 85.6% |
| The government needs to offer more incentives to encourage companies to invest in environmentally beneficial practices | 3.8% | 0.0% | 96.2% |

Table 7: Views regarding green tax

Ninety percent (n=94) of the respondents indicated they would support carbon taxes as a means of encouraging more efficient use of energy and reducing carbon emission. Seventy six percent of the sample (n=79) were not in favour of green tax even, if it increased the price of the products that their business used for manufacturing. About 85.6% (n= 89) indicated they would make long-term business decisions or investments, taking the government's existing

environmental tax and regulation framework into account. An overwhelming majority (96.2 %; n=100) felt the government needed to offer more incentives to encourage companies to invest in environmentally beneficial practices.

4.8.3 The effectiveness of different government environmental tools

Views regarding the effectiveness of governmental tools that could be utilized in business to encourage them to reduce their environmental impact were also investigated. Responses ranged from strongly effective, to not at all. The results are presented in Figure 14 below.

Almost 57% (n=59) indicated that tax incentives were a much favoured method for business to reduce their environmental impact. About 46.2 % (n=48) of the sample felt that tax was not a very effective tool to accomplish their environmental goal. About 57.7% (n=60) agreed that regulations would not assist business to accomplish their environmental goals.

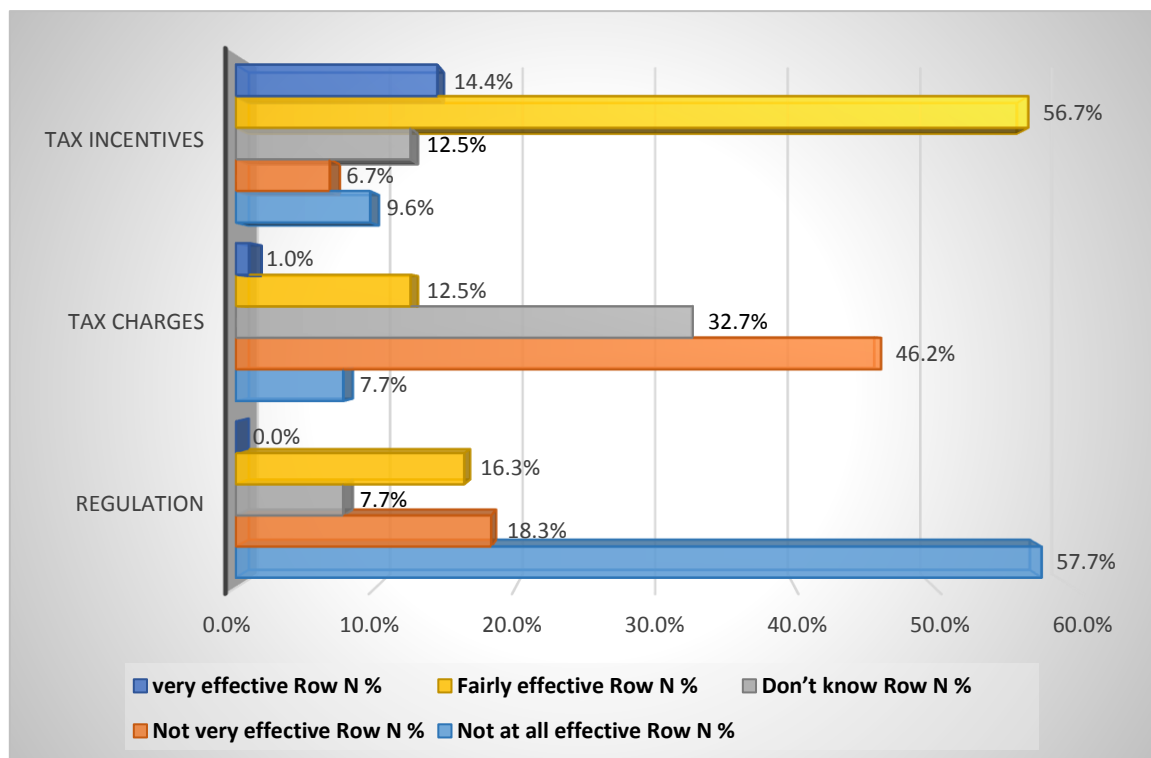


Figure 14: The effectiveness of different government environmental tools

SECTION 6

4.9 ATTITUDES OF SME OWNER'S WITH REGARDS TO GREEN TAX INCENTIVES

This section identifies attitudes of SME owner's with regards to green tax incentives.

4.9.1 Effects of business concepts on business decisions

This section of the questionnaire asked respondents to indicate how certain business concepts had impacted on decision making in their business. They ranked their responses as being not influential on business decisions =1, to influential on business decisions=3.

It was evident that cost saving and competitive advantage (81.7%; n=85) was very influential on decision making, whilst complying with legislation and regulation and obtaining tax incentives had no influences on decision making (73.1%; n=76).

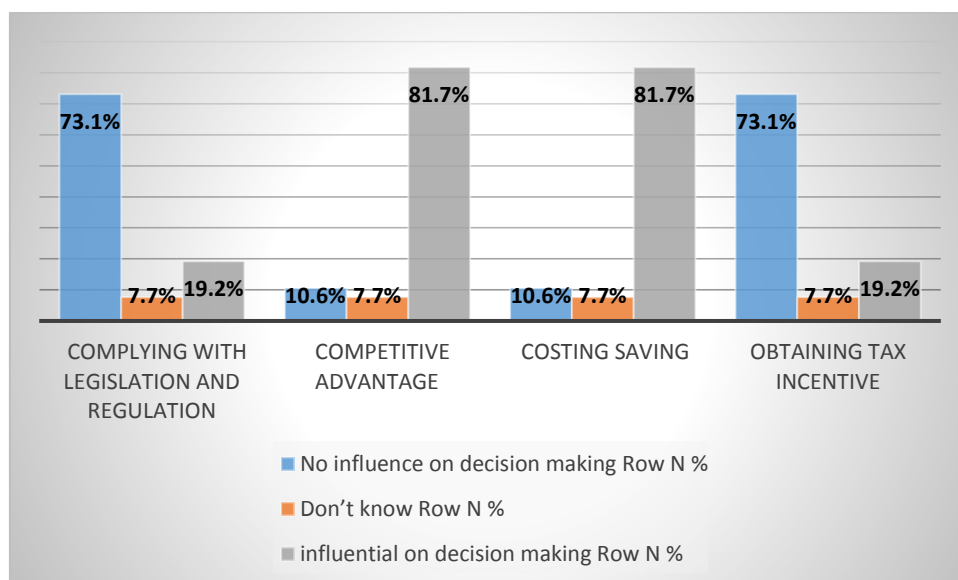


Figure 15: Relationship between business concepts and business decisions

4.9.2 Level of support for green taxation

Respondents were asked to indicate whether they would support or oppose green tax. A majority of the respondents supported the concept of green tax (98.1 %; n=102). Almost 99 % (n=103) of the respondents expressed that they would support green taxes if the money would be utilized for reduce carbon dioxide emissions initiatives.

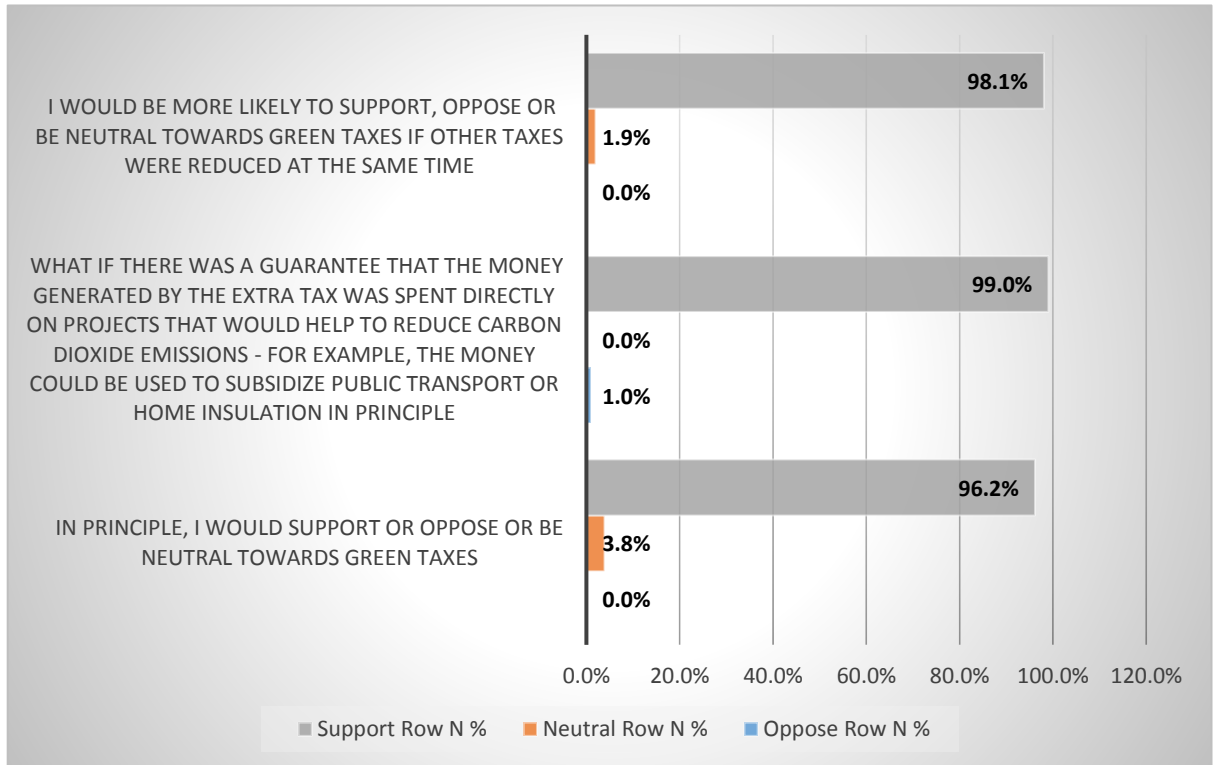


Figure 16: Level of support for green taxation

4.9.3 Attitudes with regard to the application of green tax incentives

A Likert type scale was used to determine the attitude of respondents with regard to the application of green tax incentives. About 95 % (n=99) of the respondents expressed difficulty in terms of establishing what current green tax incentives were available. After looking at the letter of information business owners agreed that prevailing environmental taxes, regulations and incentive are ineffective (92.3%; n=96). The data also established that 83.5% (n=87) of

the respondents were afraid to apply for green tax incentives as they might be investigated by SARS. Almost 85.6% (n=89) indicated that they would hire tax specialists to counsel them on the application and utilisation of green tax incentives. Respondents were also of the opinion that government does not engage effectively with them with regard to environmental policies (84.6%; n=88). Respondents agreed that compliance with current tax incentives was too difficult to identify and merit applying for them (91.3%; n=98).

| Statement | Disagree | Neutral | Agree |
|--|----------|---------|-------|
| There is difficulty in establishing what incentives exist | 3.8% | 1.0% | 95.2% |
| The existing environmental taxes, regulations and incentives are ineffective | 1.0% | 6.7% | 92.3% |
| I am afraid to apply for green tax incentives due to being investigated by SARS | 10.7% | 5.8% | 83.5% |
| I would hire a specialist tax consultant to advise me on the application and utilisation of green tax incentives | 8.7% | 5.8% | 85.6% |
| Government does not engaged effectively with business in terms of environmental policies | 13.5% | 1.9% | 84.6% |
| Compliance with current tax incentives is too onerous to merit applying for them | 5.8% | 2.9% | 91.3% |

Table 8: Attitudes with regard to application of green tax incentives

SECTION 7

4.10 VIEWS OF OWNERS WITH REGARD TO BUSINESS SUSTAINABILITY AND PROFITABILITY, IF GREEN TAX INCENTIVES WERE USED

This section identifies attitudes of SME owner's with regards to green tax incentives.

4.10.1 Perceptions regarding business sustainability and profitability if green tax incentives were used

This section focusses on data regarding owners' attitudes towards business sustainability and profitability, if green tax incentives were used. Respondents were found to be willing to implement green tax incentives, as they create

business sustainability (92.3%; n=96). A majority of respondents (91.3%; n=95) felt that business profitability would improve if green tax incentives were utilized. Respondents also agreed that green tax incentives could create new sustainable business practices.

However 87.5% (n=91) of the sample felt that they could not become environmentally friendly, until they were more profitable. Respondents also felt that they could advance their firm’s profitability by executing greener business practices. More than 88 % (n= 92) agreed that implementing green tax incentives resulted in cost saving.

| Statement | Disagree | Neutral | Agree |
|---|----------|---------|-------|
| I am willing to implement green tax incentives as they create business sustainability | 1.9% | 5.8% | 92.3% |
| I am willing to implement green tax incentives as they improve business profitability | 1.0% | 7.7% | 91.3% |
| I use green tax incentives to create new sustainable business practices | 4.8% | 5.8% | 89.4% |
| Our business cannot be more environmentally friendly until we become more profitable | 6.7% | 5.8% | 87.5% |
| I can improve my firms’ profitability by implementing greener business practices | 8.7% | 5.8% | 85.6% |
| Implementing green tax incentives results in cost saving | 3.8% | 7.7% | 88.5% |

Table 9: Owners views regarding business sustainability and profitability, if green tax incentives are used

SECTION 8

4.11 VIEWS REGARDING INTRODUCING GREEN TAX INCENTIVES AND ITS IMPLICATIONS FOR MANUFACTURING SME’S GOING GREEN

This section related to views on introducing other green tax incentives and its implications for manufacturing SMEs going green. The following issues were covered.

4.11.1 Views regarding other green tax incentives and its implications for manufacturing SME's going green

The results are presented in Table 10 below. Respondents approved government decision, in trying to encourage them to go green by rewarding green incentives (86.5%; n=90). More than 90 % (n=94) of respondents expressed that the current South African tax system should include more incentives to allow business to become carbon neutral. "There should be an introduction of new green tax incentives that are tailored for small manufacturing enterprises. A majority of the respondents felt that the current green tax incentives do not cater for them. About 95.2% (n=99) agreed that there should be an introduction of new green tax incentives that are tailored for SME's. They further agreed that there should be an energy efficient tax deduction for energy efficient business (88.5%; n=92). Respondents also felt that there should be tax exemption and deductions to encourage taxpayers to buy alternative and fuel-efficient vehicles (95, 2%; n=99).

More than 90 % (n=94) agreed there should be the creation of income tax deductions per tree for every indigenous tree planted. They also agreed that SME's that produce green products should be zero-rated in terms of VAT (93.3%; n=97).

There was also strong consensus with regards to the following: businesses can take a bonus tax depreciation, for qualified equipment used in reuse and recycling processes (96.2%; n=100); fringe benefits could be offered to employees for green initiatives, e.g. riding a bicycle to work, only if granted full tax deduction (91.3%; n=95); There should be a different tax penalty on negative environmental activities based on the size of an enterprise. (88.5%; n=92) and there should be tax subsidies and grants made available to renewable energy producers (97.1 %; n=101).

| Statement | Disagree | Neutral | Agree |
|---|----------|---------|-------|
| Government is trying to encourage business to go green by rewarding business with green incentives | 7.7% | 5.8% | 86.5% |
| The South African tax system should include incentives for business to become carbon neutral | 5.8% | 1.9% | 92.3% |
| There should be an introduction of new green tax incentives that are tailored for SME's | 1.9% | 2.9% | 95.2% |
| There should be an energy efficient tax deduction for energy efficient businesses | 10.6% | 1.0% | 88.5% |
| There should be tax exemption and deductions to encourage taxpayers to buy alternative and fuel-efficient vehicles | 4.8% | 0.0% | 95.2% |
| There should be the creation of income tax deduction per tree for every indigenous tree planted | 4.8% | 4.8% | 90.4% |
| SME's that produce green products should be zero- rated in terms of VAT | 5.8% | 1.0% | 93.3% |
| Businesses can take a bonus tax depreciation for qualified equipment used in reuse and recycling processes | 3.8% | 0.0% | 96.2% |
| I would offer fringe benefits to employees for green initiatives, eg riding bicycle to work, only if I'm granted full tax deduction | 4.8% | 3.8% | 91.3% |
| There should be a different tax penalty on negative environmental activities based on the size of an enterprise for environmental | 8.7% | 2.9% | 88.5% |
| There should be tax subsidies and grants made available to renewable energy producers | 2.9% | 0.0% | 97.1% |

Table 10: Views regarding introducing other green tax incentives

4.11.2 Views regarding government tax and regulatory frameworks

A Likert type scale was used to identify what work was needed to be done to in relation to government tax and regulatory frameworks. It was found that 76.0% (n=79) of the sample believed that there was ineffective engagement with businesses over environmental policy and tax. They also felt that there was insufficient priority given to business issues regarding climate change (76.0%; n=79).

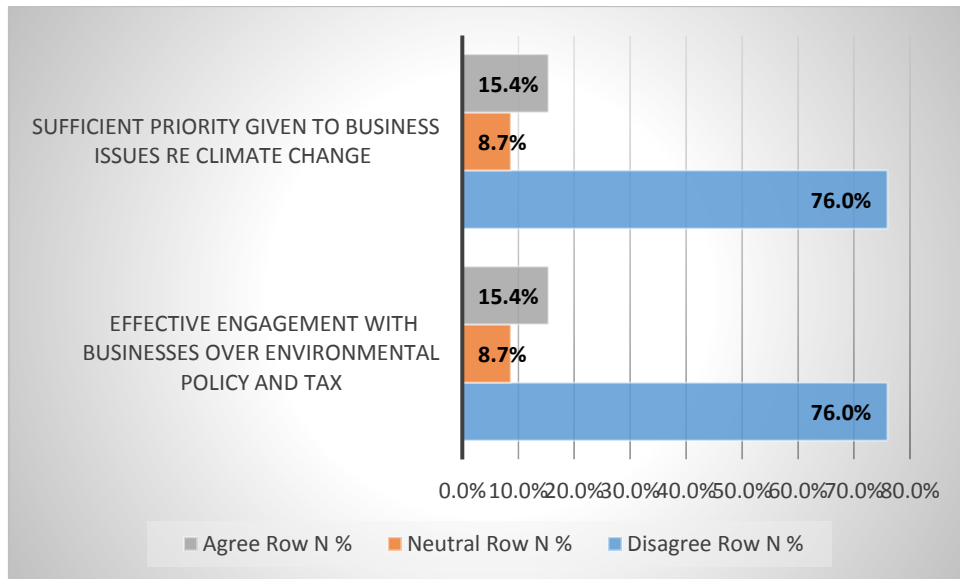


Figure 17: Views regarding government tax and regulatory frameworks

4.11.3 Extent to which monies generated from environmental taxes and regulation should be directed to ‘green’ projects

Respondents were asked: “how important do you feel it is for business to see that monies raised from environmental taxes and regulation are being/would be directed to ‘green’/environmental projects and initiatives?”

Seventy nine percent (n=82) felt that it was very important that financial gains from environmental taxes and regulation needed to be utilized on ‘green’/environmental projects and initiatives and a further 7, 7% (n=8) thought it to be fairly important.

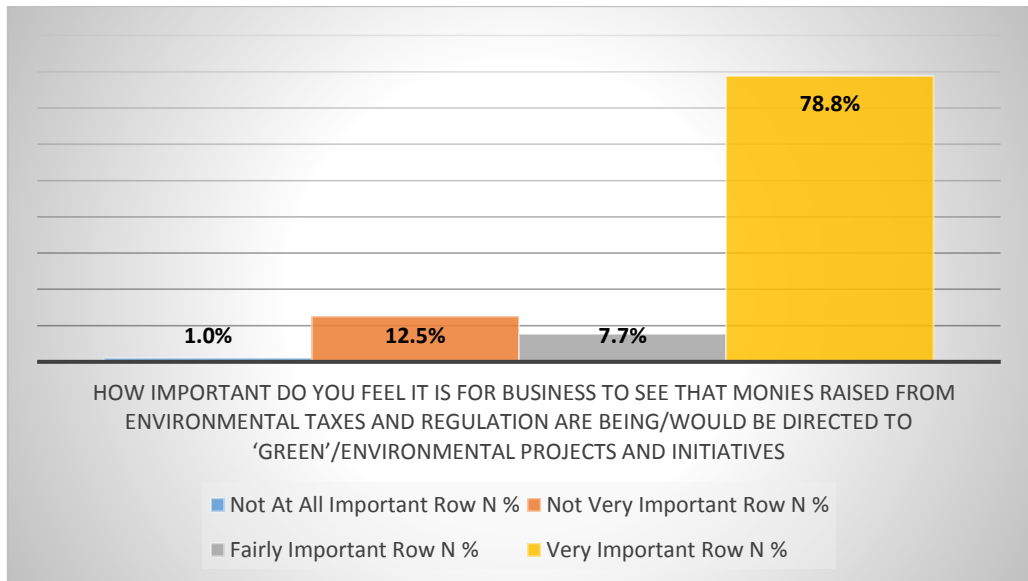


Figure 18: Monies raised from environmental taxes and regulation and 'green' projects

4.12 RELIABILITY STATISTICS

The two most important aspects of precision are reliability and validity. Reliability is computed by taking several measurements on the same subjects. A reliability coefficient of 0.70 or higher is considered as "acceptable" (Gupta and Gupta 2011:66).

4.12.1 Cronbach's alpha score

Reliability was evaluated using Cronbach's alpha. The resolution of Cronbach's alpha is to measure the internal consistency and reliability of scale. Bland and Altman (1997) stated that "research tools to compare groups, α may be less than in the clinical situation, when the value of the scale for an individual is of interest. For comparing groups, α values of 0.7 to 0.8 are regarded as satisfactory. For the clinical application, much higher values of α are needed. The minimum is 0.90, and $\alpha=0.95$, as here, is desirable".

The overall reliability score of 0.848 exceeds the recommended value of 0.700. This indicates a high (overall) degree of acceptable, consistent scoring for this research.

All of the sections meet the minimum requirement value, with only Section F being slightly below. The primary reason for this is that the construct has been newly developed with each subsection having the minimum number of variables

| Section | Title | Number of Items | Cronbach's Alpha |
|----------------|--|-----------------|------------------|
| B | Level of knowledge, awareness and attitude of owners of SME's in regards of environment and environmental issues | 8 of 8 | .655 |
| C | Business owner's awareness and attitude in terms of South Africa Income tax | 16 of 16 | .784 |
| E | Identifying the level of awareness of the owner of SME'S to green tax incentives | 15 of 15 | .653 |
| F | Identifying the level of attitudes of the owner of SME'S to green tax incentives | 13 of 13 | .507 |
| G | the perceptions of SME's owners with regard to business sustainability and profitability, if green tax incentives are used | 6 of 6 | .823 |
| H | The perceptions of introducing other green tax incentives and the implications for manufacturing SME's going green | 14 of 14 | .680 |
| Overall | | 72 of 72 | .848 |

Table 11: Cronbach's alpha score for all the items that constituted the questionnaire

4.12.2 Hypothesis Testing

Tests were implemented to define whether there was a statistically significant difference between the biographical information and factors pertaining to environmental issue, taxation system and green taxation and incentives. The traditional approach to reporting a result requires a statement of statistical significance. A **p-value** is generated from a **test statistic**. A significant result is indicated with " $p < 0.05$ ". These values are highlighted with a *. The Chi square test was performed to determine whether there was a statistically significant relationship between the variables (rows vs columns). The null hypothesis states that there is no association between the two.

| Statement | Chi-Square | df | Asymp. Sig. |
|--|------------|----|-------------|
| Type of ownership? | 22.231 | 3 | .000 |
| How many years have you been operating your business? | 9.269 | 4 | .055 |
| Age | 32.635 | 4 | .000 |
| Highest educational Qualification | 62.846 | 3 | .000 |
| Are you aware of the term climate change? | 92.346 | 1 | .000 |
| Business is the largest contributor to climate change | 157.865 | 2 | .000 |
| Climate change is a huge challenge to mankind | 96.154 | 1 | .000 |
| Climate change is a significant issue for my business | 138.019 | 2 | .000 |
| Efficient energy use is important for my business | 168.481 | 2 | .000 |
| SMEs are responsible for more than % of the total pollution | 92.904 | 2 | .000 |
| Pro environmental attitudes do not always mean positive environmental behaviours | 120.25 | 2 | .000 |
| In these economically challenging times climate change is low on our priority | 104.327 | 2 | .000 |
| My business has a responsibility to help manage the impact of climate change | 163.288 | 2 | .000 |
| For the average taxpayer, I think that the income tax system is... | 33.25 | 2 | .000 |
| For me personally, I believe that the income tax system is... | 39.827 | 2 | .000 |
| Generally, I believe that the manner in which the income tax burden is distributed across taxpayers is | 28.865 | 2 | .000 |
| Generally, I feel the income tax is a fair tax | 53.154 | 2 | .000 |
| There is a high business profit by operating illegal business and under reporting of profits | 148.404 | 2 | .000 |
| The tax system is well designed | 65.327 | 2 | .000 |
| I feel rules are applied inconsistently | 78.25 | 2 | .000 |
| I feel a moral obligation to pay my tax | 77.885 | 1 | .000 |
| Paying tax is a responsibility that should be willingly accepted by all Tax payers | 163.288 | 2 | .000 |
| I always file my tax return without the assistance of a tax expert/an accountant | 58.5 | 1 | .000 |
| The tax system is easy to understand ie rate of tax, filing and paying dates | 124.519 | 2 | .000 |
| I have not exaggerated the amount of deductions in my income tax return | 77.885 | 1 | .000 |
| I am absolutely confident about the legitimacy of the claims in my income tax return | 147.365 | 2 | .000 |
| I declare all my income earned for tax purpose | 190.404 | 2 | .000 |
| It is everyone's responsibility to pay the correct amount of tax | 92.346 | 1 | .000 |
| It is every ones responsibility to comply with the tax laws | 96.154 | 1 | .000 |
| Are you fully aware of South Africa government's environmental policy? | 44.462 | 1 | .000 |
| Are you fully aware of the term environmental taxation? | 58.5 | 1 | .000 |
| In your opinion, what is environmental taxation? | 41.904 | 8 | .000 |
| In your opinion, what do you think is the purpose of environmental taxation? | 45.923 | 3 | .000 |
| The government needs to offer more incentives to support investment in environmentally beneficial activities, processes & new technologies | 107.385 | 2 | .000 |

| | | | |
|---|----------------------|---|------|
| Meeting criteria required by current tax incentives is too onerous to make the incentives worth applying for | 89.442 | 2 | .000 |
| It is clear what tax incentives exist and how to apply for them | 66.827 | 2 | .000 |
| Current tax incentives are sufficiently motivating to make businesses change their behaviour | 85.75 | 2 | .000 |
| If government offered tax incentives, a business like ours would significantly accelerate its green investment | 162.827 | 2 | .000 |
| The government should encourage environmentally friendly business practices by means of tax incentives | 100.038 | 1 | .000 |
| I am aware of green tax as government has done well to communicate this initiative | 85.75 | 2 | .000 |
| Current tax incentives are sufficiently motivating to make businesses change their behaviour | 85.75 | 2 | .000 |
| My business will support carbon taxes as a means of encouraging more efficient use of energy and reducing carbon emission | 152.385 | 2 | .000 |
| I am in favour of green tax even if it increases the price of the products that my business uses for manufacturing | 85.75 | 2 | .000 |
| I would make long -term business decisions or investments, taking government's existing environmental tax and regulation framework into account | 127.865 | 2 | .000 |
| The government needs to offer more incentives to encourage companies to invest in environmentally beneficial practices | 88.615 | 1 | .000 |
| Regulation | 61.923 | 3 | .000 |
| Tax charges | 73.596 | 4 | .000 |
| Tax incentives | 89.462 | 4 | .000 |
| Complying with legislation and regulation | 76 | 2 | .000 |
| Competitive advantage | 109.75 | 2 | .000 |
| Costing saving | 109.75 | 2 | .000 |
| Obtaining tax incentive | 76 | 2 | .000 |
| In principle, I would support or oppose or be neutral towards green taxes | 88.615 | 1 | .000 |
| What if there was a guarantee that the money generated by the extra tax was spent directly on projects that would help to reduce carbon dioxide emissions - for example, the money could be used to subsidize public transport or home insulation In principle | 100.038 | 1 | .000 |
| I would be more likely to support, oppose or be neutral towards green taxes if other taxes were reduced at the same time | 96.154 | 1 | .000 |
| There is difficulty in establishing what incentives exist | 179.212 | 2 | .000 |
| The existing environmental taxes, regulations and incentivise are ineffective | 163.288 | 2 | .000 |
| I am afraid to apply for green tax incentives due to being investigated by SARS | 116.990 ^f | 2 | .000 |
| I would hire a specialist tax consultant to advise me on the application and utilisation of green tax incentives | 127.865 | 2 | .000 |
| Government does not engaged effectively with business in terms of environmental policies | 125.154 | 2 | .000 |
| Compliance with current tax incentives is too onerous to merit applying for them | 157.635 | 2 | .000 |
| I am willing to implement green tax incentives as they create business sustainability | 163 | 2 | .000 |
| I am willing to implement green tax incentives as they improve business profitability | 158.212 | 2 | .000 |
| I use green tax incentives to create new sustainable business practices | 147.25 | 2 | .000 |

| | | | |
|--|---------|---|------|
| Our business cannot be more environmentally friendly until we become more profitable | 137.327 | 2 | .000 |
| I can improve my firm's profitability by implementing greener business practices | 127.865 | 2 | .000 |
| Implementing green tax incentives results in cost saving | 142.462 | 2 | .000 |
| Government is trying to encourage business to go green by rewarding business with green incentives | 132.538 | 2 | .000 |
| The South African tax system should include incentives for business to become carbon neutral | 163 | 2 | .000 |
| There should be an introduction of new green tax incentives that are tailored for SME's | 179.096 | 2 | .000 |
| There should be an energy efficient tax deduction for energy efficient businesses | 143.673 | 2 | .000 |
| There should be tax exemption and deductions to encourage taxpayers to buy alternative and fuel-efficient vehicles | 84.962 | 1 | .000 |
| There should be the creation of income tax deduction per tree for every indigenous tree planted | 152.327 | 2 | .000 |
| SME's that produce green products should be zero- rated in terms of VAT | 168.481 | 2 | .000 |
| Businesses can take a bonus tax depreciation for qualified equipment used in reuse and recycling processes | 88.615 | 1 | .000 |
| I would offer fringe benefits to employees for green initiatives, eg riding bicycle to work, only if I'm granted full tax deduction | 157.519 | 2 | .000 |
| There should be a different tax penalty on negative environmental activities based on the size of an enterprise | 142.75 | 2 | .000 |
| There should be tax subsidies and grants made available to renewable energy producers | 92.346 | 1 | .000 |
| Effective engagement with businesses over environmental Policy and tax | 85.75 | 2 | .000 |
| Sufficient priority given to business issues re climate change | 85.75 | 2 | .000 |
| How important do you feel it is for business to see that monies raised from environmental taxes and regulation are being/would be directed to 'green'/environmental projects and initiatives | 163.615 | 3 | .000 |

Table 12: Chi Square Test –Single Variable

The alternate hypothesis indicates that there is an association. For example: The p-value between “highest educational qualification” and “business is the largest contributor to climate change” was **0.000** (which is less than the significance value of 0.05). This means that there was a significant relationship between the variables.

That means that, the educational level of a respondent does play a role in terms of how respondents perceive business' contribution to climate change. The direction of the scores can be obtained from the frequency tables. All values without an * (or p-values more than 0.05) do not have a significant relationship. All other variables with a $p < 0.05$ are inter-related.

4.12.3 Chi Square Test–Single Variable

Single variable tests were implemented to identify whether there was a statistically significant difference in factors pertaining to environmental issue, taxation system and green taxation and incentives. Refer to appendix D present the outcomes of the Chi square test, to ensure that the research produces valid result, all questions in the survey were subjected to Shapiro-Wilks test for ordinarieness to determine whether the responses follow a normal distribution. Chi-square tests-single variables were implemented to evaluate each question and identify whether there was significant selection of specific satisfaction rates over others. The null hypothesis that is tested showed that there is no difference in the number of selections. Based on the result in appendix D the researcher can establish that most of the analysis below yielded significant results. However, the only statements that yielded insignificant results was “How many years have you been operating your business?”

The p-value between “If government offered tax incentives, a business like ours would significantly accelerate its green investment” and “Highest qualification” was 0.005. This means that there was a significant relationship between the statements. That was, the level of education allowed business owners to realise benefits of tax incentives the higher the level of education, the better appreciative business was towards tax incentives.

The p-value between “In principle, I would support or oppose or be neutral towards green taxes” and “Are you aware of the term climate change” is .007*. This result indicated that there was a significant relationship between the respondents’ support with regards to green tax and there awareness of climate change.

The p-value between “I would hire a specialist tax consultant to advise me on the application and utilisation of green tax incentives” and “Highest qualification” was 0.048. This finding implied that there was a very significant

relationship between qualification of businesses owners impacting them would regards to having to utilized a tax consultant to advise them on the application and utilisation of green tax incentives. Please refer to appendix

4.12.4 Correlations

4.12.4.1 Bivariate correlations

Bivariate correlations were also performed on the ordinal data. The test was implemented to demonstrate whether there was a direct or inverse proportional relationship between the research variables. The results indicated the following patterns. Positive values indicate a directly proportional relationship between the variables and a negative value indicates an inverse relationship. All significant relationships are indicated by a * or **. For example, the correlation value between “efficient energy use is important for my business” and “the government needs to offer more incentives to support investment in environmentally beneficial activities, processes & new technologies” was **0.201**. This is a directly related proportionality. Respondents agree that the more government offers incentives, the more useful energy efficiency is to the business, and vice versa. Negative values imply an inverse relationship. That is, the variables have an opposite effect on each other. That is, as one increases, the other decreases. For example, the correlation value between “business is the largest contributor to climate change” and “is you fully aware of South Africa government’s environmental policy?” is **-0.415**. This is an inversely related proportionality. Respondents agreed that the less businesses know about policy, the more they would be likely to pollute, and vice versa. The table below is a summary of the correlations using the average values for the various sections. Positive values shown a directly proportional relationship between the variables and a negative value indicates an inverse relationship. All significant relationships are indicated by a * or **. For example, the correlation value between section E5.1 (Thinking about environmental tax incentives.) and section E5.2 (The awareness of the owner of SME’S to green tax incentives) is **.519**** and is significant at **.000**. This value shows a directly

related proportionality between the above-mentioned variables. Respondents agreed that the more they taught were about environmental tax incentives, the more the awareness of the owner of SME'S to green tax incentives increased and vice versa. Negative values suggest an inverse relationship. That is, the variables have an opposite effect on each other. For example, the correlation value in the Table below (between Section B (Level of knowledge, awareness and attitude of owners of SME's with regards to environment and environmental issues) and Section D (identifying owners understanding of environmental taxation) is $-.405$. Respondents demonstrate that, a constrained limited knowledge, awareness and attitude of owners with respect to environment and environmental issues resulted in respondents been less inclined to grasp the understanding of environmental taxation and vice versa. a correlation between " What is your attitude of with regard to application of green tax incentives have" and "The perceptions of introducing other green tax incentives and the implications for manufacturing SME's going green " is $.393^{**}$. This significant relationship suggested that as business owners have an encouraging attitude with regard to application of green tax incentives, it will positively influence the need to introduce other green tax incentives and reduce implications for manufacturing SME's going green. Table 13: Bivariate correlations (below)

Correlations

| | | | Section_B | Section_C3 | Section_C3 | Section_C3 | Section_D | Section_E5 | Section_E5 | Section_E5 | Section_F6 | Section_F6 | Section_F6 | Section_G | Section_H8 | Section_H8 | |
|------------|-----------------|-----------------|-----------|------------|------------|------------|-----------|------------|------------|------------|------------|------------|------------|-----------|------------|------------|--|
| Spearman's | Section_B | Correlation | 1,000 | | | | | | | | | | | | | | |
| | | Sig. (2-tailed) | | | | | | | | | | | | | | | |
| | | N | 104 | | | | | | | | | | | | | | |
| | Section_C3 | Correlation | -,011 | 1,000 | | | | | | | | | | | | | |
| | | Sig. (2-tailed) | ,914 | | | | | | | | | | | | | | |
| | | N | 104 | 104 | | | | | | | | | | | | | |
| | Section_C3 | Correlation | ,375** | ,318** | 1,000 | | | | | | | | | | | | |
| | | Sig. (2-tailed) | ,000 | ,001 | | | | | | | | | | | | | |
| | | N | 104 | 104 | 104 | | | | | | | | | | | | |
| | Section_C3 | Correlation | ,416** | ,008 | ,337** | 1,000 | | | | | | | | | | | |
| | | Sig. (2-tailed) | ,000 | ,934 | ,000 | | | | | | | | | | | | |
| | | N | 104 | 104 | 104 | 104 | | | | | | | | | | | |
| | Section_D | Correlation | -,405** | -,069 | -,276** | -,346** | 1,000 | | | | | | | | | | |
| | | Sig. (2-tailed) | ,000 | ,486 | ,005 | ,000 | | | | | | | | | | | |
| | | N | 104 | 104 | 104 | 104 | 104 | | | | | | | | | | |
| | Section_E5 | Correlation | -,229* | ,322** | -,183 | -,041 | -,081 | 1,000 | | | | | | | | | |
| | | Sig. (2-tailed) | ,020 | ,001 | ,063 | ,678 | ,414 | | | | | | | | | | |
| | | N | 104 | 104 | 104 | 104 | 104 | 104 | | | | | | | | | |
| | Section_E5 | Correlation | ,071 | ,056 | -,114 | ,062 | -,246* | ,519** | 1,000 | | | | | | | | |
| | | Sig. (2-tailed) | ,476 | ,572 | ,248 | ,529 | ,012 | ,000 | | | | | | | | | |
| | | N | 104 | 104 | 104 | 104 | 104 | 104 | 104 | | | | | | | | |
| Section_E5 | Correlation | -,085 | ,022 | -,102 | ,001 | ,024 | -,024 | ,032 | 1,000 | | | | | | | | |
| | Sig. (2-tailed) | ,389 | ,821 | ,301 | ,991 | ,807 | ,813 | ,744 | | | | | | | | | |
| | N | 104 | 104 | 104 | 104 | 104 | 104 | 104 | 104 | | | | | | | | |
| Section_F6 | Correlation | -,117 | ,078 | -,158 | -,087 | ,001 | ,194* | ,237* | ,123 | 1,000 | | | | | | | |
| | Sig. (2-tailed) | ,238 | ,430 | ,108 | ,382 | ,991 | ,048 | ,016 | ,215 | | | | | | | | |
| | N | 104 | 104 | 104 | 104 | 104 | 104 | 104 | 104 | 104 | | | | | | | |
| Section_F6 | Correlation | ,271** | ,079 | ,059 | ,164 | -,141 | -,134 | ,059 | -,067 | -,041 | 1,000 | | | | | | |
| | Sig. (2-tailed) | ,005 | ,423 | ,553 | ,095 | ,154 | ,176 | ,553 | ,499 | ,683 | | | | | | | |
| | N | 104 | 104 | 104 | 104 | 104 | 104 | 104 | 104 | 104 | 104 | | | | | | |
| Section_F6 | Correlation | ,511** | -,130 | ,307** | ,543** | -,569** | -,085 | ,185 | -,018 | -,168 | ,198* | 1,000 | | | | | |
| | Sig. (2-tailed) | ,000 | ,188 | ,002 | ,000 | ,000 | ,391 | ,060 | ,854 | ,089 | ,043 | | | | | | |
| | N | 104 | 104 | 104 | 104 | 104 | 104 | 104 | 104 | 104 | 104 | 104 | | | | | |
| Section_G | Correlation | ,498** | ,077 | ,462** | ,382** | -,614** | -,046 | ,161 | -,180 | -,153 | ,284** | ,555** | 1,000 | | | | |
| | Sig. (2-tailed) | ,000 | ,439 | ,000 | ,000 | ,000 | ,639 | ,103 | ,068 | ,120 | ,003 | ,000 | | | | | |
| | N | 104 | 104 | 104 | 104 | 104 | 104 | 104 | 104 | 104 | 104 | 104 | 104 | | | | |
| Section_H8 | Correlation | ,365** | ,027 | ,380** | ,622** | -,345** | -,142 | ,000 | -,133 | -,200* | ,258** | ,393** | ,437** | 1,000 | | | |
| | Sig. (2-tailed) | ,000 | ,785 | ,000 | ,000 | ,000 | ,151 | ,997 | ,178 | ,042 | ,008 | ,000 | ,000 | | | | |
| | N | 104 | 104 | 104 | 104 | 104 | 104 | 104 | 104 | 104 | 104 | 104 | 104 | 104 | | | |
| Section_H8 | Correlation | -,300** | ,054 | -,324** | -,254** | ,184 | ,610** | ,638** | ,143 | ,279** | -,166 | -,228* | -,269** | -,360** | 1,000 | | |
| | Sig. (2-tailed) | ,002 | ,586 | ,001 | ,009 | ,061 | ,000 | ,000 | ,149 | ,004 | ,091 | ,020 | ,006 | ,000 | | | |
| | N | 104 | 104 | 104 | 104 | 104 | 104 | 104 | 104 | 104 | 104 | 104 | 104 | 104 | 104 | 104 | |

** . Correlation is significant at the 0.01 level (2-tailed).

* . Correlation is significant at the 0.05 level (2-tailed).

. Table 13: Bivariate correlations

4.13 FACTOR ANALYSIS

Factor analysis is a statistical technique whose main goal is data reduction. A typical use of factor analysis is in survey research, where a researcher wishes to represent a number of questions with a small number of hypothetical factors. For example, as part of a national survey on political opinions, participants may answer three separate questions regarding environmental policy, reflecting issues at the local, state and national level. Each question, by itself, would be an inadequate measure of attitude towards environmental policy, but *together* they may provide a better measure of the attitude. Factor analysis can be used to establish whether the three measures do, in fact, measure the same thing. If so, they can then be combined to create a new variable, a factor score variable that contains a score for each respondent on the factor. Factor techniques are applicable to a variety of situations.

A researcher may want to know if the skills required to be a decathlete are as varied as the ten events, or if a small number of core skills are needed to be successful in a decathlon. You need not believe that factors actually exist in order to perform a factor analysis, but in practice the factors are usually interpreted, given names, and spoken of as real things.

Each matrix table is preceded by a table that reflects the results of KMO and Bartlett's Test. The requirement is that Kaiser-Meyer-Olkin Measure of Sampling Adequacy should be greater than 0.50 and Bartlett's Test of Sphericity less than 0.05. In all instances, the conditions are satisfied which allows for the factor analysis procedure. Certain components are divided into finer components. This is explained below in the rotated component matrix refer to appendix E .

Factor analysis is a statistical technique whose main goal is data reduction. A typical use of factor analysis is in survey research, where a researcher wishes

to represent a number of questions with a small number of hypothetical factors. With reference to the tables above:

- The principle component analysis was used as the extraction method, and the rotation method was Varimax with Kaiser Normalization. This is an orthogonal rotation method that minimizes the number of variables that have high loadings on each factor. It simplifies the interpretation of the factors.
- Factor analysis/loading show inter-correlations between variables.
- Items of questions that loaded similarly imply measurement along a similar factor. An examination of the content of items loading at or above 0.5 (and using the higher or highest loading in instances where items cross-loaded at greater than this value) effectively measured along the various components.

It is noted that the variables that constituted Sections E5.1 and E5.3 loaded perfectly along one factor. This means that the statements (variables) that constituted components E5.1 and E5.3 perfectly measured the component. That is, the component measured what it was intended to measure.

The remaining sections split along two or more components. This implies that respondents identified certain aspects of the sub-themes as belonging to other sub-sections. Please refer to appendix

4.14 CONCLUSION

In this chapter, the data acquired from the research was presented. Reliability and descriptive statistics were used to define the findings from questionnaires which were completed by personnel from manufacturing SME's. Tables, figures and graphs were used to exhibit data on the information supplied by the respondents. Factor analysis was used to denote a number of questions with a number of hypothetical factors. SPSS version 20.0 was used for this. Tables and graphs indicate the analysis by section. Both closed ended

questions and one ended question was used to stimulate more subjective evidence. Hypothesis testing was used to define whether significant relationships existed between variables. The chapter that follows relates to a discussion of findings made.

CHAPTER FIVE

DISCUSSION OF FINDINGS AND CONCLUSIONS AND RECOMMENDATIONS

Today we're dumping 70 million tons of global-warming pollution into the environment, and tomorrow we will dump more, and there is no effective worldwide response. Until we start sharply reducing global-warming pollution, I will feel that I have failed.

Al Gore

5.1 INTRODUCTION

This chapter presents a discussion based on the findings made and conclusions and recommendations. The discussion will focus on the following aspects : demographic data; the knowledge, awareness and attitude of owners of small medium enterprises (manufacturing), with regards to the environment and environmental issues; business owners' awareness and attitude in terms of South African income tax; identifying owners' understanding of environmental taxation; their awareness of and attitudes towards green tax incentives and how it influences sustainability and profitability, if green tax incentives are used. Recommendations regarding what small manufacturing enterprises need to do to implement green tax incentives and government interventions to allow for green tax incentives to become more favourable amongst SME's owners are presented. In addition recommendations with regards to areas requiring greater attention in terms of green tax will be made.

5.2 SUMMARY OF THE RESEARCH STUDY

- The first objective of the study was to investigate owners' knowledge and awareness of environmental issues.
- The second objective was to explore small medium enterprise owners' understanding of and support for environmental taxation.
- The third objective was to investigate owners' attitudes towards green tax incentives.
- The fourth objective was to inquire about the potential impact on business sustainability and profitability if green tax incentives were used.

5.3 DEMOGRAPHIC DATA

5.3.1 Ownership and owner demographics

About two thirds of the sample operated as a sole propriety or private company (73 %) and have been in operation for more than 12 years. This reflects a sample characterized by extensive years of entrepreneurship knowledge and manufacturing experience. In terms of the age of the owners, almost 60 % were between 30 to 60 years of age which reflected a fairly mature and experienced sample of respondents whose judgement would have been based on accumulated experience, knowledge and skill. Almost 60 % of the sample were also found to have either obtained a Diploma or Degree which suggests that they had furthered their education in their field. This may have enhanced their understanding of green tax incentives.

5.4 KNOWLEDGE, AWARENESS AND ATTITUDE OF SME OWNERS WITH REGARDS TO THE ENVIRONMENT AND ENVIRONMENTAL ISSUES

There was full consensus amongst the entire sample who agreed that they all understood the concept of climate change. This resonated with Ayatakshi's (2012) study where a 100% of his sample, also concurred that they understood the term climate change. This reflects that manufacturing business

owners comprehend and are conscious of climate change in the business context. A majority of the current sample further agreed that “climate change is a huge challenge to mankind” (98.8%; n=103). Similar findings were made in the UK where 75% of the sample, felt that climate change posed grave danger to humankind Ayatakshi (2012). The current sample also agreed that “efficient energy use was important for my business” (93.27%; n=97). This also resonated with Ayatakshi’s (2012) study, where it was found that 84% of businesses in the UK indicated that they had been energy efficient. The high level of energy efficiency in the current sample may be due to high electricity costs in South Africa and the reason why businesses strive towards being energy efficient.

More than 90 % of the current sample supported the view, that their business has a responsibility, to manage the impact of climate change. This reflects a positive attitude crucial for sustained change in this area and in keeping with the earth summit which promoted the notion that not only the government, but other stakeholders should address the challenges associated with climate change. International research also found that the private sector had a role to play. Ayatakshi (2012) found that 33% of UK businesses indicated that they had a responsibility to manage the impact of climate change. Despite acknowledging support for this, about 80 % of the current sample expressed that economically challenging times have had a negative impact on the ability to prioritize climate change within the business sector. In terms of Britain, only half of the sample (54%) indicated that economic factors had impacted on their ability to address climate change (Ayatakshi 2012).

Despite the slightly different levels of support it can be concluded that the progress of addressing climate change, y majority of businesses in SA and the UK, has been adversely affected by financial recession. More than 77 % of the sample believed that business was a major contributing factor to the total pollution in SA. This differed significantly when compared to the United Kingdom where Ayatakshi (2012) indicated that only 11% of business owners

felt that they were major contributors to the country's total pollution. This suggests that business owners abroad may be more conscious of the pollution impact abroad and have taken steps to prevent pollution. In South Africa there appears to be stronger support (92 %), for the notion that business has a role to help curb the impact of climate change, unlike the UK counterparts, where only 33% of business felt that they have an obligation to meet the challenges of climate change (Ayatakshi 2012). This finding is in line with the literature which supports the view that the Western business world is preoccupied more with material wealth and profit as compared to the well-being of the environment.

The p-value between "climate change is a huge challenge to mankind." and "highest qualification" was 0.000, which had less than the significance value of 0.05. This means that there was a significant relationship between the statements. That was, acknowledging the impact of climate change was related to the level of education. The higher the level of education, the greater awareness of business owners in establishing and recognising the impact climate change has.

The correlation value between "identifying owners understanding of environmental taxation and "how you feel about income taxes and the income tax system" was -.246." This result indicated that as the businesses owners have negative inclination towards the normal income tax system, their comprehension of environmental taxation was adversely impacted

5.5 OWNERS' AWARENESS AND ATTITUDE TOWARDS SA INCOME TAX

Business owners do not appear to view the SA income tax system favourably. About half of the sample expressed negativity towards it and the other half remained impartial as opposed to expressing positive sentiments. The lack of faith in the current tax system may result in businesses being reluctant to implement green initiatives and use green tax incentives effectively and efficiently. These findings elevate the need for future research to investigate

the reasons for unease amongst business owners, with regards to the current taxation system. It suggests a need for government to spend time listening to business owners apprehensions regarding the current tax system, so as to identify what interventions can be put in place to address their concerns.

Participants were asked if the income tax was a fair type of tax that was imposed on them. About 60 % agreed that income tax was a fair type of tax imposed on them and about 40 % disagreed. It is possible that those who support it, see it as taxes to assist the government in meeting its commitment in terms of providing basic services (health, education, protection). This suggests that business owners are aware of the need and motives for tax collection. Despite this however business owners believed that the current system was unfair, in terms of the amount paid specifically. Almost 90 % of the respondents felt that there were a high number of businesses that profited from operating illegal businesses and under reporting of profits. This suggests that they are aware of businesses who are not contributing towards the country national income tax collection and who under report their financial performance and pay less taxes. This alludes to the fact that the income tax system is failing to ensure fairness and equality in the SA context. More than 65 % believed the tax system was poorly designed and that the income tax rules were inconsistently applied. The government needs to reconsider the income tax system and refine it in terms of fairness and consistency.

It was important to note that more than 90 % of the sample believed that it was a moral obligation to pay their taxes and that paying tax was a responsibility that should be willingly accepted by all tax payers. This reflects that owners comprehend and abide by paying taxes duties, despite their concerns regarding the fairness of the system.

About 88 % of the sample always filed their tax returns, without the assistance of a tax expert/an accountant, which suggests that the system is easy to implement and that most comprehend how to do same without the assistance of any tax expert or accountant. A significant portion of the sample (90 %)

expressed that they were confident about the legitimacy of the claims in their income tax returns. Whilst it may be difficult to assess the legitimacy of these claims as owners may not necessarily be truthful, the fact that they believe the system to be somewhat fair and do submit claims suggests that it is done in ethical way.

There was also a significant relationship between the variable “age” and “the tax system is well designed”. The p-value between these two variables was 0.18*. The age of the business owners seemed to have influenced their perceptions of whether the tax system was well designed. It is possible that because they have been involved in meeting the needs of the tax system for a long period and had become used to it without having problems, that they viewed it as being well designed.

The correlation between, “thinking about environmental tax incentives” and “the awareness of the owner of SME’S to green tax incentives” was found to be .519**. This implied that as business owners showed interested in environmental tax incentives, it had helped improve awareness of green tax incentives. Therefore increased thought with regards to environmental tax incentives may have resulted in greater awareness of green tax incentives.

5.6 OWNERS’ UNDERSTANDING OF ENVIRONMENTAL TAXATION

More than 80 % of the current sample reported having knowledge of the South African governments’ environmental policy and understood environmental taxation. These findings differ from those made by Ayatakshi (2012) where 51% of the UK sample had indicated that they did not understand environmental policy in their country. Despite this in SA however, only 26 % of the sample agreed that environmental tax was regarded as tax to encourage good environmental behaviour. Hence not all owners may fully understand the notion of environmental taxation. Ayatakshi (2012) supported this saying that the majority of respondents in his study believed that environmental taxation was “yet another business tax’ and there were few respondents who believed

that environmental taxation was a ‘tax to encourage good environmental behaviour.’ This suggests a clear lack of understanding regarding why environmental taxes are levied. This in turn may hamper business owners from implementing initiatives and utilizing green tax incentives effectively and efficiently.

About 50 % of the current sample agreed that environmental tax encouraged good environmental behaviour, which reflects a divided view. Similarly Ayatakshi (2012) reported that 34 % of the sample believed that environmental taxation was another business tax for the government to make more money. Both in SA and UK it would appear that half of the samples studied seem to consider environmental taxation as another burden, as opposed to meeting genuine environmental needs. This contradicts earlier findings that the current sample fully understands notions of climate change and environmental taxation.

The p-value between “age” “and what is environmental taxation was .045*. This result indicated that there was a significant relationship between the respondents’ age and knowledge about environmental tax. It was possible that experience coupled with furthering education could have resulted in greater knowledge with regards to environmental tax.

5.7 SME OWNERS’ AWARENESS OF GREEN TAX INCENTIVES

Almost 76% of the respondents disagreed that current tax incentives had motivated business to change their behaviour. This concurs with the PriceWaterhouseCoopers (2010) report which found that 67% of their sample had also disagreed, that the current tax incentive system had motivated business to change their behaviour. This indicates a need for the introduction of new incentives that can persuade and motivate business to become more eco-conscious and go green. Also 70% of the sample had expressed that they were unaware of what tax incentives existed and how to apply for them. The finding was consistent with PriceWaterhouseCoopers (2010) report,

which also found that 72% of the sample were unclear about tax incentives that exist and how to apply for them. It is therefore suggested that most respondents get formal training in terms of identifying and applying for tax incentives to help expedite their utilization. The small business sample in this study and the study undertaken by Price Waterhouse Coopers reflects a need for formal training on establishing how to apply for and implement tax incentives. If owners feel that applying for tax incentives is tedious and difficult, it will impact negatively on green tax incentives. More than 80% of respondents in both the current and Price Waterhouse Coopers study agreed that government should offer more incentives to support investment in environmentally beneficial activities, processes and new technologies. This will ensure pro environmental sustainability practices that will combat the effect of climate change.

More than 92 % of the current sample were found to support the stance that the government should offer tax incentives, so as to accelerate its green investment. This will ensure that small businesses are given environmental tools for coping and meeting the challenges and difficulties in terms of being environmentally friendly. A study conducted by Visser (2009) found that 86% of the sample believed that the government was responsible, for ensuring that businesses become environmentally friendly, by using green tax incentives as a catalyst. Interestingly more than 75 % of the current sample expressed that current tax incentives are not sufficiently motivating to make businesses change their behaviour. This suggests a need to invigorate new strategies to promote this. It is therefore crucial that government revisits its environmental tax policy, to ensure that businesses consider more strongly environmental taxation and begin to implement the associated mechanisms.

A majority of the respondents also believed that environmental taxation should not impact negatively on the manufacturing process. If environmental tax impacts on small business then there will be resistance towards implementation, which prevents its benefit from green tax incentives.

Mandy and Lakhani (2010) stated that 60% of South African businesses do not feel comfortable making long term business decisions or investments, taking existing environmental tax and regulation frameworks into account. However the literature indicates that investing in green concepts and utilizing government's existing environmental tax and regulations will result in cost saving and increasing future profits. More than 95 % of the current sample felt that the government needed to offer more incentives that would encourage companies, to invest in environmentally beneficial practices. Even in the UK, Manning, Howlett and PriceWaterhouseCoopers (2007) reported that 68% of the businesses had felt the need for government to introduce new incentives, to encourage companies to invest in environmentally beneficial practices.

There was significant support for tax incentives as a favoured method for business to reduce environmental impact, just more than half of the sample regarded tax incentives as a fairly effective tool for this purpose. In terms of increasing the tax liability of businesses, 46.2 % (n=48) of respondents felt that increasing the tax liability was not an effective tool to accomplish environmental goals and change. When asked if regulations drafted by government would assist business to accomplish their environmental goals 57.7% (n=60) of the sample, felt that this mechanism would be ineffective. These findings concurs with findings made by PriceWaterhouseCoopers (2010). The literature and empirical finding of the study identifies green tax incentives as being very effective in terms of allowing business to advance eco-conscious strategies.

The correlation between, "level of knowledge, awareness and attitude of owners of SME's with regards to environment and environmental issues." and "identifying the level of supporting or opposing green taxation " was found to be .271**. This finding indicated that the greater the knowledge, awareness and attitude of owners of SME's with regards to environment and environmental issues., the greater the chance of the business owners supporting green taxation.

5.8 ATTITUDES OF SME OWNERS TOWARDS GREEN TAX INCENTIVES

Almost the entire sample indicated that they would support green taxes if other taxes were reduced at the same time. This finding resonates with those made by Bosquet (2000), in the UK where 77% of the sample supported the fact that business would favour green tax if there was a tax shift from normal tax. Almost the entire sample in the current study, said they would support green taxes if the money was used for the intended purpose. This sentiment was also echoed by participants in Bosquet's (2000) study where 73 % of the sample said they would support green taxes if the revenue from green tax was used for environmental protection. This suggests that businesses both in the UK and SA are doubtful as to whether the government actually does use green tax revenue, for improvement of the environment. Hence government needs to be accountable in terms of environmental tax budgets, which in turn may promote the adoption of green tax incentives.

About 95 % of the sample also expressed that they did not know what current green tax incentives were available. This suggests a lack of awareness and knowledge of green tax incentives. This is supported by the fact that 86 % of the sample said that they would they would hire tax specialists to counsel them, on the application of green tax incentives. The need for government to engage effectively with them regards to environmental policies was strongly articulated, so that owners could be aware of all new legislation and tax policies in place. It would therefore appear that current green tax incentives are geared more towards big businesses applying for them. Empirical findings of this study indicates that small to medium enterprise form the mainstay of many economies and to preclude them from the benefit of green tax incentives is an injustice.

The chi-test revealed a significant relationship between the following two statements : "the government needs to offer more incentives to support investment in environmentally beneficial activities, processes and new

technologies” and “are you aware of the term climate change” with a p-value of .044*. This implies an awareness of climate change which warrants the need for government to offer more incentives to support investment in environmentally beneficial activities, processes and new technologies.

5.9 BUSINESS SUSTAINABILITY AND PROFITABILITY WHEN GREEN TAX INCENTIVES ARE USED

A majority of the sample were willing to implement green tax incentives if it promoted sustainability (92 %). Small business owners therefore appear aware of the benefits of going green and the opportunities to claim incentives in the form of deductions and exemptions which would allow for a reduction of their current taxation liability payment. About 90% also believed that business profitability would improve if green tax incentives were utilized. Several studies (Visser 2009; Ayatakshi 2012) reinforce the notion that green taxation incentives, would allow business to increase profits with the combined advantage of going green, which would result in cost savings. About 88 % believed that going green was healthy as it resulted in cost saving and would be energy efficient. This resulted in finances and resources being saved which allowed for business growth. In the same vein about 88 % felt however, that they could not become environmentally friendly until they were more profitable. Other studies for e.g. by Harris (2012) showed the benefits of green tax incentives and how it could advance future business profits. Going green also allows savings and the reduction of tax through valid green taxation deduction and exemptions.

Although respondents agreed that the government was trying to encourage green incentives, most felt that the current green tax incentives did not cater for their needs. About 90 % of the sample indicated that there should be an energy efficient tax deduction, for an energy efficient business and tax exemptions and deductions that would encourage taxpayers to buy alternative and fuel-efficient vehicles. There was strong support for tax deductions for things such as planting indigenous trees and that SME's that produce green products should be zero- rated in terms of VAT. The sample also supported

the stance that businesses should take a bonus tax depreciation for qualified equipment used in reuse and recycling processes and that fringe benefits, should be offered to employees for green initiatives, e.g. riding a bicycle to work. They also supported the need for different tax penalties on negative environmental activities and tax subsidies and grants for those renewable energy producers.

The sample was also given the opportunity to comment through the open ended question in the study. Most responses reiterated those contained in the close ended questions and reinforced the following:

- Tax incentives should be given to taxpayers who reduce emissions.
- Businesses should learn how to improve environmental sustainability in terms of using green tax incentives.
- Implementing green tax incentives results in cost savings and also improving the environmental stance of the business.

The chi-test revealed a significant relationship between “I can improve my firm’s profitability by implementing greener business practices” and “how many years have you been operating your business?” with a p-value of .015*.

A correlation between “ identifying owners understanding of environmental taxation” and “the perceptions of SME’s owners with regard to business sustainability and profitability, if green tax incentives are used ” was -.614**. This significant relationship suggested that more often business owners did not comprehend the concept of environmental taxation. This appear to lead to perceptions that understanding of environmental taxation can impact on business sustainability and profitability if green tax incentives are used.

5.10 RECOMMENDATIONS

It would appear that small manufacturing enterprises needed more knowledge and information regarding green tax assessment and green tax incentives and

their objectives. It also found that they needed to know how to implement them in a way that had a positive impact on the organization and the SA economic and environmental context. It is therefore recommended that there be a central hub for this information, where owners of SMEs could go for guidance on the most proficient method to use green taxation assessments and how it would benefit them. There is also a need to encourage and empower an expanded dialogue between SMEs and governmental administration bodies.

The study also found that despite support for a poor understanding of environmental taxation could prompt SME's to view ecological strategies with suspicion and negativity. They alluded to the ecological tax charges as being negative and a means to indulge government voracity'. These misconceptions must be cleared so that environmental tax assessment, is seen as a monetary instrument to assist in promoting environmental change

Hence it is imperative that government draws in the SME populace to assist in creating friendly green taxation policies. Also SMEs should have a platform to communicate about issues pertaining to eco-tax and for making inquiries that can be addressed. SMEs are financially resource bound and are generally owner operated by one individual who is occupied with numerous task and duties of the business. This restricts time for a better understanding of complex environmental tax laws and assessment records and to comprehend the ramifications of such charges on them. James and Alley (2002) agreed about the intricacy of taxation duty dialect and enactment which causes problems.

Climate change and energy efficacy is a risk and there is a need to identify ways to become green and reduce energy needs, which reduces the carbon foot print. The government therefore needs to draft a comprehensive year plan for identifying practices and policies that would assist business in finding ways to go green. Such a plan must be communicated and discussed by all key stakeholders that are involved and can help the way that business can implement such cleaner practices. The taxation system needs to be transparent and the number of taxes and incentives needs to be increased.

This reinforces the need for government to spend time listening to concerns voiced by business, in terms of the current tax system in order to identify what interventions can be used to disperse their challenges.

A lack of understanding about environmental tax, may result in businesses failing to use green tax incentives effectively. Furthermore more new incentives must be developed to persuade businesses to go green. The government and business also needs to revise their current environmental taxation policy processes so as to make them more understandable for all stakeholders. It is recommended that a committee be set up between government, business and other stakeholders to ensure that everyone is given equal opportunity to voice their concerns. Hence all relevant parties have a voice in drafting policies, procedures and methods that will benefit government, business and the environment.

There must be a more vociferous drive from government to start creating awareness on how to identify and applying green tax incentives that will expedite their utilization. This will enhance pro-environmental sustainability. They also need to relook at environmental tax policy to ensure that businesses may benefit from environmental taxation.

Government also needs to ensure that monies collected from environmental taxation be used for environmental initiatives. This ensures that businesses will be more fully aware of the government's commitment to the environment, thereby preventing doubts regarding their agenda when it comes to green tax implementation.

5.11 LIMITATIONS OF THIS STUDY

The sample was restricted only to manufacturing small manufacturing enterprises that were located in the EThekweni region. Although this is not representative of all small manufacturing enterprises, the findings shed light on understanding green tax incentives within the context of manufacturing SME's in South Africa.

5.12 IMPLICATIONS FOR FURTHER RESEARCH

The study highlighted what further possible research could be undertaken in light of green taxation and incentives in South Africa. Future research can focus on how to stimulate business owners and the government to embrace and implement green taxation and embrace good green sustainable practices.

There is a need to investigate further the following areas:

- The green taxation policy being implemented in other countries with the view to revamping new legislation practices in South Africa.
 - The need to ascertain whether the implementation of green taxation can contribute to climate change and environmental sustainability.
 - The study may be expanded to include other provinces, in South Africa and other small manufacturing enterprises which will allow for more detailed picture to emerge nationally.
 - There is also a need to investigate other concerns regarding the current tax policy system.

5.13 CONCLUSION

This study found that a majority of SME owners were genuinely concerned about climate change. The use of green taxation and incentives was supported as a favourable mechanism to help curb climate change, and promote environmental sustainable practices in term of businesses. There were high levels of enthusiasm by manufacturing businesses to go green and use green taxation and incentives.

Environmental taxation has been in the environmental policy portfolio of the South African government, in response to being a signatory to the Kyoto Protocol. Environmental taxes operate by incentivizing polluters to internalize their external costs of pollution by polluting less or paying more taxes. Often policies are designed for larger businesses and imposed on smaller ones without taking into consideration the very different characteristics of the SMEs.

SMEs operate in all sectors of the South African economy and are therefore liable to environmental taxes, but until now no study has been conducted which has attempted to understand the perceptions and opinions of SMEs towards these taxes and also towards environmental issues in general.

This study therefore sets in motion the need to engage SMEs, in the wider discussion of environmental taxes in order to achieve their full potential. It is envisaged that the findings of this study will enable an improved understanding and utilization of green tax incentives, with the intention of government introducing new green tax incentives that cater for SME's.

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Faculty of Accounting and Informatics
Master of Technology: Taxation

Dear Respondent

I am a post graduate student, registered at the Durban University of Technology in the Department of Taxation. I am currently pursuing a Degree in Master of Commerce: Taxation. The primary component of the degree deals with a research-based investigation that necessitates data collection through a survey.

My topic is: "An exploration of the views of manufacturing small medium enterprise owners with regards to green tax incentives in the EThekweni region of Kwa Zulu - Natal". In order to complete my degree, the latter part of the research involves the administration of a questionnaire. You have been identified as a business owner who could contribute to this study.

I would be grateful if you could please complete the attached questionnaire. The questionnaire should take approximately 30 minutes to complete and requires only a cross next to the relevant response. To assist you, some information on green tax incentive has been included.

You can be assured that your response will be kept confidential and will not be divulged to any other person. Your co-operation in assisting me with my study is appreciated and I take this opportunity of thanking you in advance for enabling me to complete this research project.

Thank you for participating in this study.

Mr Uveer Kalidin
Student no: 20507679
Cell: 074 209 3609

Information on Green Taxes Incentives In South Africa

| <u>No</u> | <u>Name of tax or incentive</u> | <u>Details of tax or incentive</u> |
|-----------|---------------------------------|--|
| 1. | Section 12B: | <p>Deductions in respect of certain machinery, plant, implements, utensils and articles used in farming or production of renewable energy</p> <p>The deductions for such assets are as follows: 50% in the year that it was first brought into use, 30% in the second year and 20% in the third.</p> |
| 2. | Section 37B: | <p>These deductions are for assets (and improvements to these assets) used in environmental treatment or recycling and environmental waste disposal. These plants must be used for air, water or solid waste treatment. It is required that these plants are set up for the purpose of protecting the environment.</p> |
| 3 | Section 12 K | <p>An exemption from normal tax is given to taxpayers who have received an amount relating to a certified emission reduction in the continuance of a qualifying Clean Development Mechanism project carried out by those people. The amount is included in the taxpayer's gross income and then exempted therefore, it is not taxed.</p> |
| 5. | Section 12 L | <p>Section 12L is a concurrent benefit that will be allowed. This is an allowance granted by any sector of the government for participating in energy-efficiency savings.</p> |

| | | |
|----|--------------------|---|
| 6. | Section 37C | <p>The non-capital costs incurred by a taxpayer to maintain and conserve land is deductible if the expenditure is incurred in terms of a biodiversity agreement that has a period of 5 years which has been entered into by the taxpayer in terms of section 44 of the National Environmental Management Biodiversity Act. Any expenditure that exceeds the income of the taxpayer must not be deducted in the current year; it will rather be deemed to be expenditure incurred in the following year of assessment.</p> |
| 7. | Section 11D | <p>Taxable income derived by a taxpayer from carrying on any trade there shall be allowed as a deduction from the income of such taxpayer so derived, an amount equal to 150 % of so much of any expenditure actually incurred by that taxpayer</p> |

Appendix A: Questionnaire

Please answer all the questions: mark the appropriate block with a cross

Section 1: Demographic Data

Answer options: Choose one of the statements below

| | | | | | |
|--|--------------------|-------------|-------------------|-----------------|-------|
| 1.1. Type of ownership? | Sole propriety | Partnership | Close corporation | Private company | |
| 1.2. How many years have you been operating your business? | 0-5 | 6 -11 | 12-17 | 18-22 | 22+ |
| 1.3. Age | 20 - 30 | 31 -40 | 41 -50 | 51- 60 | 61+ |
| 1.2. Highest educational Qualification | Senior certificate | Diploma | Degree | Masters | other |

Section 2: Level of knowledge, awareness and attitude of owners of SME's with regards to environment and environmental issues.

2.1. Are you aware of the term climate change?

Answer options: Choose one of the statements below

| | |
|-------------------|--|
| <u>Yes</u> | |
| <u>No</u> | |

2.2. Business owners' awareness and attitudes towards the environment and environmental issues.

Answer options: Strongly Disagree (SD), Disagree (D), Not Sure (NS), Agree (A), and Strongly Agree (SA)

| Statement | SD | D | N | A | SA |
|---|----|---|---|---|----|
| 2.2.1. Business is the largest contributor to climate change | | | | | |
| 2.2.2. Climate change is a huge challenge to mankind | | | | | |
| 2.2.3. Climate change is a significant issue for my business | | | | | |
| 2.2.4. Efficient energy use is important for my business | | | | | |
| 2.2.5. SMEs are responsible for more than 70% of the total pollution | | | | | |
| 2.2.6. Pro environmental attitudes do not always mean positive environmental behaviours | | | | | |
| 2.2.7. In these economically challenging times climate change is low on our priority | | | | | |
| 2.2.8. My business has a responsibility to help manage the impact of climate change | | | | | |

Section 3: Business owners' awareness and attitude towards the SA Income tax system

3.1. How do you feel about income taxes and the income tax system ?

Answer options: very unfair (1), unfair (2), neither unfair nor fair (3), fair (4) and very fair (5)

| Statement | 1 | 2 | 3 | 4 | 5 |
|--|----------|----------|----------|----------|----------|
| 3.1.1. For the average taxpayer, I think that the income tax system is: | | | | | |
| 3.1.2. For me personally, I believe that the income tax system is: | | | | | |
| 3.1.3. Generally, I believe that the manner in which the income tax burden is distributed across taxpayers is: | | | | | |

3.2. How do you feel about income taxes and the income tax system?

Answer options: Strongly Disagree (SD), Disagree (D), Not Sure (NS), Agree (A), and Strongly Agree (SA)

| Statement | SD | D | N | A | SA |
|--|-----------|----------|----------|----------|-----------|
| 3.2.1. Generally, I feel the income tax is a fair tax | | | | | |
| 3.2.2. There is a high business profit by operating illegal business and under reporting of profits. | | | | | |
| 3.2.3. The tax system is well designed | | | | | |
| 3.2.4. I feel rules are applied inconsistently | | | | | |
| 3.2.5. I feel a moral obligation to pay my tax | | | | | |
| 3.2.6. Paying tax is a responsibility that should be willingly accepted by all Tax payers | | | | | |

3.3. The tax compliance of business owners

Answer options: Strongly Disagree (SD), Disagree (D), Not Sure (NS), Agree (A), and Strongly Agree (SA)

| Statement | SD | D | N | A | SA |
|---|-----------|----------|----------|----------|-----------|
| 3.3.1. I always file my tax return without the assistance of a tax expert/an accountant | | | | | |
| 3.3.2. The tax system is easy to understand i.e. rate of tax, filing and paying dates | | | | | |
| 3.3.3. I have not exaggerated the amount of deductions in my income tax return. | | | | | |

| | | | | | |
|---|--|--|--|--|--|
| 3.3.4. I am absolutely confident about the legitimacy of the claims in my income tax return | | | | | |
| 3.3.5. I declare all my income earned for tax purpose | | | | | |
| 3.3.6. It is the responsibility of all to pay the correct amount of tax | | | | | |
| 3.3.7. It is the responsibility of all to comply with the tax laws | | | | | |

Section 4: identifying owners understanding of environmental taxation

4.1. Are you fully aware of South Africa government's environmental policy?

Answer options: Choose one of the statements below

| | |
|-------------------|--|
| <u>Yes</u> | |
| <u>No</u> | |

4.2. Are you fully aware of the term environmental taxation?

Answer options: Choose one of the statements below

| | |
|-------------------|--|
| <u>Yes</u> | |
| <u>No</u> | |

4.3. In your opinion, what is environmental taxation?

Answer options: Choose one of the statements below

| | |
|---|--|
| Don't know | |
| Another business tax | |
| Tax to encourage good environmental behaviour | |
| Polluter pays concept | |
| Taxes on energy | |
| Taxes on wastes | |
| Taxing environmentally damaging activities | |
| Another business tax | |

| | |
|---|--|
| Tax to encourage good environmental behaviour | |
|---|--|

4.4. In your opinion, what do you think is the purpose of environmental taxation?

Answer options: Choose one of the statements below

| | |
|--|--|
| Another business tax to raise government revenue | |
| Fines on polluting behavior | |
| To incentivize favorable environmental behavior | |
| A social cover up for government greed | |

Section 5: Identifying the level of awareness of the owner of SME'S to green tax incentives.

5.1. Environmental tax incentives

Answer options: Strongly Disagree (SD), Disagree (D), Not Sure (NS), Agree (A), and Strongly Agree (SA)

| Statement | SD | D | N | A | SA |
|--|----|---|---|---|----|
| 5.1.1. The government needs to offer more incentives to support investment in environmentally beneficial activities, processes & new technologies. | | | | | |
| 5.1.2. Meeting criteria required by current tax incentives is too onerous to make the incentives worth applying for. | | | | | |
| 5.1.3. It is clear what tax incentives exist and how to apply for them. | | | | | |
| 5.1.4. Current tax incentives are sufficiently motivating to make businesses change their behaviour. | | | | | |

5.2. The awareness of SME owners towards green tax incentives

Answer options: Strongly Disagree (SD), Disagree (D), Not Sure (NS), Agree (A), and Strongly Agree (SA)

| Statement | SD | D | N | A | SA |
|---|----|---|---|---|----|
| 5.2.1. If government offered tax incentives, a business like ours would significantly accelerate its green investment. | | | | | |
| 5.2.2. The government should encourage environmentally friendly business practices by means of tax incentives. | | | | | |
| 5.2.3. I am aware of green tax as government has done well to communicate this initiative. | | | | | |
| 5.2.4. Current tax incentives are sufficiently motivating to make businesses change their behaviour. | | | | | |
| 5.2.5. My business will support carbon taxes as a means of encouraging more efficient use of energy and reducing carbon emission. | | | | | |

| | | | | | |
|---|--|--|--|--|--|
| 5.2.6. I am in favour of green tax even if it increases the price of the products that my business uses for manufacturing. | | | | | |
| 5.2.7. I would make long -term business decisions or investments, taking government's existing environmental tax and regulation framework into account. | | | | | |
| 5.2.8. The government needs to offer more incentives to encourage companies to invest in environmentally beneficial practices. | | | | | |

5.3. The effectiveness of different government environmental tools

How effective do you feel each of the following tools are/would be at encouraging your business to reduce its environmental impact?

Answer options: Not at all effective (1), Not very effective (2), don't know (3), very effective (4) and fairly effective

| List of tools | 1 | 2 | 3 | 4 |
|-----------------------|---|---|---|---|
| 5.3.1. Regulation | | | | |
| 5.3.2. Tax charges | | | | |
| 5.3.3. Tax incentives | | | | |

Section 6: Attitudes of owners of SMEs towards green tax incentives.

6.1 How does the following business concepts affect business decisions?

Answer options: No influence on decision making (1) or don't know (2) or influential on decision making (3)

| Statement | 1 | 2 | 3 |
|--|---|---|---|
| 6.1.1. Complying with legislation and regulation | | | |
| 6.1. 2. Competitive advantage | | | |
| 6.1.3. Costing saving | | | |
| 6.1.4.Obtaining tax incentive | | | |

6.2 Identifying the level of supporting or opposing green taxation

Answer options: oppose (O) or Neutral (N) or Support (S)

| Statement | O | N | S |
|--|---|---|---|
| 6.2.1. In principle, I would support or oppose or be neutral towards green taxes. | | | |
| 6.2.2. What if there was a guarantee that the money generated by the extra tax was spent directly on projects that would help to reduce carbon dioxide emissions - for example, the money could be used to subsidize public transport or home insulation. In principle, would you support, or oppose or be neutral to an increase in green taxes if the money was spent in this way. | | | |
| 6.2.3. I would be more likely to support, oppose or be neutral towards green taxes if other taxes were reduced at the same time. | | | |

6.3. What is your attitude with regard to the application of green tax incentives?

Answer options: Strongly Disagree (SD), Disagree (D), Not Sure (NS), Agree (A), and Strongly Agree (SA)

| Statement | SD | D | N | A | SA |
|--|----|---|---|---|----|
| 6.3.1. There is difficulty in establishing what incentives exist. | | | | | |
| 6.3.2. The existing environmental taxes, regulations and incentives are ineffective. | | | | | |
| 6.3.3. I am afraid to apply for green tax incentives due to being investigated by SARS. | | | | | |
| 6.4.4. I would hire a specialist tax consultant to advise me on the application and utilisation of green tax incentives. | | | | | |
| 6.3.5. Government does not engaged effectively with business in terms of environmental policies. | | | | | |
| 6.3.6. Compliance with current tax incentives is too onerous to merit applying for them. | | | | | |

Section 7: Perceptions of SME owners' with regard to business sustainability and profitability, if green tax incentives are used

7.1. What is your perceptions regarding business sustainability and profitability, if green tax incentives are used?

Answer options: Strongly Disagree (SD), Disagree (D), Not Sure (NS), Agree (A), and Strongly Agree (SA)

| Statement | SD | D | N | A | SA |
|---|----|---|---|---|----|
| 7.1.1. I am willing to implement green tax incentives as they create business sustainability. | | | | | |
| 7.1.2. I am willing to implement green tax incentives as they improve business profitability. | | | | | |
| 7.1.3. I use green tax incentives to create new sustainable business practices. | | | | | |
| 7.1.4. Our business cannot be more environmentally friendly until It is more profitable. | | | | | |
| 7.1.5. I can improve my firms' profitability by implementing greener business practices. | | | | | |
| 7.1.6. Implementing green tax incentives results in cost saving. | | | | | |

Section 8: Perceptions of introducing other green tax incentives and the implications for manufacturing SME's going green

8.1. Perceptions of introducing other green tax incentives and the implications for manufacturing SME's going green

Answer options: Strongly Disagree (SD), Disagree (D), Not Sure (NS), Agree (A), and Strongly Agree (SA)

| Statement | SD | D | N | A | SA |
|--|----|---|---|---|----|
| 8.1.1. Government is trying to encourage business to go green by rewarding business with green incentives. | | | | | |
| 8.1.2. The SA tax system should include incentives for business to become carbon neutral. | | | | | |
| 8.1.3. There should be an introduction of new green tax incentives that are tailored for SME's. | | | | | |
| 8.1.4. There should be an energy efficient tax deduction for energy efficient businesses. | | | | | |
| 8.1.5. There should be tax exemption and deductions to encourage taxpayers to buy alternative and fuel-efficient vehicles. | | | | | |
| 8.1.6. There should be the creation of income tax deduction per tree for every indigenous tree planted. | | | | | |
| 8.1.7. SME's that produce green products should be zero-rated in terms of VAT. | | | | | |
| 8.1.8. Businesses can take a bonus tax depreciation for qualified equipment used in reuse and recycling processes. | | | | | |
| 8.1.9. I would offer fringe benefits to employees for green initiatives, e.g. riding bicycle to work, only if I'm granted full tax deduction | | | | | |
| 8.1.10. There should be a different tax penalty on negative environmental activities based on the size of an enterprise. | | | | | |
| 8.1.11. There should be tax subsidies and grants made available to renewable energy producers. | | | | | |

8.2 There is work to be done in convincing organisations about all aspects of government tax and regulatory frameworks

Answer options: Strongly Disagree (SD), Disagree (D), Not Sure (NS), Agree (A), and Strongly Agree (SA)

| Statement | SD | D | N | A | SA |
|---|----|---|---|---|----|
| 8.2.1.. Effective engagement with businesses over environmental. Policy and tax | | | | | |
| 8.2.2. Sufficient priority given to business issues re. climate change | | | | | |

8.3. How important do you feel is it for business to see that monies raised from environmental taxes and regulations are being/would be directed to 'green'/environmental projects and initiatives?

Answer options: Not At All Important (1), Not Very Important (2), Fairly Important (3) and Very Important (4)

| Statement | 1 | 2 | 3 | 4 |
|---|---|---|---|---|
| 8.3.1. How important do you feel is it for business to see that monies raised from environmental taxes and regulation are being/would be directed to 'green'/environmental projects and initiatives | | | | |

8.4. Are there any further issues or comments that you wish to add in respect of the research study. Kindly use the space below for your responses.

Thank you!

Appendix B: Letter of information



Title of Research study: An exploration of the views of manufacturing small medium enterprise owners with regards to green tax incentives in the EThekweni region of Kwa Zulu - Natal

Researcher: Mr U. Kalidin

Co-investigator/s/supervisor /s: Professor R. Bhagwan (PHD)

Outline of the Procedures:

- i. Questionnaires to manufacturing SME'S owners
All manufacturing SME'S owners from the EThekweni region will be participants in the survey. Questionnaires will be submitted to SME'S owners in this region of KZN. With the consent of the owners, the questionnaire would take 10 minutes to complete.

Risk or discomfort to the Participant: There are no risks to participants.

Benefits: None

Reason /s why the Participant may be Withdrawn from the Study: Participation is voluntary and the participants may withdraw at any time.

Remuneration: Research participants will not be paid.

Cost of the study: No cost.

Confidentially: The respondent's identity will not be required on the questionnaire.

Research-related Injury: N/A

Person to contact in the event of any Problems or Queries

For further queries kindly contact the Researcher, Mr U. Kalidin, on 074 209 3609 or my supervisor, Professor R. Bhagwan 031 373 2197 or the institutional research ethics administrator on 031 373 2900. Complaints can be reported to the DVC: TIP, Prof F. Otieno on 031 373 2382 or dvctip@dut.ac.za.

Appendix C: Letter of consent



CONSENT

Statement of Agreement to Participate in the Research Study:

- I hereby confirm that I have been informed by the researcher, Mr. U. Kalidin (name of the researcher), about the nature, conduct, benefits and risk of this study-Research Ethics. Clearance Number 6213
- I have also received, read and understand the above written information (Participant Letter of information) regarding the study.
- I am aware that the result of the study, including personal and business details will be anonymously processed into a study report.
- In view of the requirements of research, I agree that the data collected during this study can be processed in a computerized system by the research.
- I may, at any stage, without prejudice, withdraw my consent and participation in the study
- I have had sufficient opportunity to ask questions and (of my own free will) declare myself prepared to participate in the study.
- I understand that there will be significant insight and a better understanding will develop during the course of this research, which may relate to my participation and will be made available to me.

| Full name of Participant | Date | Time | Signature/Right Thumbprint |
|--------------------------|------|------|----------------------------|
|--------------------------|------|------|----------------------------|

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

| Full name of Witness (if applicable) | Date | Time | Signature |
|--------------------------------------|------|------|-----------|
|--------------------------------------|------|------|-----------|

Appendix D : Chi test values

| | | Type of ownership? | How many years have you been operating your business? | Age | Highest educational Qualification | Are you aware of the term climate change? |
|--|------------|--------------------|---|--------|-----------------------------------|---|
| Business is the largest contributor to climate change | Chi-square | 14,369 | 29,060 | 20,828 | 35,344 | 22,493 |
| | df | 12 | 16 | 16 | 12 | 4 |
| | Sig. | 0,278 | .024* | 0,185 | .000* | .000* |
| Climate change is a huge challenge to mankind | Chi-square | 9,716 | 4,274 | 13,504 | 27,347 | 16,227 |
| | df | 6 | 8 | 8 | 6 | 2 |
| | Sig. | 0,137 | 0,832 | 0,096 | .000* | .000* |
| Climate change is a significant issue for my business | Chi-square | 13,939 | 23,282 | 22,613 | 22,115 | 10,379 |
| | df | 12 | 16 | 16 | 12 | 4 |
| | Sig. | 0,305 | 0,106 | 0,124 | .036* | .035* |
| Efficient energy use is important for my business | Chi-square | 7,699 | 9,430 | 25,768 | 57,829 | 34,098 |
| | df | 12 | 16 | 16 | 12 | 4 |
| | Sig. | 0,808 | 0,895 | 0,057 | .000* | .000* |
| SMEs are responsible for more than % of the total pollution | Chi-square | 26,826 | 35,947 | 18,267 | 43,258 | 1,926 |
| | df | 12 | 16 | 16 | 12 | 4 |
| | Sig. | .008* | .003* | 0,309 | .000* | 0,749 |
| Pro environmental attitudes do not always mean positive environmental behaviours | Chi-square | 18,442 | 22,550 | 14,098 | 17,909 | 1,862 |
| | df | 12 | 16 | 16 | 12 | 4 |
| | Sig. | 0,103 | 0,126 | 0,591 | 0,118 | 0,761 |
| In these economically challenging times climate change is low on our priority | Chi-square | 20,285 | 9,249 | 16,928 | 26,927 | 11,504 |
| | df | 12 | 16 | 16 | 12 | 4 |
| | Sig. | 0,062 | 0,903 | 0,39 | .008* | .021* |
| My business has a responsibility to help manage the impact of climate change | Chi-square | 8,201 | 13,552 | 18,033 | 56,695 | 34,308 |
| | df | 12 | 16 | 16 | 12 | 4 |
| | Sig. | 0,769 | 0,632 | 0,322 | .000* | .000* |
| For the average taxpayer, I think that the income tax system is... | Chi-square | 17,958 | 25,306 | 21,131 | 18,621 | 3,965 |
| | df | 12 | 16 | 16 | 12 | 4 |
| | Sig. | 0,117 | 0,065 | 0,174 | 0,098 | 0,411 |
| For me personally, I believe that the income tax system is... | Chi-square | 16,184 | 26,278 | 30,462 | 13,498 | 4,386 |
| | df | 12 | 16 | 16 | 12 | 4 |
| | Sig. | 0,183 | 0,05 | .016* | 0,334 | 0,356 |
| | Chi-square | 10,127 | 17,247 | 14,253 | 18,049 | 5,483 |

| | | | | | | |
|--|------------|--------|--------|--------|--------|-------|
| Generally, I believe that the manner in which the income tax burden is distributed across taxpayers is | df | 12 | 16 | 16 | 12 | 4 |
| | Sig. | 0,605 | 0,37 | 0,58 | 0,114 | 0,241 |
| Generally, I feel the income tax is a fair tax | Chi-square | 27,525 | 21,170 | 20,230 | 11,823 | 2,093 |
| | df | 12 | 16 | 16 | 12 | 4 |
| | Sig. | .006* | 0,172 | 0,21 | 0,46 | 0,719 |
| There is a high business profit by operating illegal business and under reporting of profits | Chi-square | 21,584 | 10,090 | 11,483 | 55,426 | 1,233 |
| | df | 12 | 16 | 16 | 12 | 4 |
| | Sig. | .042* | 0,862 | 0,779 | .000* | 0,873 |
| The tax system is well designed | Chi-square | 30,324 | 16,948 | 29,974 | 20,191 | 4,439 |
| | df | 12 | 16 | 16 | 12 | 4 |
| | Sig. | .002* | 0,389 | .018* | 0,064 | 0,35 |
| I feel rules are applied inconsistently | Chi-square | 10,510 | 10,248 | 34,446 | 15,723 | 6,360 |
| | df | 12 | 16 | 16 | 12 | 4 |
| | Sig. | 0,571 | 0,853 | .005* | 0,204 | 0,174 |
| I feel a moral obligation to pay my tax | Chi-square | 4,183 | 16,601 | 43,359 | 4,759 | ,357 |
| | df | 9 | 12 | 12 | 9 | 3 |
| | Sig. | 0,899 | 0,165 | .000* | 0,855 | 0,949 |
| Paying tax is a responsibility that should be willingly accepted by all Tax payers | Chi-square | 14,844 | 12,607 | 13,923 | 8,168 | ,259 |
| | df | 12 | 16 | 16 | 12 | 4 |
| | Sig. | 0,25 | 0,701 | 0,604 | 0,772 | 0,992 |
| I always file my tax return without the assistance of a tax expert/an accountant | Chi-square | 14,432 | 16,390 | 10,177 | 11,400 | 4,382 |
| | df | 9 | 12 | 12 | 9 | 3 |
| | Sig. | 0,108 | 0,174 | 0,6 | 0,249 | 0,223 |
| The tax system is easy to understand ie rate of tax, filing and paying dates | Chi-square | 23,789 | 23,575 | 19,519 | 19,358 | 3,604 |
| | df | 12 | 16 | 16 | 12 | 4 |
| | Sig. | .022* | 0,099 | 0,243 | 0,08 | 0,462 |
| I have not exaggerated the amount of deductions in my income tax return | Chi-square | 9,514 | 13,286 | 38,591 | 7,919 | ,416 |
| | df | 9 | 12 | 12 | 9 | 3 |
| | Sig. | 0,391 | 0,349 | .000* | 0,542 | 0,937 |
| I am absolutely confident about the legitimacy of the claims in my income tax return | Chi-square | 8,767 | 25,926 | 12,183 | 6,825 | 3,895 |
| | df | 12 | 16 | 16 | 12 | 4 |
| | Sig. | 0,723 | 0,055 | 0,731 | 0,869 | 0,42 |
| I declare all my income earned for tax purpose | Chi-square | 5,376 | 17,862 | 12,569 | 9,263 | 1,066 |
| | df | 9 | 12 | 12 | 9 | 3 |
| | Sig. | 0,8 | 0,12 | 0,401 | 0,413 | 0,785 |
| It is everyone's responsibility to pay the correct amount of tax | Chi-square | 8,246 | 14,297 | 14,569 | 9,618 | ,181 |
| | df | 9 | 12 | 12 | 9 | 3 |
| | Sig. | 0,51 | 0,282 | 0,266 | 0,382 | 0,981 |
| It is every ones responsibility to comply with the tax laws | Chi-square | 10,353 | 5,101 | 8,798 | 7,491 | 2,356 |
| | df | 6 | 8 | 8 | 6 | 2 |

| | | | | | | |
|--|------------|--------|--------|--------|--------|--------|
| | Sig. | 0,111 | 0,747 | 0,36 | 0,278 | 0,308 |
| Are you fully aware of South Africa government's environmental policy? | Chi-square | 12,259 | 4,843 | 4,606 | 5,335 | ,647 |
| | df | 3 | 4 | 4 | 3 | 1 |
| | Sig. | .007* | 0,304 | 0,33 | 0,149 | 0,421 |
| Are you fully aware of the term environmental taxation? | Chi-square | 8,062 | 2,718 | 8,149 | 4,732 | ,441 |
| | df | 3 | 4 | 4 | 3 | 1 |
| | Sig. | .045* | 0,606 | 0,086 | 0,193 | 0,506 |
| In your opinion, what is environmental taxation? | Chi-square | 31,151 | 35,357 | 63,403 | 21,551 | 12,363 |
| | df | 24 | 32 | 32 | 24 | 8 |
| | Sig. | 0,149 | 0,313 | .001* | 0,606 | 0,136 |
| In your opinion, what do you think is the purpose of environmental taxation? | Chi-square | 10,921 | 9,029 | 14,399 | 13,555 | 4,119 |
| | df | 9 | 12 | 12 | 9 | 3 |
| | Sig. | 0,281 | 0,7 | 0,276 | 0,139 | 0,249 |
| The government needs to offer more incentives to support investment in environmentally beneficial activities, processes & new technologies | Chi-square | 11,831 | 16,398 | 17,351 | 19,137 | 9,801 |
| | df | 12 | 16 | 16 | 12 | 4 |
| | Sig. | 0,459 | 0,426 | 0,363 | 0,085 | .044* |
| Meeting criteria required by current tax incentives is too onerous to make the incentives worth applying for | Chi-square | 14,241 | 35,471 | 11,414 | 13,181 | 1,104 |
| | df | 12 | 16 | 16 | 12 | 4 |
| | Sig. | 0,286 | .003* | 0,783 | 0,356 | 0,894 |
| It is clear what tax incentives exist and how to apply for them | Chi-square | 11,060 | 10,459 | 13,243 | 9,910 | 6,455 |
| | df | 12 | 16 | 16 | 12 | 4 |
| | Sig. | 0,524 | 0,842 | 0,655 | 0,624 | 0,168 |
| Current tax incentives are sufficiently motivating to make businesses change their behaviour | Chi-square | 25,943 | 20,217 | 29,196 | 14,775 | ,978 |
| | df | 12 | 16 | 16 | 12 | 4 |
| | Sig. | .011* | 0,211 | .023* | 0,254 | 0,913 |
| If government offered tax incentives, a business like ours would significantly accelerate its green investment | Chi-square | 13,893 | 20,715 | 21,629 | 28,139 | ,905 |
| | df | 12 | 16 | 16 | 12 | 4 |
| | Sig. | 0,308 | 0,19 | 0,156 | .005* | 0,924 |
| The government should encourage environmentally friendly business practices by means of tax incentives | Chi-square | 11,528 | 9,424 | 7,620 | 16,858 | ,535 |
| | df | 6 | 8 | 8 | 6 | 2 |
| | Sig. | 0,073 | 0,308 | 0,471 | .010* | 0,765 |
| I am aware of green tax as government has done well to communicate this initiative | Chi-square | 25,943 | 20,217 | 29,196 | 14,775 | ,978 |
| | df | 12 | 16 | 16 | 12 | 4 |
| | Sig. | .011* | 0,211 | .023* | 0,254 | 0,913 |
| Current tax incentives are sufficiently motivating to make businesses change their behaviour | Chi-square | 25,943 | 20,217 | 29,196 | 14,775 | ,978 |
| | df | 12 | 16 | 16 | 12 | 4 |
| | Sig. | .011* | 0,211 | .023* | 0,254 | 0,913 |
| My business will support carbon taxes as a means of encouraging more efficient use of energy and reducing carbon emission | Chi-square | 16,769 | 30,883 | 5,189 | 7,645 | 4,414 |
| | df | 9 | 12 | 12 | 9 | 3 |
| | Sig. | 0,052 | .002* | 0,951 | 0,57 | 0,22 |

| | | | | | | |
|--|------------|--------|--------|--------|--------|--------|
| I am in favour of green tax even if it increases the price of the products that my business uses for manufacturing | Chi-square | 25,943 | 20,217 | 29,196 | 14,775 | ,978 |
| | df | 12 | 16 | 16 | 12 | 4 |
| | Sig. | .011* | 0,211 | .023* | 0,254 | 0,913 |
| I would make long -term business decisions or investments, taking government's existing environmental tax and regulation framework into account | Chi-square | 17,324 | 19,860 | 16,641 | 13,948 | ,756 |
| | df | 12 | 16 | 16 | 12 | 4 |
| | Sig. | 0,138 | 0,227 | 0,409 | 0,304 | 0,944 |
| The government needs to offer more incentives to encourage companies to invest in environmentally beneficial practices | Chi-square | 17,076 | 16,396 | 17,223 | 7,080 | ,439 |
| | df | 9 | 12 | 12 | 9 | 3 |
| | Sig. | .048* | 0,174 | 0,141 | 0,629 | 0,932 |
| Regulation | Chi-square | 10,768 | 15,925 | 8,302 | 12,060 | 3,753 |
| | df | 9 | 12 | 12 | 9 | 3 |
| | Sig. | 0,292 | 0,195 | 0,761 | 0,21 | 0,289 |
| Tax charges | Chi-square | 7,021 | 17,422 | 20,049 | 29,445 | 2,631 |
| | df | 12 | 16 | 16 | 12 | 4 |
| | Sig. | 0,856 | 0,359 | 0,218 | .003* | 0,621 |
| Tax incentives | Chi-square | 9,623 | 36,791 | 14,589 | 20,693 | 5,361 |
| | df | 12 | 16 | 16 | 12 | 4 |
| | Sig. | 0,649 | .002* | 0,555 | 0,055 | 0,252 |
| Complying with legislation and regulation | Chi-square | 2,522 | 4,905 | 10,420 | 4,536 | 1,138 |
| | df | 6 | 8 | 8 | 6 | 2 |
| | Sig. | 0,866 | 0,768 | 0,237 | 0,605 | 0,566 |
| Competitive advantage | Chi-square | 3,849 | 5,114 | 12,674 | 5,952 | ,691 |
| | df | 6 | 8 | 8 | 6 | 2 |
| | Sig. | 0,697 | 0,745 | 0,124 | 0,429 | 0,708 |
| Costing saving | Chi-square | 3,849 | 5,114 | 12,674 | 5,952 | ,691 |
| | df | 6 | 8 | 8 | 6 | 2 |
| | Sig. | 0,697 | 0,745 | 0,124 | 0,429 | 0,708 |
| Obtaining tax incentive | Chi-square | 2,522 | 4,905 | 10,420 | 4,536 | 1,138 |
| | df | 6 | 8 | 8 | 6 | 2 |
| | Sig. | 0,866 | 0,768 | 0,237 | 0,605 | 0,566 |
| In principle, I would support or oppose or be neutral towards green taxes | Chi-square | 12,776 | 3,943 | 7,403 | 14,365 | 7,263 |
| | df | 3 | 4 | 4 | 3 | 1 |
| | Sig. | .005* | 0,414 | 0,116 | .002* | .007* |
| What if there was a guarantee that the money generated by the extra tax was spent directly on projects that would help to reduce carbon dioxide emissions - for example, the money could be used to subsidize public transport or home insulation In principle | Chi-square | 1,754 | 2,172 | 3,366 | 51,495 | 33,994 |
| | df | 3 | 4 | 4 | 3 | 1 |
| | Sig. | 0,625 | 0,704 | 0,499 | .000* | .000* |
| I would be more likely to support, oppose or be neutral towards green taxes if other taxes were reduced at the same time | Chi-square | 12,099 | 2,686 | 3,289 | 4,391 | ,061 |
| | df | 3 | 4 | 4 | 3 | 1 |
| | Sig. | .007* | 0,612 | 0,511 | 0,222 | 0,806 |

| | | | | | | |
|--|------------|--------|--------|--------|--------|-------|
| There is difficulty in establishing what incentives exist | Chi-square | 19,378 | 32,552 | 30,996 | 21,206 | ,454 |
| | df | 12 | 16 | 16 | 12 | 4 |
| | Sig. | 0,08 | .008* | .013* | .047* | 0,978 |
| The existing environmental taxes, regulations and incentives are ineffective | Chi-square | 22,322 | 9,349 | 11,065 | 8,820 | ,331 |
| | df | 9 | 12 | 12 | 9 | 3 |
| | Sig. | .008* | 0,673 | 0,523 | 0,454 | 0,954 |
| I am afraid to apply for green tax incentives due to being investigated by SARS | Chi-square | 37,842 | 17,013 | 15,120 | 15,784 | 1,985 |
| | df | 12 | 16 | 16 | 12 | 4 |
| | Sig. | .000* | 0,385 | 0,516 | 0,201 | 0,738 |
| I would hire a specialist tax consultant to advise me on the application and utilisation of green tax incentives | Chi-square | 23,504 | 23,712 | 14,479 | 21,167 | 5,048 |
| | df | 12 | 16 | 16 | 12 | 4 |
| | Sig. | .024* | 0,096 | 0,563 | .048* | 0,282 |
| Government does not engaged effectively with business in terms of environmental policies | Chi-square | 11,407 | 19,352 | 19,787 | 29,147 | 7,461 |
| | df | 12 | 16 | 16 | 12 | 4 |
| | Sig. | 0,494 | 0,251 | 0,23 | .004* | 0,113 |
| Compliance with current tax incentives is too onerous to merit applying for them | Chi-square | 13,508 | 13,929 | 25,868 | 16,622 | 4,365 |
| | df | 9 | 12 | 12 | 9 | 3 |
| | Sig. | 0,141 | 0,305 | .011* | 0,055 | 0,225 |
| I am willing to implement green tax incentives as they create business sustainability | Chi-square | 19,021 | 19,815 | 21,846 | 18,387 | 1,804 |
| | df | 12 | 16 | 16 | 12 | 4 |
| | Sig. | 0,088 | 0,229 | 0,148 | 0,104 | 0,772 |
| I am willing to implement green tax incentives as they improve business profitability | Chi-square | 10,421 | 11,519 | 21,732 | 28,438 | 2,939 |
| | df | 9 | 12 | 12 | 9 | 3 |
| | Sig. | 0,318 | 0,485 | .041* | .001* | 0,401 |
| I use green tax incentives to create new sustainable business practices | Chi-square | 16,181 | 20,810 | 18,275 | 10,266 | ,679 |
| | df | 12 | 16 | 16 | 12 | 4 |
| | Sig. | 0,183 | 0,186 | 0,308 | 0,593 | 0,954 |
| Our business cannot be more environmentally friendly until we become more profitable | Chi-square | 19,930 | 22,443 | 12,346 | 20,335 | ,716 |
| | df | 12 | 16 | 16 | 12 | 4 |
| | Sig. | 0,068 | 0,129 | 0,72 | 0,061 | 0,949 |
| I can improve my firm's profitability by implementing greener business practices | Chi-square | 23,220 | 30,629 | 47,635 | 21,136 | 1,368 |
| | df | 12 | 16 | 16 | 12 | 4 |
| | Sig. | .026* | .015* | .000* | .048* | 0,85 |
| Implementing green tax incentives results in cost saving | Chi-square | 14,756 | 17,567 | 41,360 | 14,010 | 1,419 |
| | df | 12 | 16 | 16 | 12 | 4 |
| | Sig. | 0,255 | 0,35 | .000* | 0,3 | 0,841 |
| Government is trying to encourage business to go green by rewarding business with green incentives | Chi-square | 19,125 | 19,311 | 23,575 | 21,973 | 4,447 |
| | df | 12 | 16 | 16 | 12 | 4 |
| | Sig. | 0,086 | 0,253 | 0,099 | .038* | 0,349 |

| | | | | | | |
|--|------------|--------|--------|--------|--------|-------|
| The South African tax system should include incentives for business to become carbon neutral | Chi-square | 7,074 | 23,137 | 27,052 | 15,127 | ,677 |
| | df | 12 | 16 | 16 | 12 | 4 |
| | Sig. | 0,853 | 0,11 | .041* | 0,235 | 0,954 |
| There should be an introduction of new green tax incentives that are tailored for SME's | Chi-square | 9,010 | 19,851 | 7,998 | 11,543 | ,381 |
| | df | 9 | 12 | 12 | 9 | 3 |
| | Sig. | 0,436 | 0,07 | 0,785 | 0,24 | 0,944 |
| There should be an energy efficient tax deduction for energy efficient businesses | Chi-square | 16,653 | 24,958 | 12,112 | 25,445 | ,423 |
| | df | 12 | 16 | 16 | 12 | 4 |
| | Sig. | 0,163 | 0,071 | 0,736 | .013* | 0,981 |
| There should be tax exemption and deductions to encourage taxpayers to buy alternative and fuel-efficient vehicles | Chi-square | 10,653 | 14,992 | 14,089 | 11,173 | ,745 |
| | df | 9 | 12 | 12 | 9 | 3 |
| | Sig. | 0,3 | 0,242 | 0,295 | 0,264 | 0,863 |
| There should be the creation of income tax deduction per tree for every indigenous tree planted | Chi-square | 13,154 | 32,868 | 11,522 | 7,361 | ,476 |
| | df | 12 | 16 | 16 | 12 | 4 |
| | Sig. | 0,358 | .008* | 0,776 | 0,833 | 0,976 |
| SME's that produce green products should be zero- rated in terms of VAT | Chi-square | 16,018 | 35,655 | 12,850 | 8,313 | 3,089 |
| | df | 12 | 16 | 16 | 12 | 4 |
| | Sig. | 0,19 | .003* | 0,684 | 0,76 | 0,543 |
| Businesses can take a bonus tax depreciation for qualified equipment used in reuse and recycling processes | Chi-square | 11,929 | 29,240 | 6,239 | 4,201 | 3,089 |
| | df | 9 | 12 | 12 | 9 | 3 |
| | Sig. | 0,217 | .004* | 0,904 | 0,898 | 0,378 |
| I would offer fringe benefits to employees for green initiatives, eg riding bicycle to work, only if I'm granted full tax deduction | Chi-square | 22,630 | 22,394 | 14,818 | 8,267 | ,601 |
| | df | 12 | 16 | 16 | 12 | 4 |
| | Sig. | .031* | 0,131 | 0,538 | 0,764 | 0,963 |
| There should be a different tax penalty on negative environmental activities based on the size of an enterprise | Chi-square | 7,573 | 34,180 | 21,090 | 26,455 | ,520 |
| | df | 12 | 16 | 16 | 12 | 4 |
| | Sig. | 0,818 | .005* | 0,175 | .009* | 0,972 |
| There should be tax subsidies and grants made available to renewable energy producers | Chi-square | 12,737 | 19,139 | 7,518 | 9,565 | ,203 |
| | df | 9 | 12 | 12 | 9 | 3 |
| | Sig. | 0,175 | 0,085 | 0,822 | 0,387 | 0,977 |
| Effective engagement with businesses over environmental Policy and tax | Chi-square | 25,943 | 20,217 | 29,196 | 14,775 | ,978 |
| | df | 12 | 16 | 16 | 12 | 4 |
| | Sig. | .011* | 0,211 | .023* | 0,254 | 0,913 |
| Sufficient priority given to business issues re climate change | Chi-square | 25,943 | 20,217 | 29,196 | 14,775 | ,978 |
| | df | 12 | 16 | 16 | 12 | 4 |
| | Sig. | .011* | 0,211 | .023* | 0,254 | 0,913 |
| How important do you feel it is for business to see that monies raised from environmental taxes and regulation are being/would be directed to 'green'/environmental projects and initiatives | Chi-square | 18,256 | 7,586 | 8,108 | 11,926 | 4,554 |
| | df | 9 | 12 | 12 | 9 | 3 |
| | Sig. | .032* | 0,817 | 0,777 | 0,218 | 0,208 |

Appendix E: Factor analysis

4.13.1 Section B2

Table 13 : Rotated Component Matrix: Business owner's awareness and attitude of the owner of the SME's to the environment and environmental issues

| | Component | | |
|--|-----------|-------|-------|
| | 1 | 2 | 3 |
| Business is the largest contributor to climate change | .628 | .110 | .198 |
| Climate change is a huge challenge to mankind | .601 | -.042 | .196 |
| Climate change is a significant issue for my business | .711 | .200 | .208 |
| Efficient energy use is important for my business | .128 | -.144 | .792 |
| SMEs are responsible for more than % of the total pollution | .145 | .280 | .729 |
| Pro environmental attitudes do not always mean positive environmental behaviours | .028 | .865 | .235 |
| In these economically challenging times climate change is low on our priority | .187 | .856 | -.154 |
| My business has a responsibility to help manage the impact of climate change | .778 | .075 | -.273 |

Extraction Method: Principal Component Analysis. Rotation Method: Varimax with Kaiser Normalization.
a. Rotation converged in 5 iterations.

4.13.2

Table 14: Rotated Component Matrix: Business owner's awareness and attitude in terms of South Africa Income tax

| | Component | | |
|--|-----------|-------|-------|
| | 1 | 2 | 3 |
| For the average taxpayer, I think that the income tax system is... | .924 | -.060 | .127 |
| For me personally, I believe that the income tax system is... | .898 | -.030 | .217 |
| Generally, I believe that the manner in which the income tax burden is distributed across taxpayers is | .871 | .148 | .160 |
| Generally, I feel the income tax is a fair tax | .406 | -.023 | .797 |
| There is a high business profit by operating illegal business and under reporting of profits | -.081 | -.041 | .666 |
| The tax system is well designed | .183 | .058 | .737 |
| I feel rules are applied inconsistently | .094 | .104 | .728 |
| I feel a moral obligation to pay my tax | .072 | .671 | .032 |
| Paying tax is a responsibility that should be willingly accepted by all Tax payers | .023 | .742 | .113 |
| I always file my tax return without the assistance of a tax expert/an accountant | .064 | .586 | .373 |
| The tax system is easy to understand ie rate of tax, filing and paying dates | .124 | .486 | .375 |
| I have not exaggerated the amount of deductions in my income tax return | -.393 | .376 | -.053 |
| I am absolutely confident about the legitimacy of the claims in my income tax return | -.214 | .533 | -.013 |
| I declare all my income earned for tax purpose | -.029 | .581 | .041 |
| It is everyone's responsibility to pay the correct amount of tax | .022 | .677 | -.063 |
| It is every ones responsibility to comply with the tax laws | .251 | .226 | .414 |

Extraction Method: Principal Component Analysis.
Rotation Method: Varimax with Kaiser Normalization.
a. Rotation converged in 5 iterations.

Component 1 = Section C3.1 = **How you feel about income taxes and the income tax system?**
 Component 3 = Section C3.2 = **How you feel about income taxes and the income tax system?**
 Component 2 = Section C3.3 = **the tax compliance of business owners.**

4.13.3

Table 15: Rotated Component Matrix: identifying owners understanding of environmental taxation

Rotated Component Matrix^a

| | Component | |
|--|-----------|-------|
| | 1 | 2 |
| Are you fully aware of South Africa government's environmental policy? | .943 | -.115 |
| Are you fully aware of the term environmental taxation? | .934 | .026 |
| In your opinion, what is environmental taxation? | -.324 | .575 |
| In your opinion, what do you think is the purpose of environmental taxation? | .169 | .851 |

Extraction Method: Principal Component Analysis.
 Rotation Method: Varimax with Kaiser Normalization.
 a. Rotation converged in 3 iterations.

4.13.4 Section E5.1:

Table 16: Rotated Component Matrix Identifying the level of awareness of the owner of SME'S to green tax incentives

Component Matrix^a

| | Component |
|--|-----------|
| | 1 |
| The government needs to offer more incentives to support investment in environmentally beneficial activities, processes & new technologies | .926 |
| Meeting criteria required by current tax incentives is too onerous to make the incentives worth applying for | .922 |
| It is clear what tax incentives exist and how to apply for them | .403 |
| Current tax incentives are sufficiently motivating to make businesses change their behaviour | .478 |

Extraction Method: Principal Component Analysis.
 a. 1 components extracted.

4.13.1 Section E5.2

Table 17 : Rotated Component Matrix Identifying the level of awareness of the owner of SME'S to green tax incentives ALL THE FONT SIZES ARE DIFF.....IT SHOULD BE THE SAME FOR EACH TABLE HEADING AND FIGURE HEADING

Rotated Component Matrix^a

| | Component | | |
|--|-----------|-------|-------|
| | 1 | 2 | 3 |
| If government offered tax incentives, a business like ours would significantly accelerate its green investment | -.012 | .892 | .134 |
| The government should encourage environmentally friendly business practices by means of tax incentives | -.083 | .902 | .025 |
| I am aware of green tax as government has done well to communicate this initiative | .994 | -.046 | -.091 |

| | | | |
|---|-------|-------|-------|
| Current tax incentives are sufficiently motivating to make businesses change their behaviour | .994 | -.046 | -.091 |
| My business will support carbon taxes as a means of encouraging more efficient use of energy and reducing carbon emission | -.016 | .030 | .599 |
| I am in favour of green tax even if it increases the price of the products that my business uses for manufacturing | .994 | -.046 | -.091 |
| I would make long -term business decisions or investments, taking government's existing environmental tax and regulation framework into account | -.182 | .081 | .829 |
| The government needs to offer more incentives to encourage companies to invest in environmentally beneficial practices | -.036 | .059 | .704 |

Extraction Method: Principal Component Analysis.
 Rotation Method: Varimax with Kaiser Normalization.
 a. Rotation converged in 4 iterations.

4.13.4.2 Section E5.3

Table 18: Rotated Component Matrix Identifying the level of awareness of the owner of SME'S to green tax incentives WHY IS THERE AN A after matrix?

Component Matrix^a

| | Component |
|----------------|-----------|
| | 1 |
| taxes | .733 |
| Tax incentives | .733 |

Extraction Method: Principal Component Analysis.
 a. 1 components extracted.

Section F6.1

Table 19: Rotated Component Matrixa: Identifying the level of attitudes of the owner of SME'S to green tax incentives.

Rotated Component Matrix^a

| | Component | |
|---|-----------|------|
| | 1 | 2 |
| Complying with legislation and regulation | .064 | .998 |
| Competitive advantage | .998 | .064 |
| Costing saving | .998 | .064 |
| Obtaining tax incentive | .064 | .998 |

Extraction Method: Principal Component Analysis.
 Rotation Method: Varimax with Kaiser Normalization.
 a. Rotation converged in 3 iterations.

Section F6.2

Table 20: Rotated Component Matrix: Identifying the level of attitudes of the owner of SME'S to green tax incentives.

Rotated Component Matrix^a

| | Component | |
|--|-----------|-------|
| | 1 | 2 |
| In principle, I would support or oppose or be neutral towards green taxes | .780 | .441 |
| What if there was a guarantee that the money generated by the extra tax was spent directly on projects that would help to reduce carbon dioxide emissions - for example, the money could be used to subsidize public transport or home insulation In principle | .919 | -.140 |
| I would be more likely to support, oppose or be neutral towards green taxes if other taxes were reduced at the same time | .029 | .966 |

Extraction Method: Principal Component Analysis.

Rotation Method: Varimax with Kaiser Normalization.

a. Rotation converged in 3 iterations.

Section F6.3

Table 21: Rotated Component Matrix: Identifying the level of attitudes of the owner of SME'S to green tax incentives.

Rotated Component Matrix^a

| | Component | |
|--|-----------|-------|
| | 1 | 2 |
| There is difficulty in establishing what incentives exist | .839 | -.079 |
| The existing environmental taxes, regulations and incentivise are ineffective | .815 | -.143 |
| I am afraid to apply for green tax incentives due to being investigated by SARS | .853 | .082 |
| I would hire a specialist tax consultant to advise me on the application and utilisation of green tax incentives | -.066 | .844 |
| Government does not engaged effectively with business in terms of environmental policies | -.028 | .899 |
| Compliance with current tax incentives is too onerous to merit applying for them | .527 | .438 |

Extraction Method: Principal Component Analysis.

Rotation Method: Varimax with Kaiser Normalization.

a. Rotation converged in 3 iterations.

Section G

Table 22: the perceptions of SME's owners with regard to business sustainability and profitability, if green tax incentives are used

Rotated Component Matrix^a

| | Component | |
|---|-----------|------|
| | 1 | 2 |
| I am willing to implement green tax incentives as they create business sustainability | .887 | .178 |
| I am willing to implement green tax incentives as they improve business profitability | .928 | .120 |
| I use green tax incentives to create new sustainable business practices | .813 | .262 |
| Our business cannot be more environmentally friendly until we become more profitable | .270 | .675 |
| I can improve my firm's profitability by implementing greener business practices | .148 | .930 |

| | | |
|--|------|------|
| Implementing green tax incentives results in cost saving | .120 | .886 |
|--|------|------|

Extraction Method: Principal Component Analysis.
 Rotation Method: Varimax with Kaiser Normalization.
 a. Rotation converged in 3 iterations.

Section H8.1

Table 23: The perceptions of introducing other green tax incentives and the implications for manufacturing SME's going green

Rotated Component Matrix^a

| | Component | | | |
|---|-----------|-------|-------|-------|
| | 1 | 2 | 3 | 4 |
| Government is trying to encourage business to go green by rewarding business with green incentives | .826 | .227 | -.005 | .057 |
| The South African tax system should include incentives for business to become carbon neutral | .873 | -.156 | .012 | .196 |
| There should be an introduction of new green tax incentives that are tailored for SME's | .876 | .078 | .088 | .011 |
| There should be an energy efficient tax deduction for energy efficient businesses | .332 | .832 | .116 | -.026 |
| There should be tax exemption and deductions to encourage taxpayers to buy alternative and fuel-efficient vehicles | -.110 | .788 | .309 | .012 |
| There should be the creation of income tax deduction per tree for every indigenous tree planted | -.039 | .782 | .066 | .452 |
| SME's that produce green products should be zero- rated in terms of VAT | .161 | .079 | .125 | .931 |
| Businesses can take a bonus tax depreciation for qualified equipment used in reuse and recycling processes | -.080 | .211 | .827 | .281 |
| I would offer fringe benefits to employees for green initiatives, eg riding bicycle to work, only if I'm granted full tax deduction | .119 | .099 | .920 | -.020 |
| There should be a different tax penalty on negative environmental activities based on the size of an enterprise | .528 | .385 | .548 | -.296 |
| There should be tax subsidies and grants made available to renewable energy producers | .540 | .588 | .076 | -.249 |

Extraction Method: Principal Component Analysis.
 Rotation Method: Varimax with Kaiser Normalization.
 a. Rotation converged in 5 iterations.

Section H8.2

Table 24: The perceptions of introducing other green tax incentives and the implications for manufacturing SME's going green

Component Matrix^a

| | Component |
|--|-----------|
| | 1 |
| Effective engagement with businesses over environmental Policy and tax | .991 |
| Sufficient priority given to business issues re climate change | .991 |
| How important do you feel it is for business to see that monies raised from environmental taxes and regulation are being/would be directed to 'green'/environmental projects and initiatives | .275 |

Extraction Method: Principal Component Analysis.
 a. 1 components extracted.