

**UNIVERSITY OF KWAZULU-NATAL**

**THE IMPACT OF RELIGION ON THE DEMAND FOR PORK IN  
PIETERMARITZBURG**

**By  
Mrs Nombuso Angel Msomi  
206515511**

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**Supervisor: Mr. Steven Msomi**

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## DECLARATION

I, Nombuso Angel Msomi declare that:

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## Abstract

While the rest of the producers of pork enjoy exporting opportunities brought about by free trade agreements of the global village, South African pork producers struggle to enter the global market, let alone remain afloat. This has resulted in the locals focusing their production towards meeting local demands, which one can argue that local pork market has reached its maturity. Moreover, other countries import pork to South Africa, making it even more difficult for local producers to expand and remain profitable if they focus only on their local customers, which are a niche market. South Africa consumes far less pork compared to other countries, particularly those countries, which have a significant percentage of non-believers, such as China. Whereas other macroeconomic factors such as political and economic factors have an impact on limiting the demand for pork, religion is an important socio-cultural factor that has been overlooked when assessing the South African macro-environment. Consequently the oversight of local pork producers has caused them to misread or misunderstand the behaviour and the future trend of consumers. This study sought to establish the impact of religion as a socio-cultural environmental factor on the demand for pork in Pietermaritzburg, the capital city of South Africa's KwaZulu-Natal Province. Non-probability sampling technique was used to identify 400 respondents. Data was collected by means of a pretested questionnaire. Subsequent to elimination of erroneous questionnaires, the total questionnaires were reduced from 400 to 375. Data was computed using Microsoft Excel version 2007. The findings showed that there was an inverse relationship between religion and demand for pork. Data was presented using different types of graphs and tables. The domestic pork market has reached its highest level of maturity; however, the respondents are open-minded about their limited influence for favourable future demands. It is recommended that the South African pork and processed pork producers diversify their reach by tapping strongly to foreign markets to remain sustainable and profitable as a significant percentage of local customers are prohibited by their religion from buying and consuming pork.

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## List of Abbreviations

<b>Abbreviation</b>	<b>Description</b>
AMIE	- Association of Meat Importers and Exporters
DAFF	- Department of Agriculture, Forestry and Fisheries
DoA	- Department of Agriculture
FAPRI	- Food and Agricultural Policy Research Institute
MDG	- Millennium Development Goals
NAFU	- National African Farmers Union
NDA	- National Department of Agriculture
NEPRO	- National Emerging Red Meat Producers Organisation
NFMT	- National Federation of Meat Traders
NPPC	- National Pork Producers Council
RMAA	- Red Meat Abattoir Association
RPO	- Red Meat Producers Organisation
SAFA	- South African Feedlot Association
SAFLA&MB	- South African Federation of Livestock and Meat Brokers
SAMIC	- South African Meat Industry Company
SAMPA	- South African Meat Processors Association
SANCU	- South African National Consumers Union
SAPPO	- South African Pork Producers Organisation
SHLALC	- Skin, Hides and Leather Council
UKZN	- University of KwaZulu-Natal
USDA	- United States Department of Agriculture
ZCC	- Zion Christian Church

# CHAPTER ONE

## INTRODUCTION AND OVERVIEW OF THE STUDY

---

### 1.1. Introduction

Prior to 1997, the South African pork industry was regulated by the Meat Board using the Marketing Act of 1968 (Luppnow, 2007). During this time, apartheid was the order of the day, and it was imposed on the marginalised majority of the citizens. As a result, South Africa maintained relations with very few countries as the rest of them had imposed sanctions on the country. According to DAFF (2011, p.8), various policies, such as the distinction between controlled and uncontrolled areas, compulsory levies payable by producers, restrictions on the establishment of abattoirs, the compulsory auctioning of carcasses according to grade and mass in controlled areas, the supply control via permits and quotas, the setting of floor prices, removal scheme, etcetera, characterised the pork industry before deregulation commenced in the early 1990s. The pork industry has changed from a highly regulated environment to one that is totally deregulated today. Since the deregulation of the agricultural marketing dispensation in 1997, the prices in the red meat industry are determined by demand and supply forces (DAFF, 2011, p.7-8).

Wright (2004) states that at face value, participation in the global village seemed like an obviously effortless opportunity for the South Africa's businesses such as primary producers. Wright (2004) added that while the rest of the producers of pork enjoy exporting opportunities brought about by free trade agreements of the global village, South African pork producers struggle to enter the global market, let alone remain afloat. This has resulted in the locals focusing their supplies towards meeting local demands. Moreover, other countries exported pork to South Africa, making it even more difficult for local producers to expand and remain profitable as they continue to focus their energy on their niche market (Wright, 2004).

## **1.2. Motivation for this Study**

In the study by Visser (2004, p.2), the following were identified as major factors that influence the demand for pork. These are consumption per capita, population growth rate, population income, import and export of animal products, and income/demand elasticity were. 'Ten explanatory variables identified by previous studies (as reported by Visser, 2004) as the major determinants of meat (pork) consumption in South Africa were initially used in this study. These include four continuous variables (income, relative price of pork, price of other meat types, and expenditure on meat) while six are discrete variables (race, gender, religion, quality, place of purchase and value adding). Six were found to be significant and all had the expected signs. The significant variables included household monthly income, relative price of pork, current household monthly expenditure on meat, preference for value-added pork products, price of substitutes (the most preferred household meat type) and pork quality,' (Oyewumi and Jooste, 2006, p.187). Religion was deemed as one of the six discrete variables in the study by Visser (2004). Considering the significance of religious beliefs around eating pork meat, it was appropriate to conduct a study on the impact of religion on the demand for pork.

Given the religious diversity in South Africa and in Pietermaritzburg in particular, it seems apparent that the demand for pork in this region could be affected by religious adherences for the majority of consumers in general. In addition, this could result to the realisation of local pork producers that the local market has reached its maturity and its growth prospects are stagnant. This realisation could assist them in venturing into trading globally instead of focusing only on the local niche market whose growth potential is already constrained by religious beliefs against pork.

### **1.2.1. Beneficiaries of this study**

The stakeholders that are identified as beneficiaries of this study are producers and suppliers of pork and pork products, the South African government and potential local and international pork market entrants.

#### 1.2.1.1. Producers and suppliers of Pork and Pork Products

Producers of pork and processed pork products, as well as representative structures such as the South African Meat Industry Company (SAMIC), will be chief beneficiaries of this study as it will educate them on consumer preferences in general and on what can be deemed as one of the key factors that affect buying decisions – the religious beliefs. The main purpose for the existence of the SAMIC is to offer training, health inspection, meat inspection, meat classification services and most importantly, to be an effective communication link between the following meat industry role players (SAMIC, 2006):

- Association of Meat Importers and Exporters (AMIE)
- Federation of Meat Traders' Union
- National Emergent Red Meat Producers' Organisation (NEPRO)
- National Federation of Meat Traders (NFMT)
- Red Meat Abattoir Association (RMAA)
- Red Meat Producers Organisation (RPO)
- South African Federation of Livestock and Meat Brokers (SAFLA&MB)
- South African Feedlot Association (SAFA)
- South African Meat Processors Association (SAMPA)
- South African National Consumers Union (SANCU)
- South African Pork Producers Organisation (SAPPO)
- Skin, Hides and Leather Council (SHLALC)

In addition, the results of this study could encourage pork producers to trade globally and shift their focus to a broader picture, the global markets that have high demand for pork and pork products such as China.

#### 1.2.1.2. Government

Lehohla (2010) states that as part of the Millennium Development Goals, South African Government currently promotes Rural Development as one of its focal areas that seeks to encourage social participation in economic growth of the country. The Department of Agriculture, together with other government departments such as The Department of Trade and Industry and the KwaZulu-Natal Department of Economic Development, serve as role players in the fulfillment of this objective of government.

It is thus important for government to fully understand the South African market situation in order to effectively encourage local producers to export. The South African Government could perhaps enter into balance of trade negotiations and agreements with countries that have high demand for pork, thus creating local, sustainable jobs and contributing to the country's Gross Domestic Product (GDP).

#### 1.2.1.3. Potential Local and International Pork Market Entrants

Potential market entrants from the local front are encouraged by government's rural development empowerment initiatives. However, due to the current balance in supply and demand, potential for failure is high. Potential importers may have to come up with much better value propositions to the South African market in order to score a piece of the pie. This study will benefit them as they will understand an important element that borders the diverse cultures of South Africa as a target market.

### **1.3. Focus of the Study**

The study by Oyewumi and Jooste (2006) was sufficient motivation for conducting this study as they showed that economic factors alone are no longer the determinants or drivers of pork consumption in South Africa. These authors found that quality of pork or pork products was one of the non-economic factors that affect the demand for pork. The research focused on the effects that religion as a belief system has on the behavior of consumers, whereby consumers demand more or less pork due to their different religious beliefs. The study was confined to Pietermaritzburg consumers who are of older than 15 years of age. As government aims to develop the rural communities, KwaZulu-Natal is the ideal region to conduct this study on as the greater part of the province is rural and open to agricultural business opportunities.

#### **1.4. Problem Statement**

Before 1980, pork was the second-most consumed meat in the world, trailing behind beef. In 1980, a shift in pork demand saw pork overtaking beef and becoming the most consumed meat in the world (Barnard, 2005). While consumption per capita is estimated at 15 kilogram, South Africa's per capita consumption has declined from 3.5 kg to 2.7 kg (NDA, 2005). It brings about confusion to learn that pork demand continues to decline while real price of pork and its substitutes have declined since the early 1970s, and the real income per capita has been increasing (NDA, 2005). All these economic factors should have been advantageous for the growth and sustainability of the pork industry in South Africa, but this has not happened. Jooste and Oyewumi (2006) sought to establish whether economic factors were key determinants of pork consumption in South Africa. These authors valued and used previous works of Bansback (1995), Huston (1999) and Dickinson et al (2003), who showed that non-economic factors were more important in determining consumers' purchasing decisions.

Oyewumi and Jooste (2006) concluded that quality was an important non-economic factor that affects pork consumption. The question that follows then is whether religion as socio-cultural factor has significant impact on pork consumption. The work of Jarvis (1993) showed that social factors can influence livestock use. The author states that religious objections to the consumption of pork in Muslim Countries, and beef in Hindu countries are an obvious factor. Pork (2006) attests to this and states that religious and cultural factors impede on trade, and that these factors have negative implications for pork industry.

It is common knowledge that individuals are unique and make thousands of choices or decisions on a daily basis. The unique nature of individuals together with the environmental pressure exerted by family members, friends or communities; influence the decisions that they stick to when making choices. It is a very interesting to learn that as people of different backgrounds gather at dining areas, different comments are made around the issue of whether pork forms part of their meal. One person justifies the reason why they do not eat pork, while the other defends their position of being at liberty to eat pork.

### 1.4.1. Religious Beliefs

South Africa is a country that regards itself as the Rainbow Nation because of diverse cultures amongst other factors. South Africa has many different religions. South Africans belong to different religions that shape and determine the manner in which they conduct themselves within the communities. It must be noted from table 1.1 below that the only religious groups that do not belong to monotheistic religion are Hinduism, Other Beliefs, Non-Religious and Undetermined. Monotheistic religions are those religions that believe in only One God. Table 1.1 below depicts the number of individuals by their associated churches.

Table 1.1 Classification of South African Residents by churches

Number of individuals by church		
Churches	Number	Percentage (%)
Anglican	1 722 076	3.84
Apostolic Faith Mission	246 190	0.55
Bandla Lama Nazaretha	248 824	0.56
Baptist	691 237	1.54
Congregational	508 825	1.14
Dutch Reformed	3 005 698	6.71
Ethiopian type churches	880 414	1.96
Lutheran	1 130 987	2.52
Methodist	3 305 404	7.37
Orthodox	42 251	0.09
Other African independent churches	656 644	1.47
Other Apostolic churches	5 609 070	12.51
Other Christian churches	3 195 477	7.13
Other Reformed churches	226 495	0.51
Other Zionist churches	1 887 147	4.21
Pentecostal/Charismatic	3 422 749	7.64
Presbyterian	832 495	1.86
Roman Catholic	3 181 336	7.10
Zion Christian	4 971 932	11.09
Islam	654 064	1.46
Judaism	75 555	0.17
African Traditional Belief	125 903	0.28
Hinduism	551 669	1.23
Other beliefs	269 200	0.60
No religion	6 767 165	15.10
Undetermined	610 971	1.36
<b>Total</b>	<b>44 819 778</b>	<b>100.00</b>

Source: Adapted from Statistics South Africa. 2011. Pocket Guide to South Africa 2011/12. [Online] Available [www:](http://www.statssa.gov.za)

[http://www.gcis.gov.za/sites/default/files/docs/resourcecentre/pocketguide/004\\_sasp\\_eople.pdf](http://www.gcis.gov.za/sites/default/files/docs/resourcecentre/pocketguide/004_sasp_eople.pdf) (Accessed 20 November 2012)

According to Statistics South Africa (2001), the greater proportion of the population believes in Christianity. While Christianity accounts for 80% of the population, Hinduism, Islam and African Traditional religions are some of the religions that are also prevalent in the country Statistics SA (2011). This is also the case with the city of Pietermaritzburg.

#### **1.4.2. Product Presentation and Consumer Education or Awareness of the Product**

While some consumers are comfortable with consuming pork in the form of steaks, some prefer to buy processed or semi processed pork such as viennas, polonies, sausages or bacon as opposed to plain cuts of pork. Table 1.1 below presents the results of the survey data for the study by Oyewumi and Jooste conducted in 2006. From this table, it is evident that Blacks and Asians who consume pork prefer value-added products to fresh meat, while Whites and Coloured who consume pork have no special preference. For this reason, the study considers all forms of pork end products.

Table 1.2 Household preferences for pork products

<b>Race</b>	<b>Fresh Meat</b>	<b>Value-added Products</b>	<b>Pre-prepared pork foods</b>
<b>Black</b>	48.4%	70.0%	46.2%
<b>Whites</b>	76.9%	78.0%	57.0%
<b>Coloureds</b>	53.8%	48.0%	35.0%
<b>Asians</b>	25.0%	37.5%	25.0%

(Adapted from: Oyewumi, O. A. & Jooste, A. 2006. Pork Consumption in South Africa: What prospects? p.3)

In his research, Luppnow (2007) found that White people consumed the most quantities of pork while Africans preferred pre-processed pork products to match the quantities demanded by White people. The table below depicted results that are marginally different to the findings by Luppnow during his study confined in Queenstown.

Table 5.1 Responsiveness to processed pork products categorised by race

Pork in Processed Form	African	Asian	Coloured	White
Not Important	41%	28%	42%	66%
Somewhat Important	6%	4%	17%	3%
Neutral	27%	37%	33%	24%
Important	19%	28%	8%	7%
Very Important	7%	4%	0%	0%
Grand Total	100%	100%	100%	100%

As shown in the table above, it was found that 32% (28 + 4) of Asians prefer pork in a processed form compared to 26% (19 +7) of Africans. And 30.25% (sum of 27 + 37 + 33 + 24 = 121 ÷ 4) of respondents from all races are indifferent about the importance of buying pork that is processed.

### 1.5. Questions to be answered by the Research

The following are the questions that this study seeks to answer.

- To what extent does religion impede on the demand for pork?
- To what extent does religion impact on the consumption of pork?
- To what extent are consumers prepared to disregard their religion by embracing religiously forbidden pork as their source of protein?
- To what extent could the absolute substitution of unprocessed pork with processed pork products improve the demand and consumption of pork at the food markets?
- Can producers or suppliers of pork export as a healthy alternative for the sustainability of their businesses?

### 1.6. Objectives of the Study

The objectives of this study are to:

- Establish whether religion is a key non-financial driver of demand for pork,
- Understand the levels of demand for pork in South Africa.
- Assist pork suppliers in making supply decisions that will meet the demand side.

This study will assist the local suppliers and marketers of pork in understanding their market and profitable product offers.

## 1.7. Limitations of the Study

The following were the limitations of the study:

- Geographical limitations - the study focused in Pietermaritzburg's Msunduzi Municipal area.
- Time – Due to the duration of the research project, the period of undertaking the study was 6 months.
- Sample Size – the entire population could not be studied and a fully representative sample of 400 respondents had to be used. This sample is made up of consumers who are older than 15 years of age.
- Identification and Targeting respondents.

## 1.8. Outline of the Study

This study follows a generic and logical research structure consisting of five distinct yet interlinked chapters:

**Chapter One** is the introduction and overview of the study and describes the problem statement, the motivation, focus and limitations of the study.

**Chapter Two** covers the review of international and South African literature on the demand for pork and pork products, the different religions that may have impact on the demand for pork, as well as Global Market opportunities for local pork producers.

**Chapter Three** explicates the different research methods that were used and the reasons thereof.

**Chapter Four** is the covers the research findings and analyses the results, taking the review of the literature in Chapter Two and the problem statement and research objectives into consideration.

**Chapter Five** is the conclusion of the study. This chapter also offers the recommendations to the audience

## **1.9. Summary**

This chapter introduced the problems facing the producers of pork and pork products regarding the stagnant growth in the demand for these products in the local markets. These problems motivated for the execution of this research. The focus and limitations framed this study. The problem statement, the objectives of the study and the questions that the research sought to answer, were formulated in this chapter. As part of the empirical study, the next chapter will review the relevant literature in a logical manner and provide comprehensive background on the topic and matters relative to it.

## CHAPTER TWO

### THE DYNAMICS OF DEMAND, RELIGION AND THE PORK INDUSTRY

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#### 2.1. Introduction

As part of an organisation's strategy formulation using the Strengths, Weaknesses, Opportunities and Threats (SWOT) analysis; an organisation analyses the macro-economic factors that affect it and its industry and respond to them as opportunities or as threats accordingly and effectively. Common macro-economic factors include political and legal, economical, ecological, infrastructural, and socio-cultural. Wright (2011) identified legal and political as the single most impactful factors that brought about opportunities for the pig farming industry. This factor eliminated protection of local producers and encouraged the free-market system. Wright (2011) added that the reality was not as desirable as the imagined expectations of the free-market system, as local producers would be expected to fend for themselves. While this significantly important factor is believed to have reshaped the industry to the detriment of local producers, religion as a socio-cultural factor has not been taken into consideration as a potential threat that could impede on industry's growth.

This chapter will review the relevant literature that supported the need for this execution of this empirical study. Firstly, the overview of the pork industry will be set out, followed by the review of global and local demand for pork. Thereafter, indications that suggest the practicality of South Africa's growth potential will be mentioned. Demand will be defined using certain schools of thought as supporting literature. The effect of culture on consumer behavior will also be discussed. And finally religion and its effect on buying decisions and consumption; as well as Global market opportunities for local producers will be discussed.

## 2.2. The Pork Industry

Pocket Oxford Dictionary (2008, p537) defines a pig as a domestic or wild mammal with a flat snout, and pork as the flesh of a pig as food. A pig is an omnivorous animal and thus it eats both plants and meat. A pig that is raised with an intention to produce meat is called a hog. A female pig or hog is called a sow, while a male pig or hog is called a boar. According to Ubisi Mail (2009), a sow can give birth to an average of 10 piglets at a time and repeat in six months. This means that one sow can produce on average 20 piglets per annum, quite a reproductive mammal indeed.

Worldwide, pork industry is the largest meat industry. About 1.3 billion hogs are raised and slaughtered in farms around the world at any given time for human consumption (Compassion in world farming, 2012). An average of eighty three thousand tons of pork is produced per annum with China producing about half of these volumes, followed by the European Union and the United States at 21% and 10% respectively while South Africa accounts for less than half a percent of global pig production (NDA, 2005).

The figure below illustrates pork production by province in the year 2010.

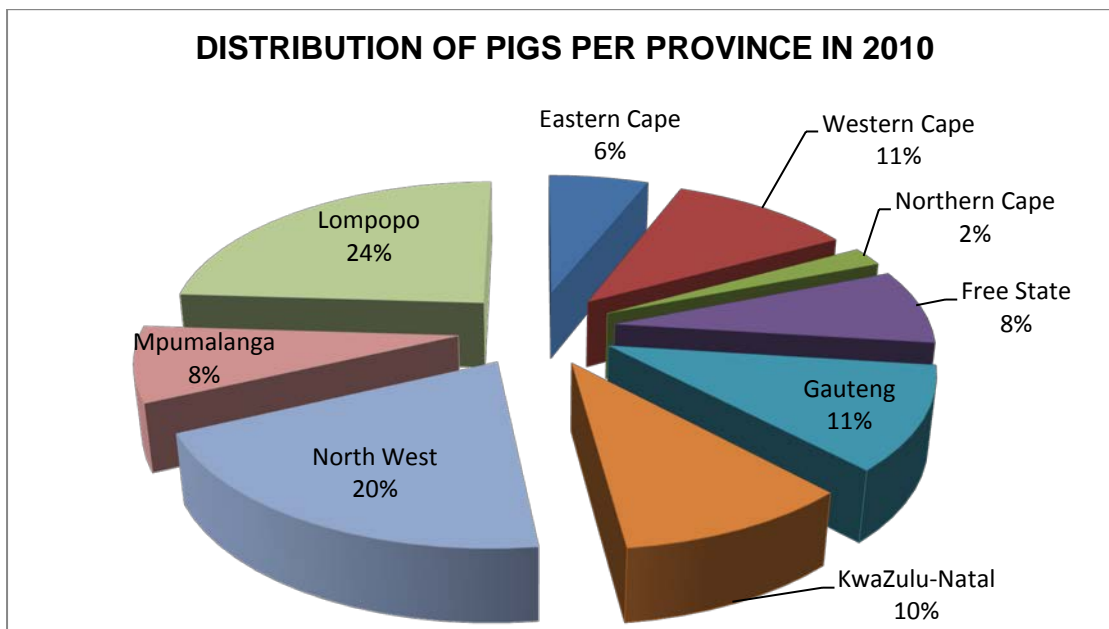


Figure 2.1 Pork Production by Province in the year 2010

(Adapted from: DAFF. 2011. Statistics and Economic Analysis. p.4)

There are approximately 400 commercial producers and 19 stud breeders in South Africa. Pig numbers are estimated at 1 599 million (DAFF, 2011). KwaZulu-Natal accounted for approximately 160 thousand pigs bred in South Africa. As illustrated in figure 2.1 above, KwaZulu-Natal produces about 10% of the country's commercial pigs. For a province with such admirable vegetation and climate, ideally for the production of pigs, this percentage is low for KwaZulu-Natal. Limpopo is a province with comparatively high climatic temperatures, but it is impressive that Limpopo is the province that produces more pigs than any other province, since pig farming requires moderate to low temperatures. According to KwaZulu-Natal Business (2007), the province of KwaZulu-Natal, particularly the midlands, is an ideal area for pig farming

### **2.3. Global and Local Demand for and Consumption of Pork**

Globally, pork is considered the most consumed meat product. According to the National Pork Producers Council (2004), the consumption of pork per capita worldwide was estimated at 15kg in 2004. FAPRI (2009, p.10) suggests that pork consumption is the fastest growing compared to other meat types, at 1.1% per annum. The Council added that credit can be given to short production cycle of pork as sows produce on average 10 piglets at a time and twice per annum. Another contributing factor to the increased global consumption of pork is the efficiency of technology used in the production process that results to optimum quantities (Luppnov, 2007). According to the Food and Agricultural Policy Research Institute (2009), global pork trade will continue to increase at a slow but steady pace.

South Africa is the smallest member of the BRICS, which represents a group of five emerging markets with significant growth potential, which are Brazil, Russia, India, China and South Africa (World Press, 2012). As the emerging economy, South Africa's pork consumption was compared with China and India which are the emerging countries that have presence in the BRICS. According to Masuda and Goldsmith (2010) estimates that pork consumption per capita in China was 35.8 kilogram in 2010. Adherents.com (2007) suggests that other than the population density there are other co-existing factors that feed to the demand for pork in China.

Adherents.com (2007) published a statistical analysis on the percentage of populations in different non-religious countries that revealed that China's non-religious population was 59% in 1998. According to Lahmeyer (2004), the religious affiliation of China is made up of 59% Non-religious, 20% Confucians, 8.5% Buddhist, 2% Taoist, 1.4% Muslims, 6% Christians and 10% Traditionalists. This reinforces the notion that China's high per capita consumption of pork stems from the fact that the majority of the population is non-religious, hence less inclined, if at all, to the restrictions imposed by religion to the consumption of pork meat.

Results published by The National Department of Agriculture (2005) in terms of consumption of pork per capita in South African showed that per capita consumption of pork continues to decline as the population increases. Pork demand in South Africa in the 1970s was 3.5 kilograms per capita, and decreased to 2.7 kilograms per capita in 2004 (NDA, 2004). Kirsten et al. (2009) reported that the consumption of pork per capita in South Africa in 2009 was estimated at 3.8 kilograms. Wright (2011) however, estimates that the per capita consumption of pork in South Africa is a mere 2.6 kilograms. South Africa's per capita consumption of pork was estimated at around 3,5 kilogram, which is less than a quarter of the international average of 16kg per capita in the year 2010 (Eskort, 2012). It is evident that South Africans consume far less pork compared to other countries; particularly the country that has a significant percentage of non-believers, such as China, which according to Han, Trienekens, Tan Tao and Omta (2007), is the largest producer and consumer of pork in the world. Among the four variety of meats consumed in China, that being Pork, Beef, Mutton and Poultry, pork consumption accounted for 69% of the total meat consumption in the year 2004 (Han et al., 2007).

Like South Africa, India is a developing country whose population is classified according to levels of income and status. The world livestock Agricultural Outlook report by the Food and Agricultural Policy Research Institute, FAPRI (2011) does not give an indication on the per capita consumption of pork in South Africa and India. According to Olson (2005), religion affects what Indians eat. In India, Hindus and Muslims do not eat pork (Gesteland and Gesteland, 2010). It must be noted that these two religions account for the biggest proportion of India's population. The author stated that India's classification of the population by religion is as follows:

Hindu	80.50%
Islamic	13.40%
Christian	2.30%
Sikh	1.90%
Buddhist	0.80%
Other	1.10%

It is evident that FAPRI's exclusion of South Africa's demand for pork is proof that is expected to become insignificant to mention on a global platform. Chandy (n.d.) states that the inequalities in India leave a greater proportion of its population below the poverty line. Poor food security in India is the reason that Indians regard pigs as animals that contest with human beings for food (Chandy, n.d.). In India, pig farming is predominantly for subsistence purposes and it already requires that food be split between humans and pigs. Good pork production requires that during hog breeding, an average of 10 kilograms of food be provided for a single hog. For this reason, pork is an unpopular animal in India and breeding of this species could be detrimental to Indians.

#### **2.4. South African Pork Industry's Growth Potential**

South Africa consumes less pork than it actually produces and is thus a net exporter of pork (DAFF, 2011). The figure below illustrates the share of South African pork exports by province since 2001.

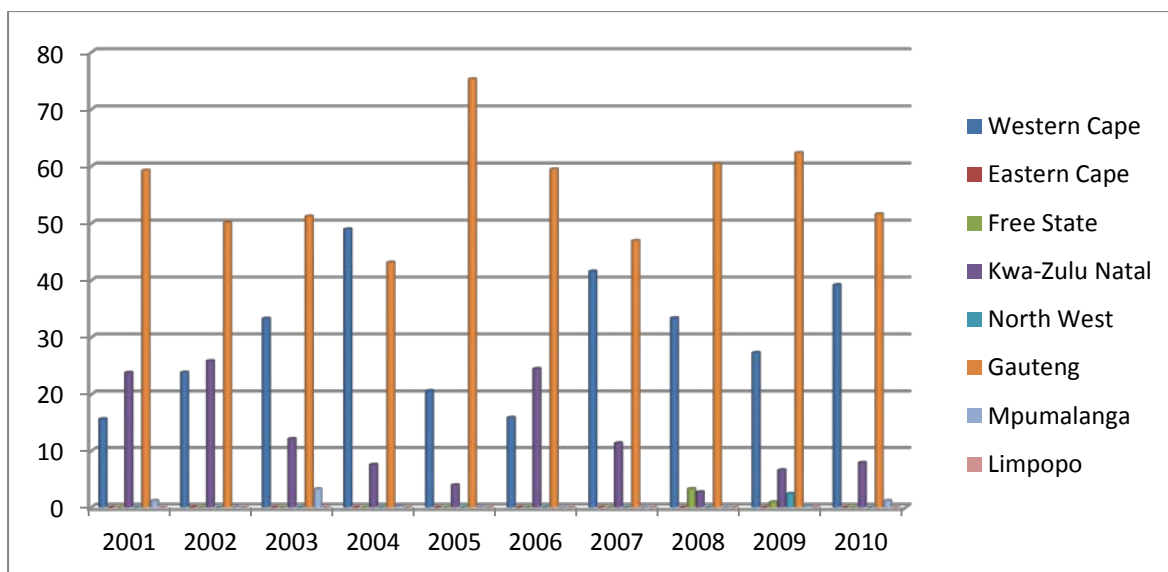


Figure 2.2 Share of provincial pork exports to the total RSA pork exports (%).  
 (Adapted from: DAFF. 2011. A Profile of the South African Pork Market Value Chain. Calculated from Quantec EasyData)

Figure 2.2 shows that Gauteng is the highest exporter of pork compared to other provinces; followed by the Western Cape from 2001 to 2010. Over the past ten years from 2001 to 2010, KwaZulu-Natal's exports have been fluctuating and unstable. The years 2005 and 2008 showed significant decline in pork exports. The reason for such decline cannot be attributed. KwaZulu-Natal was the third highest exporter although in most years, its export quantities were comparatively low. The following figure is the presentation of the map of South Africa. In the year 2010, as depicted in figure 2.2 above, Gauteng exported 52%, while the Western Cape, KwaZulu-Natal and Mpumalanga provinces exported 39%, 8% and 1% respectively. Contrasting observations by Williamse (2005) that South Africa was a net importer of pork as at 2004, with positive import trends, must be noted.

Production proportions by province are depicted in the map of South Africa which is labeled as figure 2.3 below.

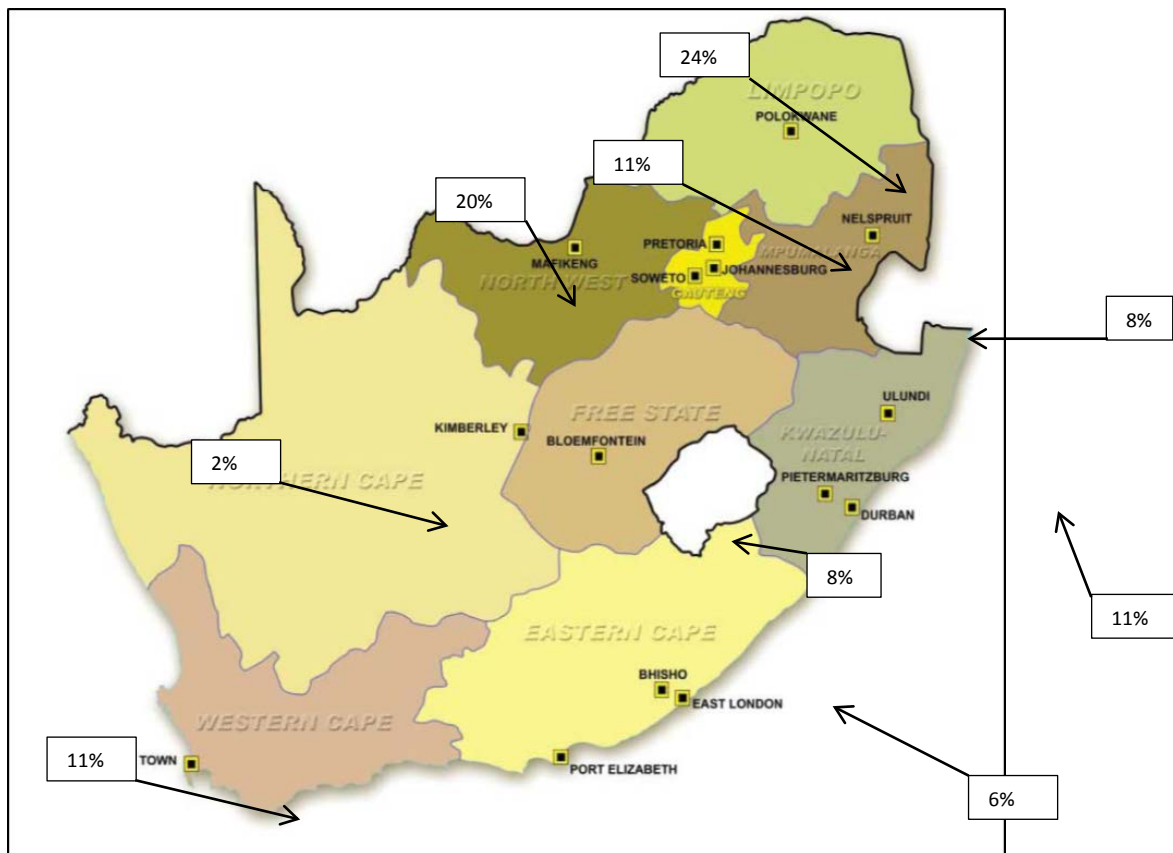


Figure 2.3: The map of South Africa with Pork Production percentages per province (Adapted from: Statistics SA. 2010. Millennium Development Goals: Country Report 2010 – The South Africa I know, The Country I Understand. p.6)

It must be noted that exports depicted in figure 2.2 above are destined for African countries only. Figure 2.4 below depicts the destination of South African pork that it exported. DAFF (2010, p.12) states that about 73% of the total South African pork and pork products exports were exported to the SADC countries and 4% was exported for Nigeria which is in the western part of the African Continent.

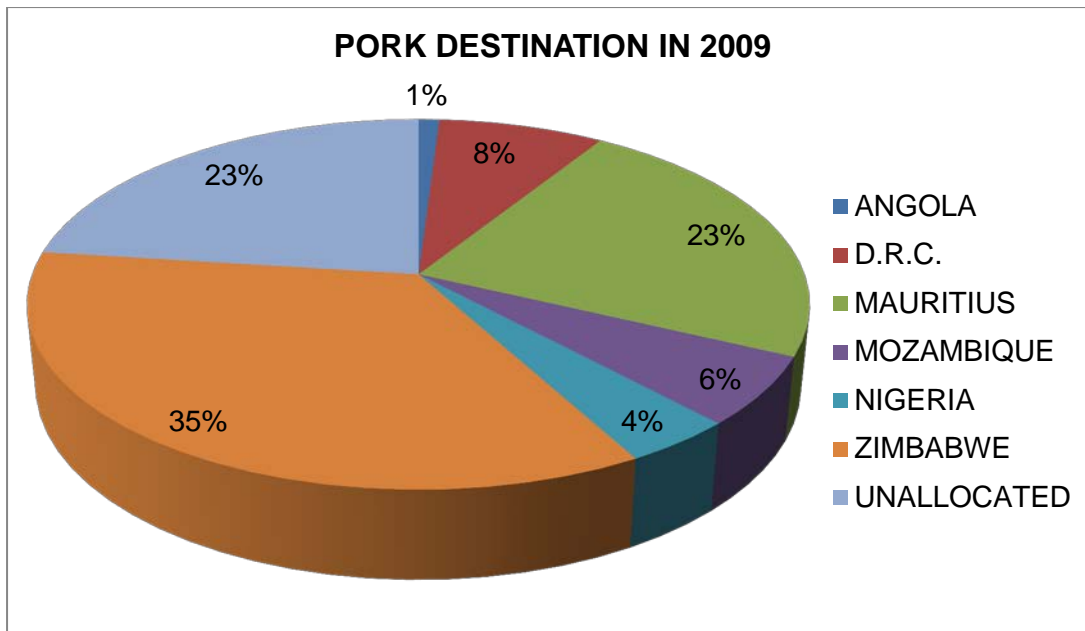


Figure 2.4 Pork Destinations in 2009

(Adapted from: DAFF. 2010. The Profile of the South African Pork Market Value Chain. p.12. Sourced from Quantec EasyData).

The Department of Agriculture Forestry and Fisheries (2010) is of the opinion that South Africa has the potential to diversify its pork exports by tapping into the biggest pork Angolan market as Angola accounts for the big share of the world pork that is imported to that country. DAFF (2010, p33) further explained that Zambia and Tanzania should be other target markets for South Africa. It is reported that the annual pork import of Zambia, Tanzania and Angola increased by 312%, 132% and 52% respectively during the periods from 2005 to 2009.

Subsequent to the sanctions on South Africa being waived in 1991 and 1993, the resulting South African economic freedom opened a window of opportunities for South Africa. The Global Competitiveness Report (2012) Ranks South Africa as 50<sup>th</sup> in terms of its competitiveness out of 144 countries. Considering that South Africa only started participating freely in the global village in 1993, this country has secured the 50<sup>th</sup> spot in two decades. This is evidence that South Africa is competitive and if South African pork producers play their cards right, with the support of government and other role player, pork producers can trade competitively with the rest of the world. In order to promote exports, NDA (2007) suggests that the exporters should be careful not to focus only on the United States markets and disregard the Far East

and the Middle East markets. There is significant growth potential and creation of job opportunities if the industry implements or enhances processing of some of its products prior to exporting (NDA, 2007)

While political and economic macro-economic factors may bring about limiting effects on the demand for pork, religion has always been overlooked as an important socio-cultural factor when assessing the South African macro-environment. The question that arises is whether this oversight may have caused local pork producers to misread the behaviour and the future trend of consumer demands.

The following are some of the major objectives of the Department of Agriculture, Forestry and Fisheries (2007), some of its major objectives includes the

- enhancement of the pork industry's domestic and international competitiveness;
- stimulation of demand and consumer confidence in domestic and export markets;
- creation of strong partnership with government;
- influencing legislation;
- monitoring trade and macro-economic conditions to ensure sustained viability and growth;
- developing a common position on agricultural policies as they affect the red meat industry;

'The challenge is to find a balance between cheap, yet acceptable, animal-based products for the consumer, maintain and create job opportunities, develop and empower the emerging sector and increase competitiveness, both in the domestic and international markets' (DAFF, 2006 p.38). According to DAFF (2006), the mandate of the Department of Agriculture, Forestry and Fisheries (DAFF) is to provide a broad based enabling environment encompassing all agricultural activities from the provision of farming inputs, farming and value adding. It is in this context that the legislative functions and policy of DAFF should be reviewed and amended to provide for changing circumstances in the production and marketing environment (National Department of Agriculture, 2006 p. 29).

In the Insight Report, Schwab (2012, p.7) of the World Economic Forum suggests that exports can be regarded as substituting domestic demand in terms of establishing the market size. The South African Pork Producers Organisation represents the commercial pork producers in South Africa. Wright (2010) claims that South African Pork Producers Organisation (SAPPO) is very competitive and admits that in order for the industry to turn around, factors that will drive the competitiveness of South African Agricultural competitiveness should be considered. The average meat consumption per capita per annum increased by 263% in developing countries, and the global demand for meat has grown three times as fast for the developing countries (Delgado, 2005).

It is estimated that the aggregate meat consumption growth rate in developing countries will be 3% per annum up to the year 2020, (Delgado, 2005). As a result, financial losses could be imminent and inevitable if South African marketers were to go by optimistic global growth trends in estimating the domestic demand for pork, as the pork market growth is stagnant compared to that of other countries such as China. South Africa's per capita consumption of pork was following a declining trend and is stagnant at 3.5 kilogram (NDA, 2005).

The South African Baseline Report (2010) indicated that the total demand for meat in South Africa was estimated to rise by 24% in 10 years. Chicken meat was projected to shoot up in demand at 44% of the total demand of the meat. Projections suggest that beef prices will trade sideways from 2012 onwards while pork markets will follow a cyclical trend, entering into a declining trend after reaching its peak in the same year. "Slightly reduced meat supply levels may boost meat prices as herds are rebuilt following the 2007/2008 herd liquidation caused by the food price increase" (Bureau for Food and Agricultural Policy, 2010, p.33).

Bureau for Food and Agricultural Policy report (2012) states that average meat prices remained consistent across all meat types in the period between the years 2008 and 2009. Of all meats, beef and mutton had a slight increase while chicken and pork prices remained under pressure. Further, it said the consumption of mutton/lamb remained relatively constant. The report also indicated that the consumption of pork declined marginally over these years. In 2003, South African

Meat Industry Company (SAMIC) published animal production report that 1 809 773 pigs were slaughtered in the period between 1998 and 1999. In the period 2002 and 2003, the number declined to 1 765 122 slaughtered pigs. In his article, Willemse (2005) noted that the demand for meat in South Africa was on the rise and it was growing faster than the producers' ability to provide. Willemse (2005) wrote that it was expected that South Africa would remain the net importer of pork as the imported pork would not affect the local production. He said this was so because cheaper imports threaten domestic industry during the periods of appreciating exchange rate.

## **2.5. Demand Defined**

Demand is defined as the sum of a particular economic commodity that a consumer or a market is willing and able to buy at a given price (Web Finance, 2011). According to James (2013), the demand is the effective want for something and the willingness and ability to pay for it. The Market Demand is the aggregate of all demands of potential customers for a specific product over a certain period of time (Business Dictionary.com, 2012). In Economics terms, demand does not merely refer to consumers' wishes that cannot be converted into a purchase (Baumol and Blinder, 2003). Microeconomics suggests that the level of consumption is affected by the supply and demand for the goods and services. According to Peepasheer (2007), one of the factors that affect the demand of any good is consumer taste and preferences. Mainstream economists suggest that the final purchase of goods and services by individuals constitutes consumption.

Demand is, to a great extent determined by consumer tastes and behavior. Perloff (2007) explains that consumers do not purchase goods they do not want or need, irrespective of the investment in advertising campaigns. In Economics, the factors that are entertained in the determination of changes in quantities of goods demanded are generic and include household income, prices of goods, substitute or complementary goods. However, as Engel et al. (1995) put it, the pre-existing attitude of a consumer towards a commodity may have an impact on the

acceptability of a persuasive marketing communication. Culture is one of such determinants on consumer attitude towards a commodity.

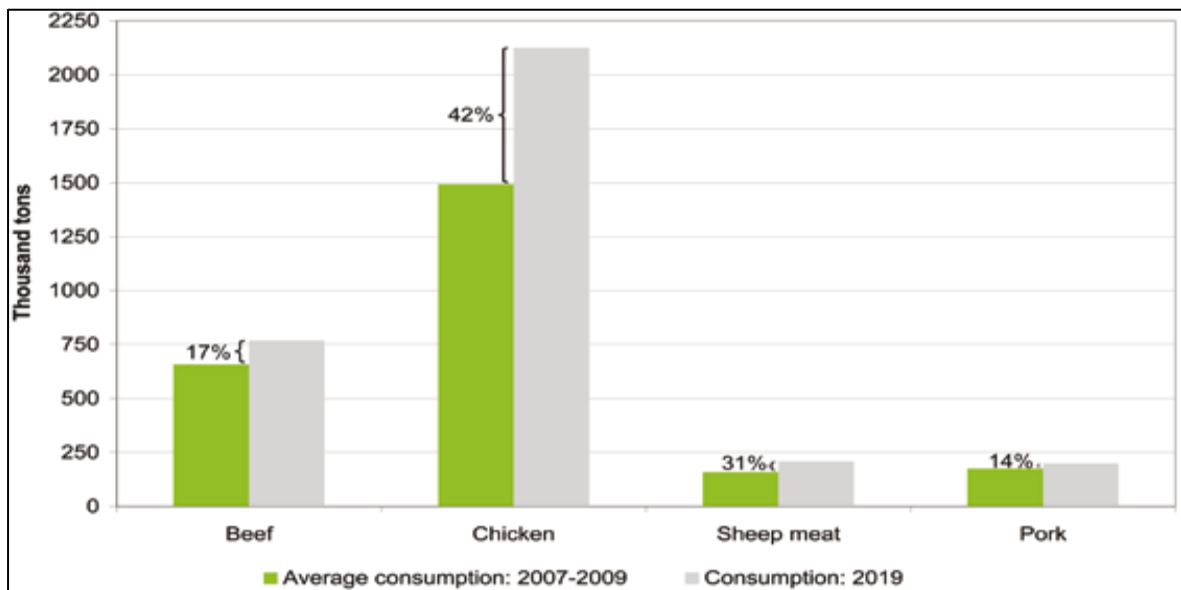


Figure 2.5 Projected versus Average Consumption of Meat

(Source: BFAP Team. 2010. Final Agricultural Outlook - The South African Agricultural Baseline. p35)

Figure 2.5 illustrates the comparison of four main meat types. The average consumption of meat is a baseline for the projected meat consumption forecasted in the year 2019. For all meat types, growth in consumption per capita is imminent. However, chicken is leading the pack at 42% over the next decade, followed by sheep meat, beef and pork at 31%, 17% and 14% respectively over the next decade. Considering that sows reproduce so exponentially compared to cows and sheep, it is evident that the demand for pork is no longer driven by its supply as it was in the past.

According to Visser (2004) the demand for pork is only influenced by per capita consumption, population income and its growth rate, income or demand elasticity, and import and export of animal products. While it can be ascertained that the income elasticity of pork and pork products is low, it can be argued that the reason for pork's low elasticity of demand is owed to non-economic factors. Whereas other macroeconomic factors such as political and economic factors have an impact on

limiting the demand for pork, religion is an important socio-cultural factor that may have been overlooked when assessing the South African macro-environment for the projection of demand. Consequently the oversight of local pork producers may have caused them to misread or misunderstand the behaviour and the future trend of consumers.

Luppnow (2007) sought to determine whether a drop in sales for fresh pork resulted from imported pork. During the study, Luppnow (2007) found that white people consumed the most quantities of pork while Africans preferred pre-processed pork products to match the quantities demanded of white people. It was also evident that Indians consume far lesser pork or processed pork products compared to other races. In Luppnow's study, at least 42% of respondents stated that the reduction in sales of fresh pork did not result from imported pork.

In their study, Oyewumi and Jooste (2006, p.186) sought to establish 'whether economic factors alone are still the main drivers of pork consumption in central South Africa'. These authors concluded during their studies that non-economic factors are increasingly shaping up the purchasing decisions of consumers regarding pork. Bansback (1995) showed that in the European Union, economic factors were primary in the determination of demand for meat in the period from 1955 to 1979. A shift in the proportion between economic and non-economic factors was evident in the period from 1975 to 1994 as shown in the table below.

Table 2.1 Importance of economic and non-economic factors in meat demand

Product	1955 - 1979		1975 - 1994	
	Economic	Non-Economic	Economic	Non-Economic
	Percentage			
Beef	95	5	68	32
Pig Meat	98	2	55	45
Sheep Meat	84	16	58	42

(Adapted from: Bansback, B. 1995. *Towards a broader understanding of meat demand*. Journal of Agricultural Economics, Vol. 46, No.3)

Social factors, and particularly religion, were not considered as key demand drivers during their study. Nieuwoudt (1998) state that the racial mix of the South African population has important implications on the demand for food.

## **2.6. The Effects of Culture on Consumer Behaviour**

Worldwide, meat is highly recognised as the primary source of nutrients that build and maintain human bodies, proteins (Speedy, 2003). In the Far East and many other Western countries, pork is highly demanded and consumed by people of different races, cultures and religions. However, unlike other domestic mammals such as cows, goats and sheep; certain religions consider pigs as taboo mammals, which are a source of taboo food. These religions are Islam and Judaism.

Culture, generally is challenging for many marketers, as it is difficult to understand and describe (Perner, 2010). And in the case of South Africa, a multi-cultural Rainbow Nation, one may violate another's culture in an irremediable manner and measure if one does or says anything that will undermine another's culture in a way that makes them feel aggrieved by that statement or action. To make matters formal and even more complicated, everyone has equal enjoyment to rights and freedoms; and no person may discriminate against or violate another's rights to ethnic or social origin, culture, beliefs and religion, amongst others. This is enshrined by Chapter 2, Subsection 9 of the Bill of Rights in the Constitution of the Republic of South Africa. It is therefore encouraged that South African communities respect and try by all means to learn and understand one another's cultures. This understanding of individuals' rights to religion and cultures is to be learnt by marketers alike.

In their recent study, Louw et al. (2010, p.111) said that beef, poultry and pork are substitute meat products whose production levels can be chiefly determined by the change in consumer behaviour. Buyer or consumer behaviour is affected by a number of factors, including economic and non-economic factors, amongst others. One of such non-economic factors is a social one, culture. Kotler et al. (2005, p.256) define culture as "the set of basic values, perceptions, wants and behaviours learned by a member of society from family and other important institutions". Perner (2010)

describes culture as an influence on a consumer by other individuals. Culture is learnt from young age from family, communities and other institutions that surrounds a child as he or she grows (Kotler et al. 2005, p.219 ).

According to Engel et al. (1995), food and feeding habits are some of the attitude and behaviors that are impacted by culture. This suggests that people influence others on what food to buy and how to prepare it, for what occasions and to be consumed on what the time of the day. Engel et al. (1995, p.613) state that culture is passed on from generation to generation, primarily by institutions such as family, schools, and religion, which in turn determine the behavioral attitudes of individuals and society in the buying and consumption decisions.

The following diagram illustrates the values, norms, sanctions and consumption pattern.

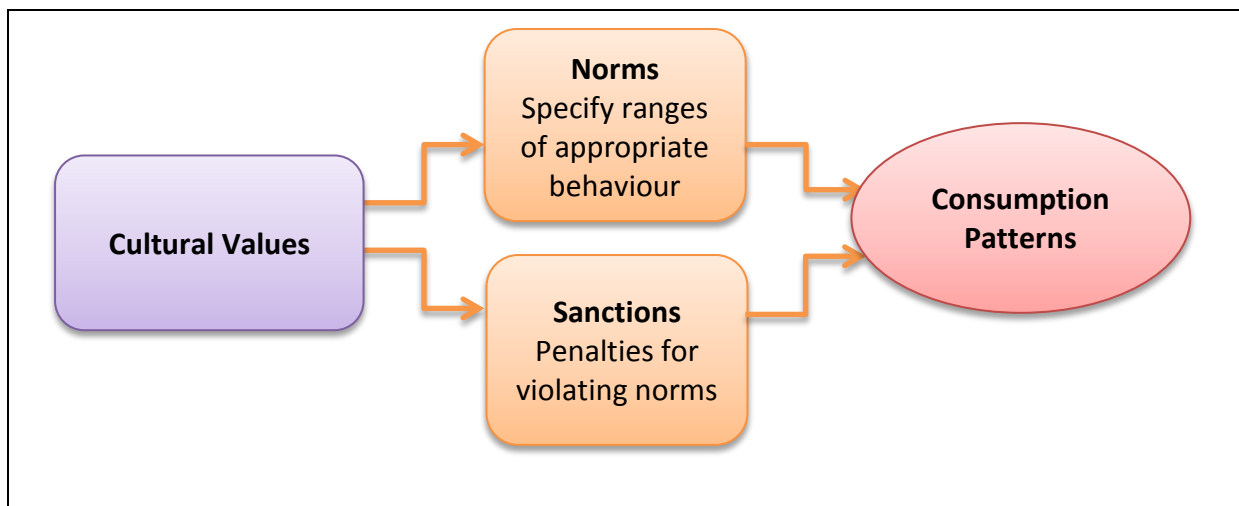


Figure 2.6 Values, Norms, Sanctions and Consumption Patterns.

(Adapted from Hawkins et al. 2007. Consumer Behavior: Building Marketing Strategy. 10<sup>th</sup> ed. McGraw-Hill Irwin, United States. p43)

Culture creates boundaries for individual behaviour and by influencing how families, groups and media, should operate, (Hawkins, et al. 2007, 43). Culture structures how the lifestyles of members of the community should evolve. As shown in figure 2.6 above, the subconscious acceptability of sets of behaviours is norms, which are the spoken or unuttered rules that specify acceptable and prohibited behaviours in a certain situation. Sanctions results if an individual contravenes the cultural norms, as

shown by the alternative direction of the arrow in figure 2.6 above. This could be a minor disapproval by the family, the community or the media, or a major banishment from the society. The norms and sanctions therefore influence the consumption patterns (Hawkins, 2007, p.43). An average Black person does not buy sun tanning sessions or creams. On the same breathe; an average White person does not buy skin lightening lotions. On that same note, consumers who have reservations about pork or pork products would not buy pork, under any circumstances and irrespective of what the marketer does to try and attract the potential customer.

## **2.7. Religion and Its Effect on Purchase Decisions of Consumers**

Ranzu (2012) defines religion as a search for meaning beyond materialism. The author adds that a world religious tradition is a set of symbols and rituals, myths and stories, concepts and truth-claims, which a historical community believes gives ultimate meaning to life, via its connection to a transcendent beyond the natural order. Religion is a set of ideas and beliefs that individuals can engage with, and is also a framework for their lived experiences (Nye, 2004). According to Nye (2004) religion and culture are basically socio-cultural macroeconomic factors that can affect an industry or an organization's competitiveness and success. According to Hawkins et al. (2007), America has 79% of the population who believes in God and half of the total American population regards religion as very important in their lives, to a point that it directly influences their behaviours. These authors further state that religion instills fear in people in order to achieve its objectives. Moreover, illiterate individuals are easily manipulated by religion (Mather, 2010).

In the old testament of the Holy Bible under the book of Leviticus, chapter 11, the Lord gave Moses and Aaron regulations for the Israelites to adhere to. These regulations were given to the community of Israel in order that any form of tarnishing could be avoided at all cost. The regulations relate to the type of food that is clean and unclean which the Israelites could and could not eat respectively. According to Harrison (1980. p.120), the Holy Bible clearly states the principles that should eternally guide people on what animals are allowed for human consumption. These conditions must both be satisfied in order for that animal species to be considered edible by humans, and if any of these two tests are not satisfied, such animals are considered unclean and must not be eaten. Animals that are 'cloven-footed' and

chew cud are the animals that the Holy Bible deemed acceptable for human consumption (Balentine, 2002).

According to Balentine (2002), pigs were among the animals that the Lord instructed the Israelites not to eat. As contained in the Holy Bible, the Lord told the Israelites that as much as the pigs have split hoofs, which are completely divided, they could not be eaten because they do not eat the cud, and were thus considered unclean and inedible. Unlike other domestic mammals such as cows, goats and sheep, people who practice certain religions such as Judaism and Islam consider pigs as taboo mammals, which are a source of taboo food. In the new testament of the Holy Bible, Jesus Christ the son of God told people who had gathered around him that what goes into the mouth does not defile a man, but that which comes out of the mouth defiles a man. However, In the Far East countries such as Korea and China, and many other European countries, pork is highly demanded and consumed by people of different races, cultures and religions (Worldwatch Institute, 2013).

## 2.8. The Position of Religions on the Consumption Of Pork

The following table depicts the statistical results of religion in South Africa as at 2001 according to Statistics South Africa.

Table 2.2 Classification of the population of South Africa by religion.

RELIGION	%
Christianity	79.80
African Traditional Religion	0.30
Non-Religious	15.10
Islam	1.46
Hinduism	1.23
Judaism	0.17
Other	0.60
Undetermined	1.36

Source: Adapted from Statistics South Africa. 2011. Pocket Guide to South Africa 2011/12. [Online] Available [www: http://www.gcis.gov.za/sites/default/files/docs/resourcecentre/pocketguide/004\\_sasp\\_eople.pdf](http://www.gcis.gov.za/sites/default/files/docs/resourcecentre/pocketguide/004_sasp_eople.pdf) (Accessed 20 November 2012)

As shown in the table above, Christianity is the predominant religion in South Africa, making up 73.52% of the population; followed by African Traditional Religion at 15%. Christianity can be seen as a very controversial and most complicated of all religions observed in South Africa. It consists of sects or churches that interpret the bible in different ways. The Holy Bible is segmented into two; these are the Old and the New Testaments. The Old Testament relates to the religious life before Jesus Christ was born, whereas the New Testament is about the religion from the birth of Christ, to his death and resurrection and up to the Revelations about the future.

To this date, new Christian churches are still formed in order to spread the Gospel of Christ. The Christian community is split into a grouping that consumes pork while another grouping refrains from eating pork. Strangely, the two groups find justification for their decision-making to consume and not-to-consume pork from Christian scriptures contained in the Holy Bible. Some Christians refer to Leviticus 11 and Deuteronomy 14 to refrain from eating pork, while other Christians make reference to Jesus' sermon in the book of Matthew 15 to support their reason for consuming pork. Roman Catholics are a typical example of Christians who make reference to the New Testament in support of their pork consumption. According to Barack-Erez (2007, p.19), pork was favorite meat for the Romans to an extent that the Jews' abstention from pork was a mystery to the Romans. The author added that other ancient nations ridiculed Jews for abstention from pork. Barack-Erez (2007) regards pigs as the subject of leprosy, which is a foul plague.

African Traditional Religion is the kind of religion that does not make reference to a particular religious book such as a Quran or a Holy Bible. 'Oral practices form part of the heritage of the African cultural wealth in its various forms and expressions and they live on, irrespective of whether they are recorded in writing or not,' (Turner, 2007). However, this religion does make reference to scriptures in the Holy Bible to show resemblance of Biblical events to African traditional events. In South Africa, particularly in KwaZulu-Natal, African Traditionalists worship ancestors, termed Amadlozi or Amathongo in isiZulu. According to Mkhize (2008), this religion is practiced under the premise that people who used to live on this planet did not die in spirit and for their spirits to live on and give guidance and protection to their living generations, they have to enter and function in a living person's body.

People who worship ancestors perform ceremonial rituals (Ntuli, 2004). According to Mkhize (2008), Ancestors are honoured by providing food at certain times for certain occasions. A newborn child is acknowledged and reported to the ancestors through a ritual (Imbeleko). A teenage girl or boy is reported as a young adult through a ritual (Umhlomyana). A woman is celebrated and given recognition as an adult through a ritual (Umemulo). When a woman leaves her home to be part of a new family, both families perform rituals. When a person dies, his spirits are joined with other spirits and brought into the family through a ritual. Mkhize (2008) explained these rituals are performed in order for the spirits of that family to give guidance, protection and blessings to those who are still alive. Live animals are slaughtered at the African Traditional Alter (Umsamo) inside the house, where an African insect (Impepho) is burnt as a tool for connecting with the ancestors. However, a cow is slaughtered in the kraal and not in the African Traditional Alter because of its size as it cannot walk through the doorway of the hut. Of all the animals that are used in such rituals, a pig is none of them; and pork does not form part of the menu during these occasions, which include funerals, weddings, tombstone unveiling ceremonies, and so on. This effectively reduces the quantity of live pigs or pork potentially demanded by African Traditionalists.

Non-believers are individuals who have no interest in committing to any religion. Individuals that practiced certain religions and found faults in the way such religions are practiced, or who, due to new developments from science, have proven the stories of the bible to be inaccurate; also belong to this group. These individuals are referred to as Atheists. An atheist does not believe in a god or gods, or other supernatural entities, (The Pluralist Project, 2013). The Pluralism Project (2011) defines the term Atheist as a person who has no religious belief in a god, gods or any supernatural powers.

Hindu religion in India does not forbid consumption of pork, however, Clovegarded (2011) explains that other Hindustani Indians due to potential competition for food between pigs and human beings, as it is, humans do not have enough food sources for themselves. For the people of India, religion is not the only reason for abstinence from pork. Food scarcity is the reason that India does not conduct commercial pig farming as India cannot afford to provide pigs with enough food for both humans and

pigs (Chandy, n.d). South African Indians belong to different religions, including Christianity. A question that may arise is 'how can one establish whether Indians in South Africa are pork eaters and which religion do they observe?' Sanders (1992, p.214) states that Jews observe the laws of 'kashrut', which entail the prohibition of consumption of blood and fatty part of animals. This incorporates food that is edible for the Jews to eat and which the Jews refer to as 'kosher'. Pigs are, and always have been an absolute abolition in the Jewish diet.

## **2.9. Global Market Opportunities for Local Producers**

Lupnow (2007) conducted an investigative study into "the impact of imported pork on the demand for pork in Queenstown". The exploratory research on South Africa's pork export opportunities to high pork consumption countries such as Korea, Japan and China can be conducted. However, the first point of departure would be to establish facts that have implications on international trade. Up until 1986, South Africa was a net exporter of pork (Badurally-Adam and Darroch,1997). Oyewumi, Jooste, Britz and Van Schalkwyk (2004) said that South Africa remains a net importer of most of these products. In response to the Medium Term Strategic Framework that addresses the Millennium Development Goals (MDG), the MDG Report (2010) states that South Africa aims to speed up growth and transformation of the economy in order to create decent work and sustainable livelihoods. Another priority is a comprehensive rural development strategy linked to land and agrarian reform.

From the KwaZulu-Natal province's perspective, the province aims to promote agri-business on a range of programmes and measure the industry's performance. To realise this, government relies on Agri-SA which was established in order to serve and promote commercial farming (DAFF, 2006). Another organisation that contributes to the fulfilment of Strategic Plan for the SA Agriculture that was drawn up in 2001 is the National African Farmers Union (NAFU) which focuses on emerging and under-resourced agricultural sectors (NDA, 2006). The body with similar functions is the National Emerging Red Meat Producers Organisation (NEPRO) whose mission statement is "To facilitate the empowerment of its members

in order that their social and economic well-being can improve and enable them to utilise market opportunities on a sustainable basis”.

The KwaZulu-Natal Provincial Department of Agriculture Environmental Affairs and Rural Development held the Agricultural Marketing Forum in 2012. The forum’s strategic objective sought to enhance agri-business on various programmes. It also wants to measure the sector’s performance in the economy. The Forum wants to consider interventions that will yield results that translate into value for money for government, sound business sense for local economies and improve the lives of people, particularly the impoverished and emerging farmers. The Marketing Agricultural Forum has suggested extensive market innovations to empower the emerging farmers in order to fulfil the objectives above (KwaZulu-Natal Agriculture, Environmental Affairs and Rural Development, 2012, p.2). They want to establish agri-business information centres and give particular attention to other logistics ranging from transportation to securing local market for producers.

The forum emphatically calls on working towards producing quality products that will meet standards for local and international trade (KwaZulu-Natal Agriculture, Environmental Affairs and Rural Development, 2012). In essence, this calls for improved agricultural extension services in order to improve the quality of products for markets. It is then believed that the finalisation and implementation of these strategies will boost the emerging agricultural sector while promoting rural development. It is vital that the pig/pork industry, especially at primary level, make substantial changes to lean towards consumers of pork with an intention to better understand changing consumers’ preferences and, through this, make the required changes to stimulate and grow pork consumption (Oyewumi and Jooste, 2006, p.193).

## 2.10. The City of Pietermaritzburg

The following diagram is a map of South Africa that shows the exact location of the KwaZulu-Natal Province, with the map of Africa as an insert to depict the exact location of South Africa within the entire African continent.



Figure 2.7 The Map of Africa and the Map of South Africa

(Source: The Big Picture of the Bible. 2012. The map of the country of South Africa in Africa. [Online] Available www: <http://bigpictureofthebible.com/images/kwazulu-map.jpg> (Accessed 10 November 2012))

As shown in Figure 3.2 above, KwaZulu-Natal is the province that is on the eastern side of South Africa, which is the southern tip of the African continent. This province has good and a variety of vegetation and climate for different types of agri-business. KwaZulu-Natal is subdivided into one metropolitan municipality which is EtheKwini Metro and ten district municipalities, one of which is uMgungundlovu. This district municipality is made up of seven local municipalities, which are Mooi Mpfana, Impendle, uMshwati, uMgeni, Richmond, Mkhambathini and Msunduzi. The following is the map of KwaZulu-Natal and it shows the location of the city of Pietermaritzburg.



Figure 2.8, The Map of KwaZulu-Natal. Source: Location4Business: The Foreign Direct Investment Platform. 2012. The Map of KwaZulu-Natal. [Online] Available www: <http://www.locations4business.com/africa/south-africa/kwazulunatal/trade-and-investment-kwazulunatal/communications/> (Accessed 09 March 2013)

According to the population statistics results from Statistics South Africa 2007, Msunduzi Municipality had an estimated population of 606 730 people. Statistics South Africa's review showed that there was a positive percentage change in the Msunduzi Local Municipality's total population by 11.6% from 2001 to 2007. Taking further increase into consideration, an assumption is made that there has been a further 5% increase in population from 2007 to 2011, taking mortalities into consideration. As a result, the estimated current population of the Msunduzi Local Municipality is estimated at 647 556 as at 2011.

## **2.11. Summary**

This chapter covered the wealth of literature that is relevant to this study. Firstly, the overview of the pork industry was set out. The review of global and local demand for pork followed. Thereafter, indications that suggest the actuality South Africa's growth potential were mentioned. Demand was defined using certain schools of thought as supporting literature. The effect of culture on consumer behavior was also discussed. And finally religion and its effect on buying decisions and consumption; as well as Global market opportunities for local producers were discussed. The chapter that follows will discuss the methods used in the formulation and execution of this study.

## CHAPTER THREE

### RESEARCH METHODOLOGY

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#### **3.1. Introduction**

In this research, a hypothetico-deductive method was used. This is a scientific and logical method which according to Sekaran and Bougie (2010, p.24) provides a “systematic approach” in solving complex problems. This method assists in understanding a problem and defining the problem statement that can be measured through collection, analysis and interpretation of qualitative and/or quantitative data (Sekaran and Bougie, 2010). This chapter presents the design and methodology which was used when conducting this study. The research design included the purpose, location, type, time horizon and unit of analysis of the study. Further, the sample size, sampling technique, the sampling design, data collection method and measurement will be covered in this research. Total error will be unpacked and discussed in detail. The use of computer software to code, summarise and analyse the data which is Microsoft Excel will also be discussed.

#### **3.2. Objectives of the Study**

The following are the objectives of this study.

3.2.1. Establish whether religion is a key non-financial driver of demand for pork.

Literature reveals that financial factors are considered by researchers as the superior of demand for pork. Other non-financial factors such as value chain hygiene and nutritional benefits from pork and pork products are considered to be drivers of the demand for pork. Culture, which shapes individuals through learnt and acceptable norms as imposed by through families and communities, has not been given much consideration or credit if at all by previous literatures. Understanding the impact of religion as a subculture on the demand for pork could be an eye-opener for pork producers and potential market entrant from South Africa and abroad.

### 3.2.2. Understand the levels of demand for pork in South Africa

It would be useful for pork producers to understand the trends of their local market. Establishing whether consumers who do not currently eat pork, would ever change their perception on it, if circumstances were to change, is a valid determinant of the industry's success.

### 3.2.3. Assist pork suppliers in making supply decisions that will meet the demand side.

From the literature, it has been established that South African pork producers produce pork primarily for the local market. South African pork producers currently export to African Countries and not to the rest of the world. As much as South Africa is the pork exporting country, the volumes are comparatively insignificant. Further, Government seeks to encourage rural development in order to improve economic participation of historically disadvantaged individuals through subsistence and commercial farming. If the pork industry's growth potential is hampered by such a strong cultural factor as religion, which is a non-economic factor that is difficult to change in the short run, it might be viable for the producers to consider exploring international markets, which could see the producers improve in terms of global market presence and market share. This study will assist the local suppliers and marketers of pork in understanding their market and profitable product offers.

## **3.3. Research Design**

The research design outlines the approach that the researcher will take in order to arrive at realisable research results and conclusions. Malhotra (2004, p.10) defines the research design as a blueprint for conducting a research and three approaches are commonly used, these are exploratory, causal or hypothesis and descriptive research design. Sekaran and Bougie (2010, p.103) describe an exploratory research design as a study, which is undertaken when the researcher has limited knowledge or information. The information obtained from that type of research is qualitative. Malhotra (2004, p.76) defines a causal research as one that is used to establish relationships between two or more independent variables. Descriptive

research, which will be used in this study is undertaken to describe the characteristics of the market, (Malhotra, 2004).

It may be tempting to conclude that the research design to be undertaken should be a causal or hypothesis study. Noting that this research seeks to determine the impact of the religion on the demand for pork, it is important to consider that the data collection method under the causal study is through experiments, whereas the descriptive research uses surveys, panels, secondary data, etcetera.

Figure 3.1 below depicts the classification of the research design which is salient in this study.

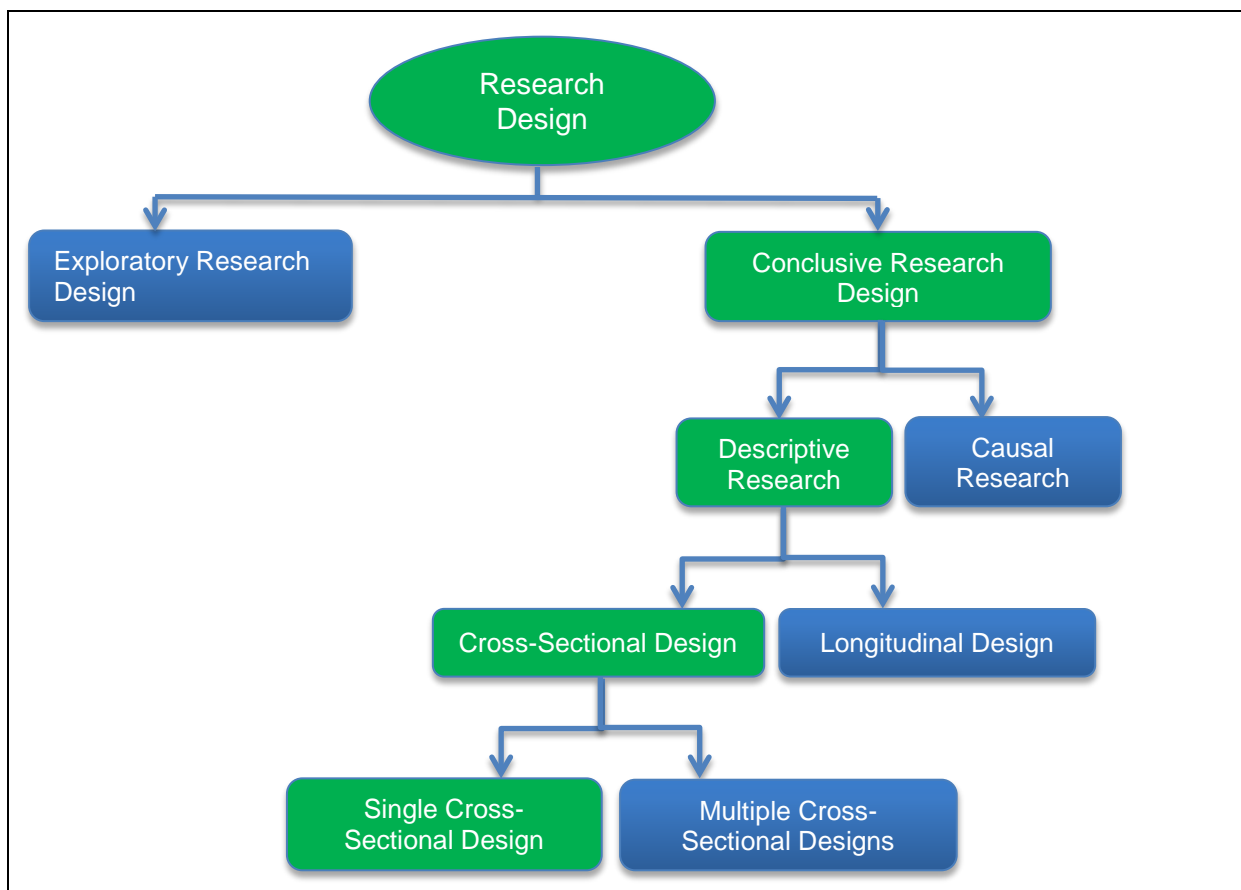


Figure 3.1 Classification of Marketing Research Design.

(Adapted from: Malhotra, N.K. 2004. *Marketing Research: An Applied Orientation*. 4<sup>th</sup> ed. Pearson Education Inc. New Jersey. p75)

Figure 3.1 portrays the design of this research. This study is a conclusive research study because it is formally structured and is based on a reasonably large representative sample extracted directly from the population, whose responses are subjected to analysis in order to reach conclusive findings (Malhotra, 2004). Its descriptiveness refers to the fact that it describes the market features, and that the method of conducting this type of research is through surveys, observations, panels of interviews and through the use of available secondary data. According to Beri (2007), descriptive studies are conducted to make certain projections or to determine the relationships between two or more variables. For the purpose of this study, the cross-sectional design was chosen and used. The cross-sectional design of the study is concerned with a sample of elements from a given population such as households, dealers, or other entities (Beri, 2007). As figure 3.1 illustrates, the design of this study is a descriptive single cross-sectional design.

### 3.4. Pretesting and Validation

The following process flow diagram depicts the steps used to design the questionnaire;

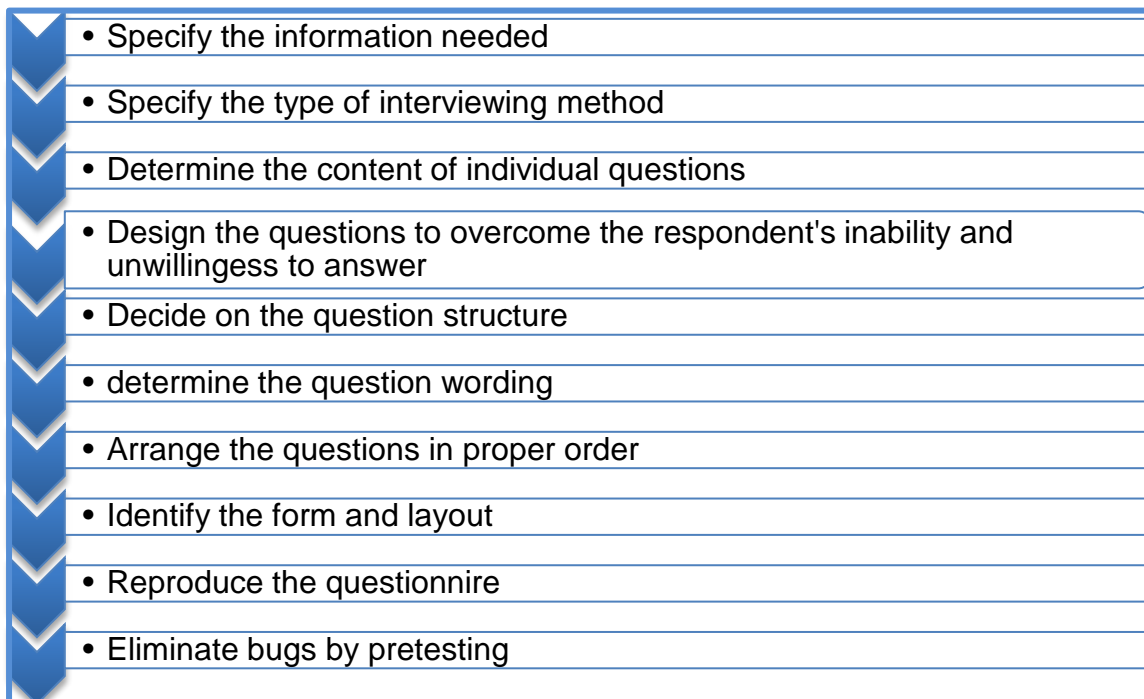


Figure 3.2 Process Flow Diagram for the Questionnaire Design

(Adapted from: Malhotra, N. K. 2004. *Marketing Research - The Applied Orientation*. 4<sup>th</sup> ed. Pearson Education International, New Jersey. p282)

The above figure illustrates the series of steps that are involved in designing the survey questionnaire from specifying the information needed, to eliminating bugs through pretesting. Specifying the information needed is a prerequisite that cannot be omitted as it is the foundation such that if the components of the problem and the approach are not clearly defined, the researcher could address problems that are not related to the research problems (Malhotra, 2004, p.9-10). Because respondents were to visualise the questionnaire, a somewhat graphic questionnaire was designed in order to enhance their imagination, refer to Appendix II. The questions that were contained in the questionnaire would add value to the study. The questions were segmented and grouped into four sections. These sections are demographics, demand for pork, religion as a psychological factor, and behavioral characteristics as market trend determinants.

The topic is easy for all respondents to conceptualise and relate to and it does not require any level of education in order to accurately respond to the questionnaire, unless if the respondent is illiterate in such a case, the interviewer would read to the respondent or translate into an appropriate and preferred language. The questions required innate responses that any randomly identified and approached respondent could easily answer. Because of the cultural nature of the study, certain members of the public whose culture is strongly against the consumption of pork were unwilling to participate in the study. Had these elements responded honestly, the number of respondents who do not eat pork would have increased significantly. Questionnaires were worded in Basic English and the questions were unambiguous. No questions were unreasonably lengthy, open-ended, or double-barreled in the questionnaire. The interviewer used isiZulu language to translate the content of the questions. This was done in order to eliminate possible response errors as a result of language barriers and illiteracy. The questions were limited to two pages.

During the questionnaire design stage, variables were measured using different types of scales; these are nominal, ordinal, interval and ratio scales. A variable is any measurable characteristic or attribute that differs from one subject to the next (Sekaran and Bougie, 2010, p.69). While a scale is a mechanism of differentiating subjects from one another on the variables of interest (Sekaran and Bougie, 2010).

The nominal and ordinal scales provide qualitative data, whereas interval and ratio scales provide quantitative data (Anderson, Sweeney, Williams and Williams, 2009). According to David and Sutton (2004), the nominal scale is used to measure distinct categories such as gender. An individual can either be male or female and these categories are distinct. When this scale is used, response options are categorised by numbers. A typical example is the measurement of the gender of the population whereby a male response would be allocated number 1, and a female response would be allocated number 2. The nominal scale was used in the demographic section which was section A of the questionnaire. These were age, marital status, gender, race, mother tongue, Christian disciple sect and religion. Dichotomous scale was used to prompt a “Yes or No” response to one of the variables in section B of the questionnaire. According to Jackson (2011), if a variable has two possible answers, it is measured on a Dichotomous scale. A nominal dichotomous scale was used to measure gender and other variables which required a “Yes or No” answer.

An ordinal scale is described as one that measures variables that are given rankings (Jackson, 2011). A Likert scale was used for variables that sought to elicit psychological factors and behavioral characteristics of subjects as market trend determinants. A Likert scale intends to study the opinions of subjects in terms of agreements or disagreements to statements of interest (Malhotra, 2004, p.258). According to Malhotra (2004), pretesting is the mini survey that is conducted using a very small sample of the population with similar traits as the respondents in order to test and eliminate any possible problems that might hinder responsiveness. Prior to the actual field work taking place, a dry run using 10 random elements was conducted from the Pietermaritzburg population in order to avoid, establish or correct any possible ambiguity and other response or non-response errors that may arise from the questionnaire.

### **3.5. Sampling Design**

#### **3.5.1. Location and Participants of the study**

KwaZulu-Natal is one of nine provinces in South Africa.

### 3.5.2. Determination of Sample Size

The total population estimate of Pietermaritzburg was 216 426 as at 2007. Assuming a 5% increase from 2007 to 2011, the total population in Pietermaritzburg can be estimated at 227 310. Rantho (2003) illustrates that KwaZulu-Natal's population by racial composition was dominated by Africans at 79.08%, followed by Indians, Coloureds and Whites at 19.29%, 7.38% and 3.25% respectively in 2003. Provincial statistics show that KwaZulu-Natal's population by race is 83.55%, 8.22%, 5.68% and 2.48% for Africans, Indians, Whites and Coloureds respectively (Statistics South Africa, 2007). Using the same statistical findings, it can be deduced that Pietermaritzburg's population composition by race is 125649, 12362, 8542 and 3730 for Africans, Indians, Whites and Coloureds respectively.

Table 3.1 Comparison of Pietermaritzburg's racial composition to that of the country, province and district.

<b>RACE</b>	<b>South Africa</b>	<b>KwaZulu-Natal</b>	<b>uMgungundlovu</b>	<b>Pietermaritzburg</b>
<b>African</b>	79.5%	83.6%	76.5%	74.0%
<b>Asian</b>	2.5%	8.2%	7.9%	15.0%
<b>Coloured</b>	8.9%	2.5%	4.3%	3.0%
<b>White</b>	9.1%	5.7%	11.3%	8.0%

(Adapted from: Elsenburg. 2009. A Profile of the KwaZulu-Natal Province: Demographics, Poverty, Income, Inequality and Unemployment from 2000 until 2007.)

The above table shows that Africans are the majority in South Africa. Asians have greater presence in KwaZulu-Natal at 8.2%, but are comparatively fewer on a national scale at only 2.5% of the total population. The opposite is true with Coloureds as they have greater presence nationally at 8.9%, but are fewer in the province of KwaZulu-Natal and particularly in uMgungundlovu District Municipality. There is consistency in the presence of the white race at national, provincial and district level.

The map of Msunduzi Municipality serves as a sampling frame for this study. While the consumption affects all individuals, it is realistic to eliminate individuals younger than 15 years of age, as these individuals have very limited purchasing power. Statistics South Africa (2011) illustrates that individuals that are 15 years or younger make up 33.85% of the total population of KwaZulu-Natal. An assumption was made that what is applicable to KwaZulu-Natal is applicable to Pietermaritzburg. Thus, the estimated population of 227 310 in Pietermaritzburg is reduced by 33.85%, in order to eliminate individuals that are younger than 15 years. For the purpose of this research, the population size of Pietermaritzburg is thus 150 388.

Figure 3.3 below is a map of Msunduzi Municipality which Pietermaritzburg forms part of.

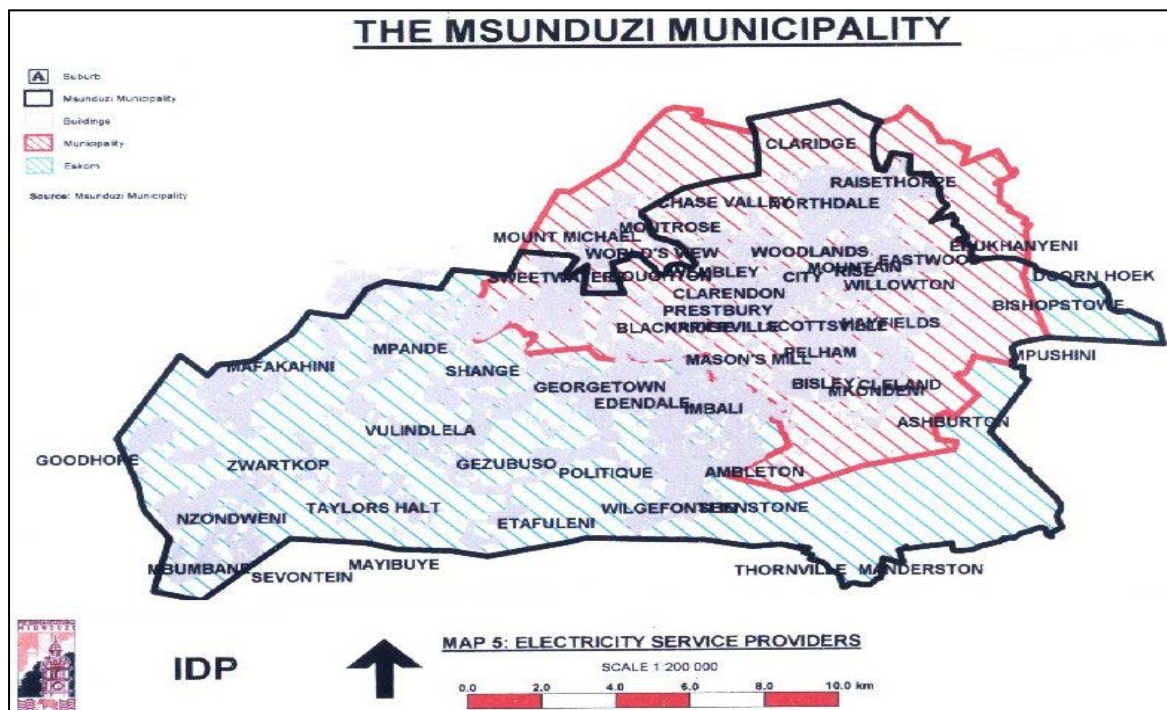


Figure 3.4 The Map of Msunduzi Local Municipality.

(Source: Councillors and Officials of the Msunduzi Municipality. 2002. The Msunduzi Municipality: The City of Choice – Integrated Development Plan. [Online] Available www:

<http://devplan.kzntl.gov.za/Municipal/IDPs/Msunduzi/IDP%20Images/map%205.jpg>

[Accessed 10 November 2012])

Pietermaritzburg is the capital city of KwaZulu-Natal province situated in the Msunduzi Local Municipality. Of the total 37 wards that make up Msunduzi, Pietermaritzburg is made up of 14 urban and peri-urban wards as shown in figure 3.4 by the red border line that geographically demarcates it (Msunduzi.gov.za, 2012). In order to determine the sample size, while ensuring optimum confidence level with low margin of error, the following table serves as a guide.

Table 3.2 Determination of Sample Size

Population Size	Confidence Level = 95% Margin of Error = 5%
100	10
1000	278
10 000	370
100 000	383
227 310	384
250 000	384
1 000 000	384

Source: Adapted from The Research Advisors. 2006. *Required Sample size*. [Online] Available www: <http://www.research-advisors.com/tools/SampleSize.htm> (Accessed 24 November 2011).

The above table depicts different population sizes at a confidence level of 95% and margin of error of 5%, which all help in establishing the suitable sample size. The sample size is the total number of subjects in the total population that are to participate in the research project as respondents. The sample size could become more or less than the study requires. This is dependent on the confidence level, the population size, the resources constraints and the dynamics of the population (Sekaran and Bougie, 2010, p.265). As mentioned, the population size of Pietermaritzburg is estimated at 227 310. Referring to the above table, it can be ascertained that Pietermaritzburg's population is less than 250 000, but greater than 100 000. Due to resource constraints, the population size and its variability, the sample size was 384 elements as recommended by Research Advisors' table 3.2. The implications are that 95% confidence level and 5% margin of error is assumed.

### **3.5.3. Sampling Technique**

The sampling technique that was employed in this study is a nonprobability sampling technique. This technique is used in cases where, like in this case, the population size is so large and subjects are unidentifiable that they have no systematic certainty of being known beforehand and become selected (Tustin et al. 2005, p.344). The most accessible members of the targeted population, who were available, able and willing to participate in the study, were conveniently sampled. Survey respondents were simply approached at the CBD within Pietermaritzburg. Prior to them participating in the survey, the respondents were verbally asked if they reside in Pietermaritzburg

### **3.6. Sampling Errors**

It is important to cite potential sources of errors that could have been experienced or that were evident during the research process. Malhotra (2004, p.89) defines total error as “the variation between the true mean value in the population of the variable of interest and the observed mean value obtained in the research project”. The latest available statistics as at 2007 are that of Msunduzi Municipality and not of Pietermaritzburg. Except in the case of Living Standards, it shall be assumed that Msunduzi statistics are similar and relevant to Pietermaritzburg. The following are the potential errors that may have or that took place during the study, which make up total error:

#### **3.6.1. Potential Sources of Error**

Statistics South Africa’s Mid-year Population Estimates (2011) illustrate that KwaZulu-Natal’s population is made up of 48% males and 52% female. However, it may not be the case for Pietermaritzburg. Further, during the fielding period, random sampling error occurred. While special care was taken to ensure that the subjects were randomly selected, taking race-gender combination into consideration, targeting respondents by gender and by race in order to tally back to Msunduzi Municipality’s population statistics was subject to omission and errors. As a result, 59.5% of subjects were females, while 40.5% we males. It can be confirmed however that it was ascertained that all the subjects that were sampled from and

reside under the Msunduzi Municipality. This was achieved by asking the potential respondents before handing over the questionnaire to them if they are Pietermaritzburg residents. The interviewer carried the enlarged map of Msunduzi Municipality (similar to Figure 3.4) with her during the field work in order to verify if respondents reside in areas or suburbs that fall under Pietermaritzburg.

### **3.6.2. Non-sampling Errors**

There are two types of non-sampling errors, namely response and non-response errors (Sapsford and Joup, 2006). The sample size for this study was 384. The subjects responded as they were identified for responding. Whenever a targeted subject was unable to participate in the study, the researcher moved on to the next available subject. There were therefore inability and/or unwillingness errors from the respondents who could not respond. A typical example of cases that resulted to unwillingness errors was when respondents who are strongly against consumption of pork blatantly refused to go as far as touching a piece of paper that has the word “pork” in it, let alone providing responses to the questionnaire.

Response error committed by the researcher who happened to be the same person as the interviewer was identified during the field work. Instead of providing “I do not eat pork” in the questionnaire as an option for subjects to tick where a subject does not eat pork, the response was labeled as “Neutral”. This error was identified at the beginning of the survey and all the respondents were informed of the implications of choosing “neutral” as a response.

In summary, total error identified during this research includes random sampling errors, non-response errors, response errors made up of researcher error and respondents’ inability or unwillingness errors.

### **3.7. Data collection**

The next stages in the research methodology are the data collection. Secondary and primary data were collected to serve different purposes. Firstly, secondary data was

collected from a variety of relevant literature, which included books, journals, local, provincial and national government publications, census data, statistical abstracts, and the internet. Secondary data is readily available information that was gathered by persons other than the person conducting the research, for reasons other than the study in question (Kotler et al., 2010, p.346). Secondary data was a requirement for the effective collection of primary data in that it assisted the researcher in identifying the problem and defining the problem statement of this study amongst other things.

### **3.7.1. Data Collection Method**

Due to the fact that Pietermaritzburg comprise of a Central Business District (CBD), elements were sampled within the CBD for ease of access. Primary data was collected through survey using questionnaires in public areas such as taxi ranks, community centres and churches and University of KwaZulu-Natal Pietermaritzburg campus. Primary data is data collected by the researcher for the purpose of responding to that particular research problem (Malhotra, 2004, p.37). As an efficient data collection technique, a questionnaire is a schedule of formally structured and articulated set of questions that are directed to respondents.

A survey was conducted using personally administered questionnaires to collect data. This was done in person and not by any electronic means, as sending emails to individuals who reside in Pietermaritzburg cannot be easy to control. People who live in other areas could respond and make the data unreliable. Further, to ensure that the respondents do not influence one another, the researcher ensured that the questionnaire was completed in real time, unless otherwise the respondent opts to terminate his or her participation in the research. In order to reach respondents from different walks of life, the survey was conducted at taxi ranks, community centres, community churches, University campus as well as in the Central Business Districts (CBD), where individuals with diverse living standards, cultures, races, tribes, ages, religion, etcetera, could be accessed. Data collection process took ten days.

### **3.8. Analysis of Data**

Subsequent to collection of data using research questionnaires, the data will be presented and analysed by way of graphs and tables.

### **3.9. Summary**

This chapter presented the design and methodology which was used when conducting this study. The research design included the purpose, location, type, time horizon and unit of analysis of the study. Further, the sampling design, sampling technique, data collection method and measurement were explained in this chapter. Research methodology is a good introduction to the chapter that follows, which presents the results of the study with the aim to provide meaningful diagnosis of the problem statement.

## CHAPTER FOUR

### PRESENTATION AND DISCUSSION OF RESULTS

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#### **4.1. Introduction**

The previous chapter explained the research methodology which served as a guide for conducting this study. This chapter presents the outcome of the survey conducted by means of questionnaires. In order to ensure accuracy and reliability of data, as well as a responsiveness of respondents, a questionnaire used was designed with precision. This was achieved by designing the questionnaire in such a way that the questions were not open-ended, double barreled, ambiguous, leading or lengthy. The questions were arranged in such a way that the respondents would initially respond to relatively easy and generic questions such as demographic questions and progress to research-specific questions.

The findings will be presented by means of tables and graphical presentations. The point of departure will be the presentation of the demographical findings which will describe the dynamics of the respondents, as well as address the reliability of the sample mix that was used. This will be followed by the presentation of the results of the demand for pork, followed by the presentation of the results of respondents' perception on religion as a psychological factor. Lastly, the behavioral changes of respondents as market trend determinants will be discussed.

#### **4.2. Treatment of data**

It must be noted that during this empirical part of the study, the inspection of questionnaires was conducted in order to validate accuracy and use of reliable data. Three hundred and eighty four questionnaires were originally planned for receipt and analysis. Four hundred questionnaires were prepared for the field work. This included 16 units that served as a blanket to guard against non-responses. About 6% of responses, 25 questionnaires ( $400 - 375 = 25$ ) were scrapped as they were either incomplete or contained errors such as ticking two or more options for a

particular variable. Because the study was confined to the area of Pietermaritzburg, the researcher personally administered the questionnaires in order to save costs and to achieve optimal and on-time responsiveness. There were however, cases where respondents requested and were granted enough time to study the questionnaire. It is likely that some of those respondents submitted incomplete questionnaires as they did not get any guide or clarity where it was needed, hence erroneous or incomplete responses.

#### 4.3. Section A – Demographic outlook of the sample

The following figure depicts the demographic statistics of the sample of 375 respondents according to their age groups.

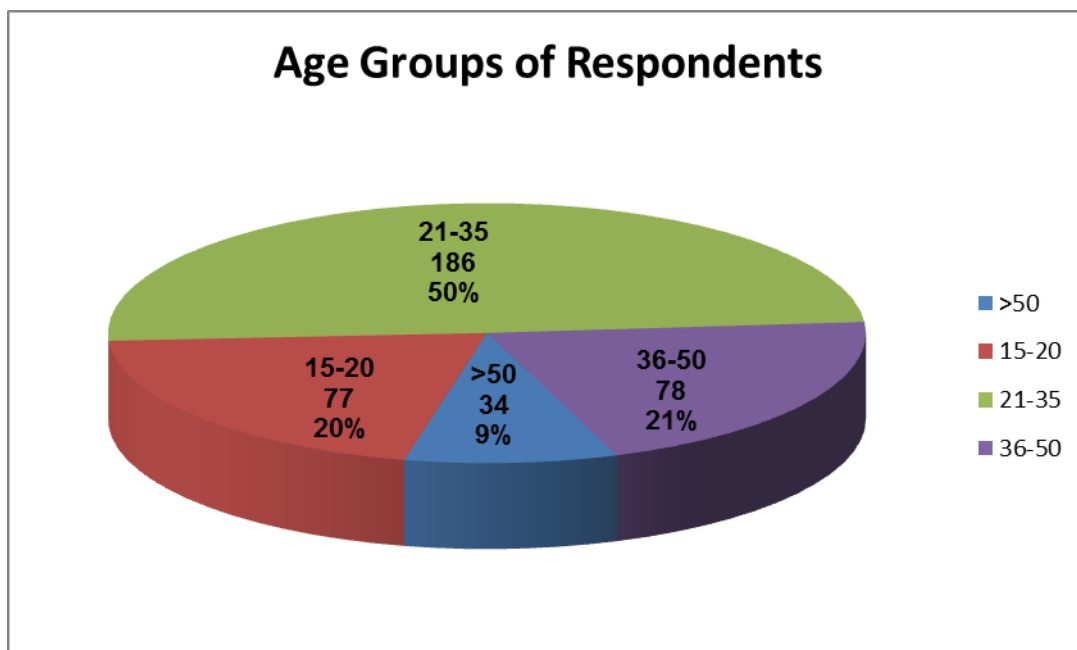


Figure 4.1 Age groups of respondents in years

Figure 4.1 above demonstrates that half of the respondents, 50% are young adults who fall within the age group of 21 to 35 years of age. The other half of the population sample consisted of youth age group of 15 to 20 years accounting for 20%, followed by adults' age group of 36 to 50 years which was 21% of the sample, with senior citizens age group of respondents older than 50 years accounting for 9% of the sample.

Table 3.1 shows that Africans are the majority in South Africa. Asians have greater presence in KwaZulu-Natal at 8.2%, but are comparatively fewer on a national scale at only 2.5% of the total population. The opposite is true with Coloureds as they have greater presence nationally at 8.9%, but are fewer in the province of KwaZulu-Natal and particularly in uMgungundlovu District Municipality. There is consistency in the presence of the white race at national, provincial and district level. Figure 4.2 below presents the classification of respondents by race.

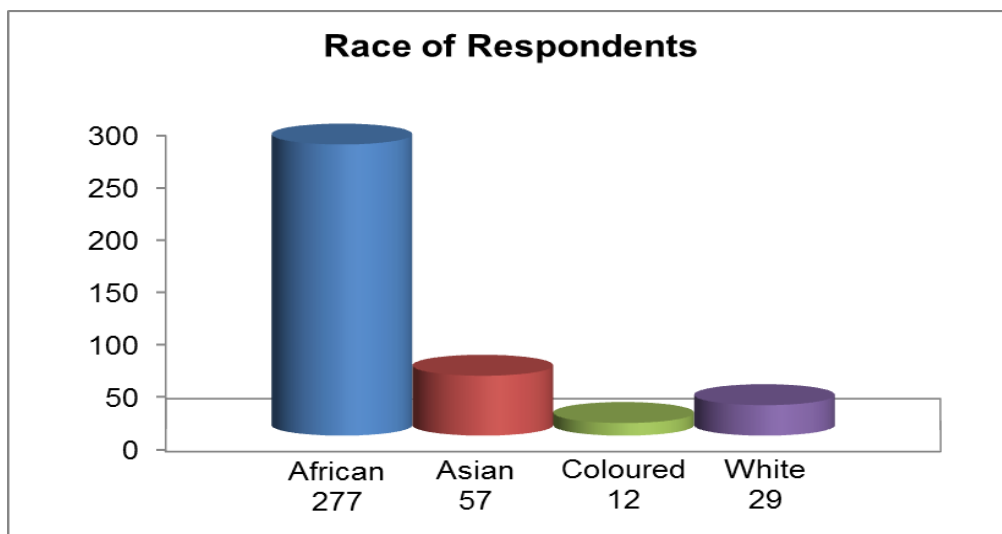


Figure 4.2 Races of Respondents

During the survey, special care was taken to ensure that all the country's races are represented in the sample. As can be expected and as illustrated in figure 4.2 above, Africans made up 74% of the sample followed by Asians, Whites and then Coloureds at 15, 8 and 3 percentages respectively. The above figure which presents the racial composition of Pietermaritzburg compares favourably and relatively to the results in Table 3.1 which depicts the racial composition of the country, the province and the district municipality under which the town belongs.

In order to reiterate the reliability of data compiled from the survey, the composition of the sample by gender was also tested and presented in figure 4.3 below.

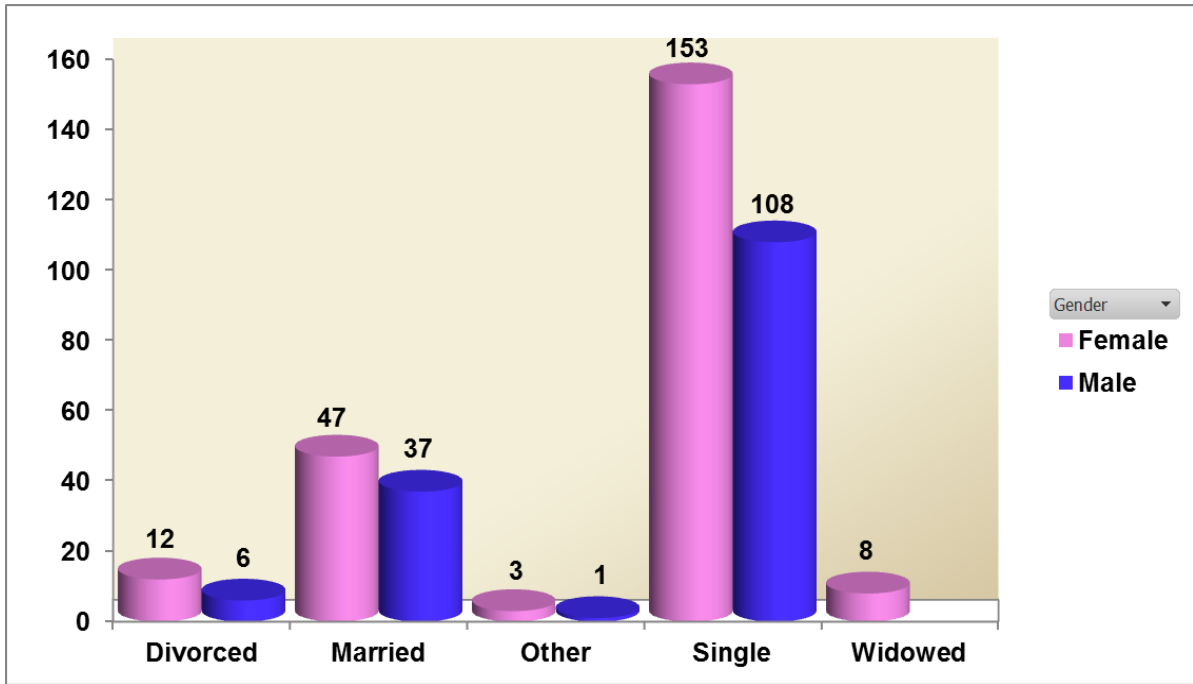


Figure 4.3 Marital statuses of respondents classified by gender

From figure 4.3 above, it is illustrious that the majority of the sample consisted of about 70% of single people. Out of 261 single respondents, 153 of them were females while the remaining 108 singles males. Notably, less than a quarter, 22.5% of the respondents are married. The split of 84 married respondents is made up of 47 and 37 females and males respectively. The remaining 30 set respondents is made up of 18 divorcees, eight female widowers and four other unspecified men and women. Married, divorced and widowed people are the ones who are expected to have strong influence on what is purchased in the household. However, considering the level of single parenthood in this country, it is apparent that single individuals also have relatively strong influence on purchasing decisions.

Respondents were asked about the number of years that they have been residents of Pietermaritzburg. The purpose of establishing their residence was to ensure that the respondents were not people coming from other parts of the province, and who would be visiting or touring the city. The following pie graph depicts the residence of respondents in Pietermaritzburg in years.

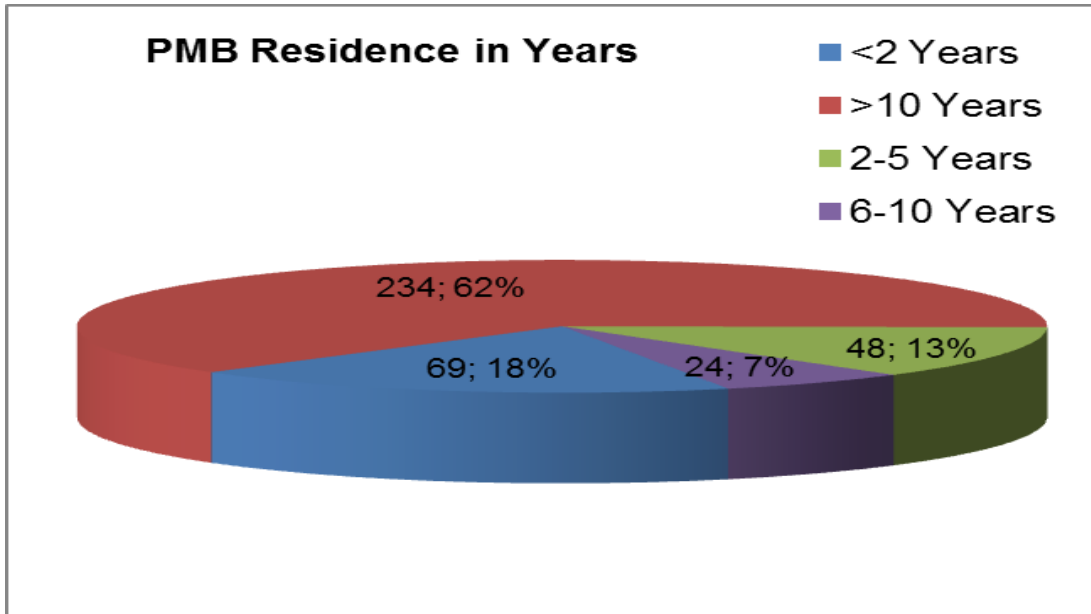


Figure 4.4 Category of Respondents Residence in Pietermaritzburg

Figure 4.4 above shows that 62% of respondents are permanent residents of Pietermaritzburg and have been living in this town for more than ten years. Residents who have lived in Pietermaritzburg for six to 10 years made up 7% of the respondents. Respondents who have been residing in this town between two to five years made up 13% while those who have been living in the city for less than two years made up 18% of the sample. This 18% includes university students who live in Pietermaritzburg to be in close proximity to the University, Durban University of Technology and other tertiary institutions, and are likely to depart upon completion of their tertiary education. The following graph is the representation of different religion of 375 respondents.

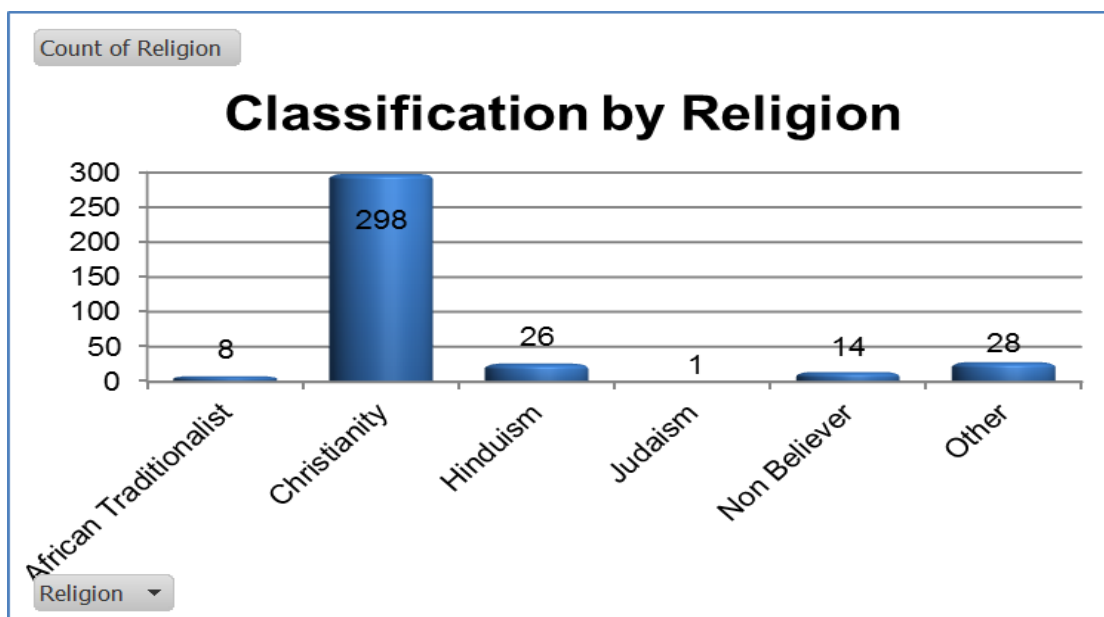


Figure 4.5 Classification of the population sample by their religion.

Figure 4.5 above depicts that there were eight African Traditionalists who were part of the population sample. Christians were a majority, accounting for 79.5% of the respondents. Respondents who believe in Hinduism accounted for 6.9%. This is in line with the outcome of the racial statistics as Indians accounted for 15% out of the total sample. It can be acknowledged that some Indians are Christians while others are of Hinduism and Islamic faiths amongst others. There is a slight distinction between the national and the city's religious composition as shown in Table 4.1 below.

Table 4.1 Comparison of the country's racial composition to that of the city of Pietermaritzburg.

RELIGION	South Africa	Pietermaritzburg
Christianity	73.52%	79.47%
African Traditional Religion	15.00%	2.20%
Non-Religious	8.08%	3.73%
Hinduism	1.25%	6.90%
Judaism	0.17%	0.20%
Other (Including Islam)	1.48%	7.50%

By comparing Pietermaritzburg’s religious composition of the respondents to that of the Country in table 4.1 above, it can be affirmed that the sample closely represented the city’s population as far as possible. Christianity is the predominant religion in Pietermaritzburg, as it is in the rest of the country. More than 70% of people believe in Christianity in South Africa. The interesting fact is that, to a certain degree, Christians inform and shape the manner in which Christianity is to affect and impact their own lives. The reference and interpretation of the bible is affected to a certain degree by other social and environment factors. For this reason, the bible is interpreted by some Christian disciple sects as stating that pork is unclean, and should not be eaten, while others refer to its new testament in the book of Matthew, chapter 15 and intepret it as stating that anything that goes into the mouth does not kill, only what comes out of the mouth is deadly. As such, there have been a lot of Christian disciple sects that have been established in order to suit certain beliefs within Christianity.

The graphical presentation below depicts Christian disciple sects that are prevelant in South Africa and Pietermaritzburg in particular.

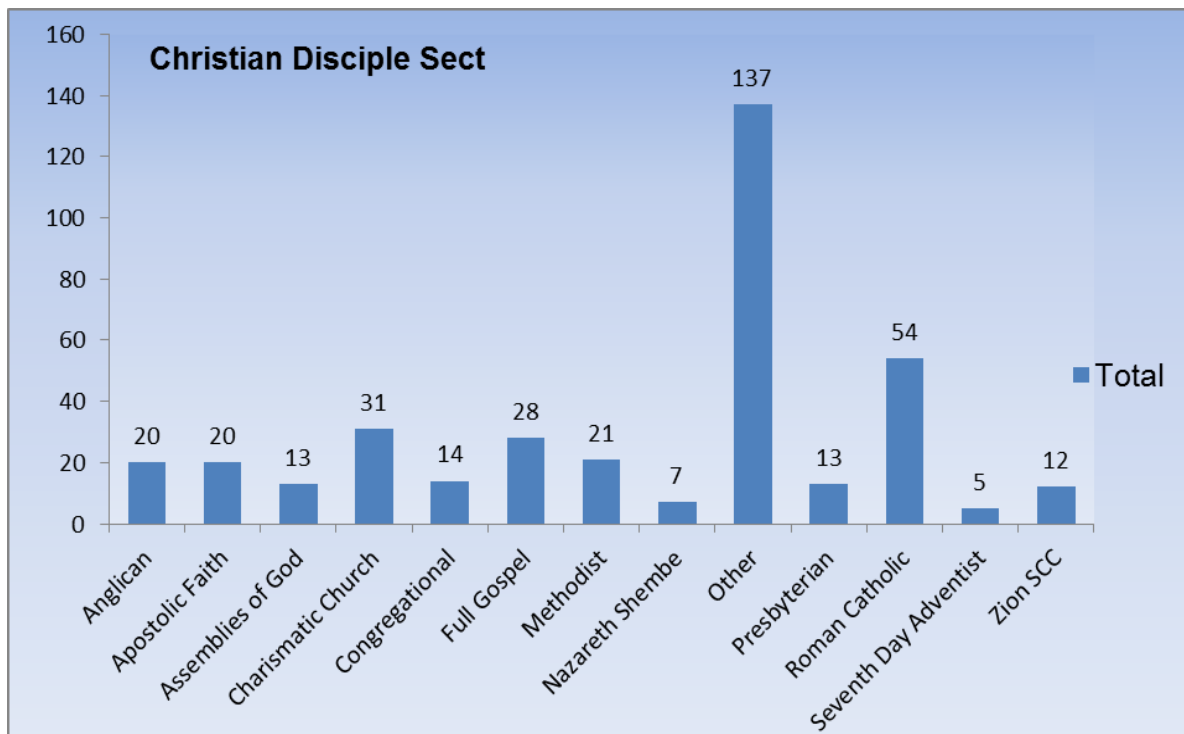


Figure 4.6 Representation of Christian disciple sects prevalent in Pietermaritzburg.

The Roman Catholic Church appears to remain the most favored church among other churches specified in figure 4.6, as 54 out of 375 respondents said that they belong to the Roman Catholic Church. The presence of other churches appears to be somewhat evenly spread. Notably, Charismatic churches appear to be growing rapidly as 31 respondents represented this Christian disciple sect. About a third, which is 137 of respondents, classified them under 'Other'. Other consists of two categories of respondents. Of the 137 respondents that are grouped as other, 89 of them are not Christians at all, refer to figure 4.5 ( $375 - 286 = 89$ ). The remaining 99 respondents belong to other Christian disciple sects that were not identified and specified in the research questionnaire. This further asserts that there are many other churches that have been established under Christianity.

#### 4.4. Section B: Demand for Pork

This section of the questionnaire sought to establish if the following factors were by any means the key drivers for the demand for pork. Table 4.2 below presents the results of the respondents' perception on what exactly prompts them to add pork or pork products into their shopping baskets.

Table 4.2 Statistical findings pertaining to variables related to the Demand for pork

#	STATEMENT	NOT IMPORTANT	SOMEWHAT IMPORTANT	NEUTRAL	IMPORTANT	VERY IMPORTANT	GRAND TOTAL
1	One eats pork because it is part of a healthy diet	113 30%	21 6%	145 39%	43 11%	53 14%	375 100%
2	For one to eat pork, it must be in a processed form	153 41%	22 6%	107 29%	71 19%	22 6%	375 100%
3	For one to eat pork, it must be on a special price	158 42%	22 6%	163 43%	19 5%	13 3%	375 100%
4	For one to eat pork, one's family must not know	212 57%	9 2%	140 37%	3 1%	11 3%	375 100%
5	For one to eat pork, one must be unaware that it is contained in the meal	204 54%	5 1%	130 35%	7 2%	29 8%	375 100%

The variables in table 4.2 above sought to establish the drivers of the demand by level of importance using the Likert scale. The first variable tested the respondents' responsiveness to pork as part of a healthy diet. Less than a third, 30% of respondents said eating pork because it is part of a healthy diet was not important to them. Less than a third, 31% of respondents said that they felt it important to eat pork as it is part of their healthy diets. More than a third, 39% of respondents felt indifferent about pork being part of a healthy diet. This group of respondents is made up of either people who do not eat pork, or people who do not appreciate the health benefits of pork. Combining 30% of respondents who do not see the importance of pork's health benefits with 39% of respondents who are indifferent about the health benefits give a tally of more than two thirds of respondents who do not value the health benefits of pork.

The second variable sought to compute, according to level of importance, if it was imperative to respondents to prefer to consume pork that is in a processed form. More than 40% of respondents deemed it unimportant for them to have to consume pork only if it is in a processed form. Less than a third, 31% of respondents expressed varying levels of importance of consuming pork, provided that it is disguised in some processed form such as viennas, polonies, sausages etcetera. About 29% of subjects said that they felt indifferent about the state of pork. This group represents people who feel indifferent because it does not affect them as they do not eat pork in any form.

Price elasticity is a standard determinant of quantity demanded (McEachern, 2009). The third variable tests the likely change in quantity of pork that is demanded if the price of pork decreases. It must be acknowledged that the changes in quantity demanded would generally increase within a group of people who do eat pork. The focal area in this instance is to also ascertain if people who do not eat pork would be prompted to buy and eat pork if it were to be comparatively cheaper than other meat products. The logical explanation to this is that pork is not price elastic. To prove this, the results from the third variable depict that only 14% of respondents react positively to changes in price. About 43% of subjects are not affected by the changes in price. This implies that irrespective of changes in the price of pork or its

products, these 163 respondents would not be tempted to buy and eat pork. It would probably be the case even if pork were to be offered to them free of charge.

There are of course people who do not do very well in resisting temptations. The same is true in the case of people who would eat pork, provided that their family members do not know about it. This number is however quite small, at only 5%. Only 23 subjects have expressed varying levels of importance in ensuring that family members must not know about their trespasses against God's commands not to eat pork. It is unlikely that these people would even dare to be seen buying or carrying pork let alone, eating it. On the other hand, 57% of respondents expressed that eating pork on condition that their family members do not know, is not important to them. The remaining 37% of respondents feel indifferent about this statement. The reason for the expression of irrelevance by these respondents would be that they do not eat pork and would never eat pork under any circumstances.

The last variable that was used to determine the demand for pork asked the respondents if it was important for them not to know that the meal contains pork as an ingredient. When asked this question, more than half, 54% of the respondents did not feel it was important and very important factor. About 11% of the respondents expressed this factor as having some levels of importance, while more than a third, 35% of respondents were not affected by this at all and felt neutral about it.

#### 4.5. Section C – Religion as a Psychological Factor

This section of the questionnaire sought to establish the extent that religion psychologically affects demand for pork. The following table and its accompanying graph that follows depict the longevity of respondents in practicing their current religions.

Table 4.3 Longevity of belief religion in years

DESCRIPTION	<1 Year	1-2 Years	3-5 Years	6-10 Years	>10 Years	Grand Total
Practicing Religion in Years	7	18	36	28	286	375
	2%	5%	10%	7%	76%	100%

More than three quarters of the respondents have been practicing their religion for longer than ten years. Seven percent of the subjects have been practicing their current religion for longer than five years but less than ten years. The remaining 17% of the respondents have been practicing their religion for less than five years.

Many people remain true and faithful to their religion. This is shown in figure 4.7 below.

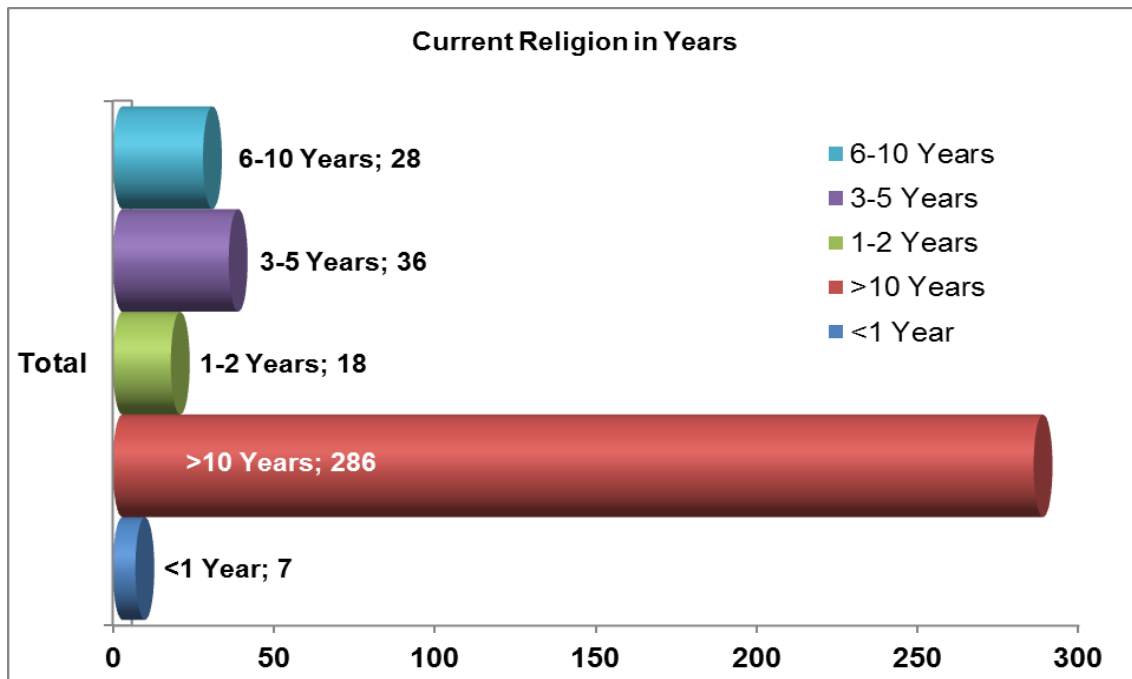


Figure 4.7 Longevity of belief religion in years.

Figure 4.7 above illustrates the number of years that respondents practiced their current religion. More than 76%, 286 respondents have been practicing their religion for more than 10 years. It must be noted that practicing the current religion for less than ten years does not automatically translate to having been practicing other religion prior to the current one. It could be that some of these respondents commenced practicing their religious beliefs for the very first time in recent years. There are of course respondents who have practiced other religions prior to their current ones. The following pie chart depicts the number of respondents who have previously practiced other religions. This variable sought to establish whether the subjects have a potential to transit from one religion to the other, thereby consuming pork, if their new religion so permits.

Only a minority of people convert from one religion to another as evidenced in figure 4.8 below.

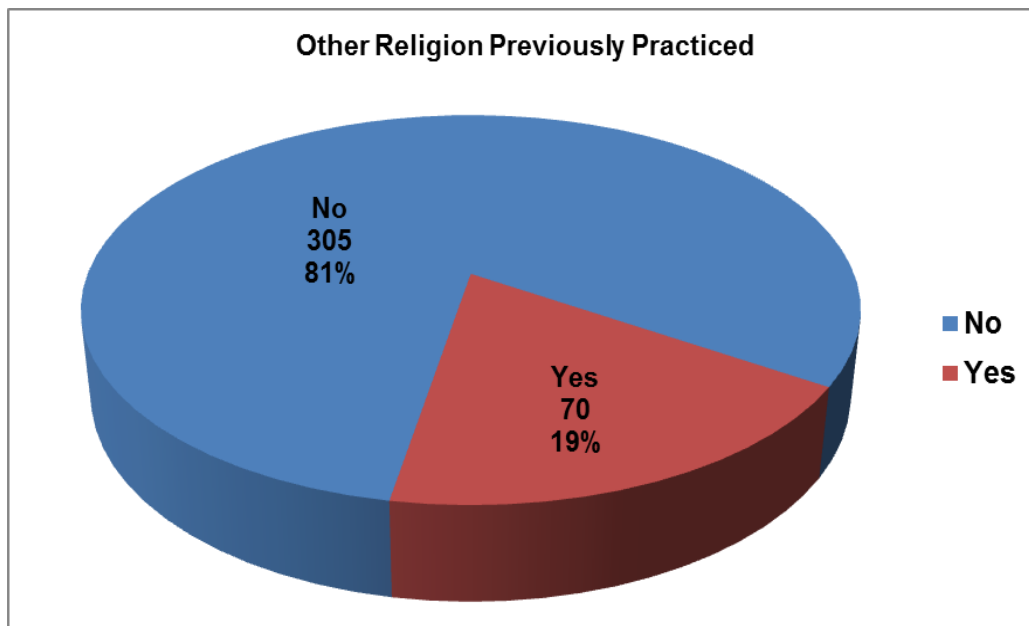


Figure 4.8 Other Religion Previously Practiced

Figure 4.8 above depicts that 81% of respondents have always practiced their current religion, while 19% have previously practiced other religions. This substantiates the suggestion that 24% of the respondents also consist of at least 5%, which translates to 18 respondents who practiced their current religion for the very first time.

Table 4.4 The results of variables on religion as a psychological factor

#	STATEMENT	STRONGLY AGREE	AGREE	NEUTRAL	DISAGREE	STRONGLY DISAGREE	GRAND TOTAL
1	Religion allows for consumption of pork	81 22%	109 29%	83 22%	40 11%	62 17%	375 100%
2	Believe that pork is unclean and full of demons	34 9%	40 11%	61 16%	125 33%	115 31%	375 100%
3	God's command not to eat pork is no longer relevant	59 16%	46 12%	136 36%	78 21%	56 15%	375 100%

The first variable in Table 4.4 above shows of the total respondents, 51% believe that their religion allows them to consume pork. These 190 subjects are

predominantly from the Christian religion as this group accounted for 298 responses. Twenty eight percent of the respondents believe that their religion does not permit them to consume pork. A total of 22% of respondents gave a neutral response to this variable, meaning that they feel indifferent about whether or not religion permits consumption for pork.

Only 11% of respondents agreed to the statement that pork is unclean and full of demons, while 9% of the respondents strongly agreed. Only a total of 74 out of 375 respondents agree or strongly agree to this statement. Close to two thirds, 64% of respondents, 125 disagreed and 115 strongly disagreed with the statement that pork is unclean and full of demons. About 16% or 61 respondents were indifferent about this statement. Barack-Erez (2007) regards pigs as the subject of leprosy, which is a foul plague, while pork is regarded by Romans as their most favorite meat. There were a total of 54 respondents who are of Roman Catholic descent during the survey. Table 4.7 depicts the responses by Roman Catholic descent. The findings in Table 4.7 are in contrast with the generalization in chapter two that all Roman Catholics value pork and regard it as their favourite. To add, this proves how polygonal Christianity is and how disciple sects as well as individuals within each sect have differing ideas about the edibility and other beliefs associated with pork. This could due to the fact that family members have significant influence on what is eaten in the household.

Table 4.5 Results of Roman Catholic Church on the statement of Pork being unclean and full of demons

<b>Statement: Count of Believe that pork is unclean and full of demons</b>						
<b>Row Labels</b>	<b>Strongly Agree</b>	<b>Agree</b>	<b>Neutral</b>	<b>Disagree</b>	<b>Strongly Disagree</b>	<b>Grand Total</b>
Roman Catholic	2	5	7	22	18	54

Notably, 36% which is made up of 136 respondents were unmoved by the statement, while a total of 28% or 105 respondents agree that God's command not to eat pork is no longer relevant today. For the Jewish and Islamic communities, God's command

to the Israelites not to eat pork is still as relevant, applicable and leading to condemnation as it did long before Christ was born. It must however be noted that Pietermaritzburg has presence of a fraction of a percent of the Jewish and less than 8% of Islamic community. As illustrated in table 4.4, a total of 36% of respondents disagree (21% or 78 respondents) or strongly disagree (15% or 56 respondent) with the statement that God’s command not to eat pork is no longer relevant. This implies that over and above the 8% of Muslims and Jews who believe that, about 30% or 115 of respondents who are Christians believe that God’s command not to eat pork is still relevant to this date. The big question that cannot be answered is which of the Christian disciple sects agree, and which ones disagree?

Table 4.6 Statistics of Roman Catholic Church on the statement that God’s Command not to eat pork is no longer relevant

<b>Count of God's command not to eat pork is no longer relevant</b>						
<b>Row Labels</b>	<b>Strongly Agree</b>	<b>Agree</b>	<b>Neutral</b>	<b>Disagree</b>	<b>Strongly Disagree</b>	<b>Grand Total</b>
Roman Catholic	8	10	19	12	5	54

Extracting the responses from the members of the Roman Catholic Church, it can be ascertained from table 4.6 above that religion plays a silent but significant role in decision making.

**4.6. Section D – Behavioral Characteristics as Market Trend Determinants**

One other objective of this empirical study was to establish if the change in consumer behavior that is characterised by religion has the potential to direct future growth trends of the pork market. In their recent study, Louw et al. (2010, p.111) said that beef, poultry and pork are substitute meat products whose production levels can be chiefly determined by the change in consumer behaviour. Demand is, to a great extent determined by consumer tastes and behavior. Perloff (2007) explains that consumers do not purchase goods they do not want or need, irrespective of the investment in advertising campaigns. However, as Engel et al. (1995) put it, the pre-existing attitude of a consumer towards a commodity may have an impact on the

acceptability of a persuasive marketing communication. Table 4.7 below presents the results on variables that addressed behavioral traits of respondents.

Table 4.7 Results of Behavioral Characteristics that serve as Market Trend Determinants

#	STATEMENT	STRONGLY AGREE	AGREE	NEUTRAL	DISAGREE	STRONGLY DISAGREE	GRAND TOTAL
1	Family does not eat pork therefore cannot eat pork	52 14%	57 15%	36 10%	118 31%	112 30%	375 100%
2	Cannot allow family members to eat pork	39 10%	43 11%	36 10%	134 36%	123 33%	375 100%
3	Will never convert from current religion to another, just to be able to eat pork	141 38%	67 18%	66 18%	55 15%	46 12%	375 100%
4	Even if they opt to change their religion in the future, they will never eat pork	81 22%	22 6%	79 21%	96 26%	97 26%	375 100%
5	Respect their religion but cannot refrain from eating pork	40 11%	68 18%	110 29%	55 15%	102 27%	375 100%
6	Their children will be at liberty to eat pork when they become adult	81 22%	112 30%	69 18%	59 16%	54 14%	375 100%

**Variable 1** – Family does not eat pork, therefore the respondent cannot eat pork.

A significant 61% of respondents disagree with the statement they cannot eat pork due to their family not eating pork. Twenty nine percent of respondents agreed that they cannot eat pork because it is not eaten in the family, while 10% of respondents neither agreed nor disagreed with this statement.

**Variable 2** – Respondents cannot allow family members to eat pork.

A significant 69% of respondents disagree with the statement they cannot allow their family members to eat pork. Twenty one percent of respondents agreed to the statement, while 10% of respondents neither agreed nor disagreed with this statement.

**Variable 3** – The respondents will never convert from current religion to another, just to be able to eat pork.

A significant 56% of respondents agreed with the statement they will never convert from their current religion to another, just to be able to eat pork. Twenty seven percent of respondents disagreed with the statement, while 18% of respondents neither agreed nor disagreed with this statement.

**Variable 4** – Even if the respondents opt to change their religion in the future, they will never eat pork.

A substantial 52% of respondents disagree with the statement which states that even if they opt to change their religion in the future, they will never eat pork. Twenty eight percent of respondents agreed to the statement, while a noteworthy 21% of respondents were neither agreed nor disagreed with this statement.

**Variable 5** - Respondents respect their religion but cannot refrain from eating pork. Forty two percent of respondents disagree with the statement which stated that as much as they respect their religion, they cannot refrain from eating pork. Twenty nine percent of respondents agreed to the statement, while a noteworthy 29% of respondents neither agreed nor disagreed with this statement.

**Variable 6** - The children of respondents will be at liberty to eat pork when they become adults.

A significant 52% of respondents agreed with the statement which states that their children will be at liberty to eat pork when they become adults. Thirty percent of respondents disagreed with the statement, while 18% of respondents were neither agreed nor disagreed with this statement. Culture is learnt from young age from family, communities and other institutions that surrounds a child as he or she grows (Kotler et al. 2005). Engel et al. (1995, p.613) state that culture is passed on from generation to generation, primarily by institutions such as family, schools, and religion, which in turn determine the behavioral attitudes of individuals and society in the buying and consumption decisions.

#### **4.7. Summary**

In this chapter, as a point of departure, demographic profile was presented and analysed. The demographics were the first section in the questionnaire. It was found that to a high degree, the sample was fully representative of the overall population of the city of Pietermaritzburg in terms of race, gender, religion and age. The following the summary of the combination that made up this sample in terms of its demographic profile.

The next and final chapter presents conclusion arising from the findings presented and analysed in this chapter. This is done by answering the questions that were asked and introduced in Chapter one. The recommendations arising from this study and recommendations for future studies are discussed. Limitations experienced in this study are also discussed in the next chapter.

## CHAPTER FIVE

### CONCLUSIONS, RECOMMENDATIONS AND LIMITATIONS

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#### 5.1. Introduction

The previous chapter focused on the presentation and analysis of results that were obtained from the survey by means of questionnaires. The study was undertaken with an intention to determine if religion had impact on the demand for pork in Pietermaritzburg. The need for such an empirical study was necessitated by the recognition that no previous study of this nature had been conducted anywhere in South Africa regarding the impediment of religion on the demand and consumption for pork.

The study by Luppnow (2007) further reinforces the assumption that generic demand determinants such as buyers' income or prices of products are not the only drivers of demand. Other factors such as political and socio-cultural have a significant impact on local demand for pork and processed pork products. It must be noted that as Willemse (2005) suggests, South Africa has appetite for meat and as a result, the overall meat demand is growing so exponentially that local producers are struggling to meet the demand. However, as it has been observed, pork's per capita consumption is very stagnant at no more than 3.8 kilogram (Kirsten et al., 2009).

The questionnaire elicited data that were analysed in order to examine and establish responses to the following key questions:

- To what extent does religion impede on the demand for pork?
- To what extent does religion impact on the consumption of pork?
- To what extent are consumers prepared to disregard their religion by embracing religiously forbidden pork as their source of protein?
- To what extent could the absolute substitution of unprocessed pork with processed pork products improve the demand and consumption of pork at the food markets?

Finally, the outcome of the above findings would assist the stakeholders in answering the following question:

- Can producers or suppliers of pork export as a healthy alternative for the sustainability of their businesses?

This chapter will address the research questions posed in the first chapter of this study. The chapter will also address the recommendations arising from the study, the limitations of the study, and the recommendations for future research.

## **5.2. Implications of this Research**

The following questions as they were set out in chapter one follow hereunder. It must be noted that the findings from the sample of 375 respondents represented the profile of the entire population of the city of Pietermaritzburg. For the purpose of the following discussion, the sample was replaced by the population it represented.

### **5.2.1. To what extent does religion impede on the demand for pork?**

Commenting on measuring the determinants of pork consumption in Bloemfontein, Oyewumi and Jooste (2006) said monthly household income, household expenditure on meat, relative price of pork, preference for value added-pork products, price of substitutes (the most preferred household meat type) and response of household to change into pork quality were six variables that were found to be significant.

A number of variables were tested in order to establish whether certain elements with the potential to impede on pork demand, have greater strength over religion. The variables in table 4.3 sought to establish the drivers of the demand other than the ones that are obvious, by level of importance using the Likert scale. There are a number of possible reasons that the demand for pork is stagnant in South Africa. One of such reasons is perceived health benefits of pork meats. Only 25% of the population believes that pork has health benefits, which is the primary reason that they eat pork. A significant 36% do not consider the health benefits of pork to be important at all. More than a third, 39% of respondents were indifferent about pork being part of a healthy diet. This group of respondents is made up of either people who do not eat pork, or people who do not appreciate the health benefits of pork.

Price elasticity is a standard determinant of quantity demanded. The third variable tests the likely change in quantity of pork that is demanded if the price of pork decreases. It must be acknowledged that the changes in quantity demanded would not generally increase within a group of people who do eat pork. The focal area in this instance was to also ascertain if people who do not eat pork would be prompted to buy and eat pork if it were to be comparatively cheaper than other meat products. The logical explanation to this is that pork is not price elastic. To prove this, the results from the variable that addressed the effects of changes in price depict that only 14% of respondents react positively to changes in price. This implies that irrespective of changes in the price of pork or its products, there are those who would not be tempted to buy and eat pork. It would undoubtedly be the case even if pork were to be offered to them free of charge.

The fact that there are people who give in to enticement of acceptable levels is sufficient to suggest that there are people who may not consume pork, provided that their family members are not aware. Only 5% of the population fails to resist temptation. Only 23 subjects have expressed varying levels of importance in ensuring that family must not know about their trespasses against God's commands not to eat pork. It is unlikely that these people would even dare to be seen buying or carrying pork let alone, eating it. On the other hand, 57% of respondents expressed that eating pork on condition that their family members do not know, is not important to them. The remaining 37% of respondents feel indifferent about this statement. The reason for the expression of irrelevance by these respondents would be that they do not eat pork and would never eat pork under any circumstances.

When the respondents were asked if it was important for them not to know that the meal contains pork as an ingredient, more than half, 54% of the respondents did not feel it was an important factor. Be that as it may, it was found that 11% of the subjects expressed this factor as having some levels of importance, while more than a third, 35% of respondents were not affected by this at all and felt neutral about the statement. From the above findings, it can be concluded with a high degree of confidence that the health benefits of pork do not drive the demand for pork. Reducing the price of pork does not promote or increase its demand.

### **5.2.2. To what extent does religion impact on the consumption of pork?**

In reference to the results presented in Table 4.5 in chapter 4, it was established that religion does have negative impact on the consumption of pork. Approximately 28% of the population of Pietermaritzburg disagree or strongly disagree with the statement that their religion allows for consumption of pork. The indifference of 22% the subjects cannot be accounted for or against consumption of pork. However, considering the nation's enthusiasm towards most types of meat in general, it would have been expected that the respondents give responses with conviction. Spiritual and physical hygiene of pigs diminishes the prospects of potential consumers and prohibits them from embracing and consuming pork. This is expressed by 20% of responses.

The last element that sought to examine the impact of religion on the consumption of pork was the relevance of God's command to the Israelites not to eat pork. South Africa and Israel are two distinct countries. While some are convinced that the commands that God gave to Israelites were exclusively for the Israelites, South Africans predominantly observe and as far as possible, obey the Holy Bible. For most South Africans, the Word of God (the Holy Bible) in its entirety is still applicable to this date. Thirty six percent of the population agrees that God's command not to eat pork is still relevant to this date. Notably, an average of 25% of the population is indifferent about the effects of religion on the consumption of pork. From the above findings, it can be concluded that, to a limited degree that religion has substantial impact on the consumption of pork.

### **5.2.3. To what extent are consumers prepared to disregard their religion by embracing religiously forbidden pork as their source of protein?**

This is potentially the crux of the findings of this study as it focuses on the likely changes or improvements in the demand trends of pork and pork products. It is evident that people feel strongly about their religion. To substantiate, about 56% of the subjects expressed that they will never convert from their current religion to another, just to be able to eat pork. It was found that 29% of the respondents do not eat pork simply because it is not eaten in their families. Twenty one percent cannot

allow family members to eat pork. Further, 30% of respondents were adamant that their children will not be at liberty to eat pork when they become adults.

An average of about 18% of respondents is indifferent about the future with respect to future prospects of pork and its products. This is an average of the sum of all the variables that relate to religion as demand trend determinants of pork. In the contrary, it was found that 52% of respondents disagreed with the statement that even if they change their religion, they will never eat pork. Sixty nine percent disagreed with the statement that they cannot allow family members to eat pork. Further, it was also found that 52% of respondents agree to the statement that their children will be at liberty to eat pork when they become adults. This proves that people of Pietermaritzburg are open-minded about the changes in the economic environment. There is not much that people who do not eat pork have to do to convince their family members not to eat pork. Cultural norms and sanctions as depicted in figure 2.6, will influence the children they raise without them being categorical about the abstinence from pork.

#### **5.2.4. To what extent could the absolute substitution of unprocessed pork with processed pork products improve the demand and consumption of pork at the food markets?**

Less than a third, 31% of respondents expressed varying levels of importance of consuming pork, provided that it is disguised in some processed form such as viennas, polonies, sausages etcetera. About 29% of subjects said that they felt indifferent about the state of pork. This group represents people who feel indifferent because it does not affect them as they do not eat pork in any form.

### **5.3. Recommendations arising from this study**

Can producers or suppliers of pork export as a healthy alternative for the sustainability of their businesses?

Oyewumi and Jooste (2006) suggest that it is vital that the pig/pork industry, especially primary producers, make substantial changes to lean towards consumers of pork with an intention to better understand changing consumers' preferences and, through this, make the required changes to stimulate and grow pork consumption. These researchers added that these changes would allow primary producers, as well as other role players to capture greater value from consumers' spending on meat.

Whereas other macroeconomic factors such as political and economic factors have an impact on limiting the demand for pork, religion is an important socio-cultural factor that has been overlooked when assessing the South African macro-environment. Consequently the oversight of local pork producers may have caused them to misread or misunderstand the behaviour of consumers which informs their buying decisions.

According to DAFF (2006), the mandate of the Department is to provide a broad based enabling environment encompassing all agricultural activities from the provision of farming inputs, farming and value adding. It is in this context that the legislative functions and policy of DAFF should be reviewed and amended to provide for changing circumstances in the production and marketing environment (National Department of Agriculture, 2006 p.29). In order for the pork industry to become successful, Government should play a leading and supportive role by enhancing the legislative environment. The outcome of this should be the improvement of the industry's domestic and global competitiveness.

#### **5.4. Limitations of the study**

Like other research projects, this particular study had the following limitations.

- Geographical limitations - the study focused in the Central Business District in the city of Pietermaritzburg within the Msunduzi Municipal area.
- Time – Due to the duration of the research project, the period of undertaking the study was 6 months. In addition, as the respondents were approached in

public areas, some of them were committed to other things and the responses they gave may not have been thought through. While the questionnaires were brief and to the point, taking about five minutes of respondents' time, some of the respondents preferred to attend to their questionnaires at their leisure and submit them later or the following day.

- **Sample Size** – the entire population could not be studied and a fully representative sample of 384 respondents had to be used. This sample was made up of consumers who are 15 years old or older. Four Hundred questionnaires were produced and disseminated. The purpose of distributing more than 384 was to create buffer that will replace non-responsive questionnaires. Nineteen of the questionnaires were not returned, while six were accounted for as non-responsive and could therefore not be used.
- **Identification and Targeting of respondents** – It was not easy to and possible to sample respondents according to their religion and disciple sect, in conjunction with using other demographic combinations. The Christian disciple sects were thus represented inconsistently.
- **Findings** – The respondents were so diverse in many respects that findings could not be generalized.
- **Literature** – Academic literature on relationships between religion and pork could not be found. Contradicting literature on South African pork industry for the same periods was obtained. This is in connection with the report on South African pork being the net importer and net exporter.

## **5.5. Recommendations for future research**

For certain religions such as Islam and Judaism, it is a fact that these religions consider pork a taboo meat, and people who fall under these two religions do not eat pork for religious reason. However, zooming in to Christianity, it was evident that such a belief differs from one Christian disciple sect to the next and with differing

levels of conviction. Considering that Christianity is predominant in South Africa, and equally true with Pietermaritzburg, there is a need to conduct a broader study that will establish the impact of culture on the consumption for pork by disciple sect. In addition to culture, other factors that can influence the demand for pork can also be researched. Wright (2010) suggests that in order for the pork industry to turn around, factors that will drive the competitiveness of South African Agricultural competitiveness should be considered.

## **5.6. Summary**

This chapter discussed deductions as responses to research questions that religion does impede on the demand for pork in Pietermaritzburg, a deduction that can be considered as representative on South Africa as a whole. Demographic factors which differ from one province to the next, particularly in terms of race and religion, would have to be taken into considerations. There is no guarantee that the youth of Pietermaritzburg will consume pork, considering the majority of adults expressed that their youth would be at liberty to decide whether or not to eat pork. Since culture is learnt and adopted in different ways, including observations, the youth might decide to eat pork, or they might decide not to eat pork when they become adults. It must be noted that although religion has a negative effect on the demand for pork in Pietermaritzburg, its impact cannot be measured.

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## Appendix I – Informed Consent Letter

### Informed Consent Letter 3C



**UNIVERSITY OF  
KWAZULU-NATAL**  
**Graduate School of Business**

Dear Respondent,

**Master of Business Administration**

**Researcher:** Ms Nombuso A Msomi (079 228 5353)

**Supervisor:** Mr Steven Msomi (031 260 7927)

**Research Office:** Ms P Ximba 031-2603587

I am Nombuso Angel Msomi, an MBA student at the Graduate School of Business, of the University of KwaZulu Natal. You are invited to participate in a research project entitled “The impact of religion on the demand for pork in Pietermaritzburg”. The aim of this study is to test the hypothesis that ‘Religion has great impact on the consumer demand for Pork in Pietermaritzburg’.

Through your participation I hope to understand the following:

- To what extent does religion impede on the demand for pork?
- To what extent does religion impact on the consumption of pork?
- To what extent are consumers prepared to disrespect their religion by embracing religiously forbidden pork as their source of protein?
- To what extent could the substitution of unprocessed pork with processed pork products improve the demand for pork?
- Under what circumstances would religious people be prepared to shift towards consuming pork?

Your participation in this project is voluntary. You may refuse to participate or withdraw from the project at any time with no negative consequence. There will be no monetary gain from participating in this questionnaire. Confidentiality and anonymity of records identifying you as a participant will be maintained by the Graduate School of Business, UKZN.

If you have any questions or concerns about completing the questionnaire or about participating in this study, you may contact me or my supervisor at the numbers listed above.

The questionnaire should take you about five (5) minutes to complete. I hope you will take the time to complete this questionnaire.

Sincerely

Investigator’s signature \_\_\_\_\_ Date \_\_\_\_\_

**Appendix II – Survey Questionnaire**



**Master of Business Administration**  
**Researcher:** Nombuso Angel Msomi (Contact 079 228 5353)  
**Supervisor:** Mr Steven Msomi (031 260 7927)  
**Research Office:** Ms P Ximba 031-2603587

**CONSENT**

I..... (full names of participant) hereby confirm that I understand the contents of this document and the nature of the research project, and I consent to participating in the research project.

I understand that I am at liberty to withdraw from the project at any time, should I so desire.

SIGNATURE OF PARTICIPANT

DATE

.....

.....

**This page is to be retained by researcher**

# SURVEY QUESTIONNAIRE

## SECTION A:

## DEMOGRAPHICS

Please complete the following questions by putting a cross or a tick in the relevant box.

What is your age? 

15 - 20	21 - 35	36 - 50	>50
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What is your marital status? 

Single	Married	Widowed	Divorced	Other _____
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What is your Gender? 

Female	Male
--------	------

What is your race? 

African	Asian	Coloured	White
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How many people make up your household? 

1 - 2	3 - 4	5 - 6	> 6
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How long have you been resident of PMB? 

<2 yrs	2 - 5 yrs	6 - 10 yrs	> 10 yrs
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What is your mother tongue?

Afrikaans	
English	
Sotho	
Tswana	
Xhosa	
Zulu	
Other: _____	

What is your religion?

African Traditionalist	
Christianity	
Hinduism	
Judaism	
Rastafarian	
Non-believer	
Other _____	

If your religion is Christianity, which disciple sect or church do you belong to?

Anglican Church	
Apostolic Faith Mission	
Assemblies of God	
Charismatic Church	
Seventh Day Adventist	
Congregational Church	
Full Gospel Church	
Methodist Church	
Nazareth Christian Church (Shembe)	
Presbyterian Church	
Roman Catholic Church	
Zion Christian Church (ZCC)	
Other: _____	

**SECTION B: DEMAND FOR PORK**

Please indicate according to importance as to the reason for eating pork using the numbers 1 to 5 as tabled below

<b>1</b> <b>Not</b> <b>Important</b>	<b>2</b> <b>Somewhat</b> <b>Important</b>	<b>3</b> <b>Neutral</b>	<b>4</b> <b>Important</b>	<b>5</b> <b>Very</b> <b>Important</b>
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STATEMENT		RATING
a.	I eat pork because it is part of a healthy diet.	
b.	For me to eat pork, it must be in a processed form, such as polony, viennas, ect.	
c.	For me to buy pork, it must be on special price.	
d.	For me to eat pork, my family must not know.	
e.	For me to eat pork, I must be unaware that my meal consists of it.	

**SECTION C: RELIGION AS A PSYCHOLOGICAL FACTOR**

Please complete the following questions by putting a cross or a tick in the relevant box.

For how long have you been practicing your religion.	< 1 year	1 - 2 yrs	3 - 5 yrs	5 - 10 yrs	> 10 yrs
Did you practice any religion before you chose your current religion?	YES	NO			
If the answer to the above question is YES, what religion did you practice before your current religion?	_____				
Did the change to your current religion change your belief about eating pork?	YES	NO	NOT APPLICABLE		
If the answer above is "YES", does your new religion restrict you from eating pork?	YES	NO	NOT APPLICABLE		
My religion allows me to eat pork.	STRONGLY AGREE	AGREE	NEUTRAL	DISAGREE	STRONGLY DISAGREE
I believe that pork is unclean and full of demons.	STRONGLY AGREE	AGREE	NEUTRAL	DISAGREE	STRONGLY DISAGREE
God's command not to eat pork is no longer relevant.	STRONGLY AGREE	AGREE	NEUTRAL	DISAGREE	STRONGLY DISAGREE
I have different reasons for not eating pork (Please specify in the space provided).	_____				

**BEHAVIORAL CHARECTERISTICS AS MARKET TREND**

**SECTION D: DETERMINANTS**

**Please complete the following questions by putting a cross or a tick in the relevant box.**

My family does not/ did not eat pork and therefore cannot eat pork.	STRONGLY AGREE	AGREE	NEUTRAL	DISAGREE	STRONGLY DISAGREE
I cannot allow my family members to eat pork.	STRONGLY AGREE	AGREE	NEUTRAL	DISAGREE	STRONGLY DISAGREE
I will never convert from my religion to another religion just to be able to eat pork	STRONGLY AGREE	AGREE	NEUTRAL	DISAGREE	STRONGLY DISAGREE
Even if I opt to change my religion in future, I will never eat pork.	STRONGLY AGREE	AGREE	NEUTRAL	DISAGREE	STRONGLY DISAGREE
I respect my religion, but cannot refrain from eating pork because of my religion.	STRONGLY AGREE	AGREE	NEUTRAL	DISAGREE	STRONGLY DISAGREE
My children will be at liberty to eat pork when they become adults.	STRONGLY AGREE	AGREE	NEUTRAL	DISAGREE	STRONGLY DISAGREE
I will always consider pigs to be unclean animals.	STRONGLY AGREE	AGREE	NEUTRAL	DISAGREE	STRONGLY DISAGREE

## Appendix iii – Ethical Clearance Letter



Research Office, Govan Mbeki Centre  
Westville Campus  
Private Bag x54001  
DURBAN, 4000  
Tel No: +27 31 260 8350  
Fax No: +27 31 260 4609  
[snymanm@ukzn.ac.za](mailto:snymanm@ukzn.ac.za)

16 November 2011

**Mrs NA Msomi (206515511)**  
**Graduate School of Business**

Dear Mrs Msomi

**PROTOCOL REFERENCE NUMBER: HSS/1186/011M**  
**PROJECT TITLE: The impact of religion on the demand for pork in Pietermaritzburg**

In response to your application dated 17 October 2011, the Humanities & Social Sciences Research Ethics Committee has considered the abovementioned application and the protocol has been granted **FULL APPROVAL**.

**Any alteration/s to the approved research protocol i.e. Questionnaire/Interview Schedule, Informed Consent Form, Title of the Project, Location of the Study, Research Approach and Methods must be reviewed and approved through the amendment /modification prior to its implementation. In case you have further queries, please quote the above reference number.**  
**PLEASE NOTE: Research data should be securely stored in the school/department for a period of 5 years.**

I take this opportunity of wishing you everything of the best with your study.

Yours faithfully

  
.....  
**Professor Steven Collings (Chair)**  
**HUMANITIES & SOCIAL SCIENCES RESEARCH ETHICS COMMITTEE**

cc. Supervisor – Mr S Msomi  
cc. Ms C Haddon