Factors influencing food consumption patterns in selected communities in Limpopo Province, South Africa

by

Jeremia Sello Madiba

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University of Pretoria
Pretoria

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DECLARATION

I declare that the thesis/dissertation, which I hereby submit for the degree **M. Inst Agrar** at the University of Pretoria, is my own work and has not previously been submitted by me for a degree at this or any other tertiary institution.

SIGNATURE: ..... DATE: .....

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SUPERVISOR: Prof Johann Kirsten

CO-SUPERVISOR: Prof Charles Machethe

ABSTRACT

Little is known about food consumption patterns of the majority of the black population and the various factors influencing food consumption patterns. An understanding of the above aspects is critical for any business enterprise to inform the formulation of a marketing strategy.

This study is an attempt to identify factors affecting food consumption patterns of three ethnic groups found the Limpopo Province. The province is unique in that it is the only province in South Africa that has a variety of ethnic groups. Various factors are considered and examined to determine how they affect food consumption patterns. These are income, religion, culture and cultural practices, and distance from town. Factors such as gender, patriotism, different life styles and age are mentioned but no emphasis is given to them.

The ethnic groups included in the study are Bapedi, Shangaans and Vhavenda. Though Whites and Indians could have been included, their number is too insignificant to warrant determining the effect they might have on consumption patterns in the province.

Analysis of Variance (ANOVA) and Chi-Square techniques were used to analyse the different relationships.

The findings show that income is a significant factor influencing food purchases and the frequency of purchase. Religion was found to be significant in influencing slaughtering of chickens but not in the slaughtering of sheep, goats and cattle. The effect of staying in a rural or urban area did not show any significance as this was played down by the establishment of shopping malls after 1994.

The study also reveals the significance of indigenous food on the ethnic groups. The study also showed the importance of the influence of religion, especially of the Zion Christian Church in certain parts of the Limpopo Province.

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CHAPTER 1

INTRODUCTION AND BACKGROUND TO THE STUDY

1.1 BACKGROUND

According to Statistics South Africa (2001 Census), the total population of Limpopo was 5 273 642. Of this number, 97,2% were black, 0,2% Coloured, 0,2% Indian and 24% white. In the census it was found that 11% of the population lived in urban areas, while 89% lived in non-urban areas. The black majority in the population consists mainly of the Shangaan-Xitsonga, Tshivenda and Northern Sotho (Sepedi) speaking groups. Sepedi is the language most spoken in Limpopo (2,8 million or 52,1%), followed by Xitsonga (1,2 million people or 22,4%) and Tshivenda (840 000 people or 15,9%).

The Shangaan-Tsonga people are found in the former homeland of Gazankulu, situated north-east of Polokwane. The Venda people live predominantly in the former homeland of Venda, located north of Polokwane, while the Northern Sotho (Sepedi) speaking people are mainly found around Polokwane, both to the west and the south.

Although these communities differ in ethnicity, there are some common foodstuffs as well as unique food products that are consumed by all of the groups. The differences encountered might depend, for example, on unique traditional agricultural practices or on other factors, such as rural versus urban living or membership of a particular religious group.

The people in the rural areas live on pieces of land that were given to them by the local chief and allocated by the respective indunas (an induna is the chief's second-in-command). The former homelands have a summer rainfall and people plant summer crops, mainly maize. Other crops include sorghum and millet.

According to Junod (1927), three legumes are particularly favoured, namely groundnuts (in Shangaan-Xitsonga they are known as *timanga)*, traditional beans (*nawa* in Northern Sotho and *nyawa* in Tshivenda) and traditional peas. Groundnuts are planted mainly by the Shangaan-Tsonga people. This last group also cultivates tobacco, sugar cane and pineapples. They make alcohol out of sugar cane and this drink is known as *shiwayawaya.*

In their study of the Shangaan-Tsonga people, Kriel and Hartman (1991) found that agriculture and the gathering of plants from the veld were the main activities engaged in to obtain food; other activities were fishing and hunting. They found that 71% of the Shangaan-Tsonga people are directly or indirectly involved in agriculture. Every woman is given a piece of arable land, known as a *nsimu*. The men's main agricultural activity is growing tobacco. The agricultural activities of the Shangaan-Tsonga groups are mainly focused on the growing of sorghum, maize and different types of beans and groundnuts. This group also uses marulas and wild plums to brew beer, as well as a particular kind of cassava, called *ntsumbula*.

As mentioned above, there are certain differences in eating habits between rural people and urban people, which results from the fact that rural people tend to produce their own food, while urban people buy their food. In addition, a greater variety of food is found in urban areas as compared with rural areas (Lubbe, 1979). The distances rural area dwellers have to travel to reach the nearest town also influences eating habits, and religion plays a role as well, since certain churches prohibit or discourage the eating of certain foods. For example, the Zionist Christian Church prohibits its members from drinking alcoholic beverages and consuming pork and pork products. This church also encourages its members to reduce the eating of red meat in favour of white meat, vegetables and grain sorghum.

1.2 RESEARCH PROBLEM

Little is known about the food consumption patterns (preferences for food types and consumption frequency) of the majority of the black population and

the factors influencing these patterns. Previous studies have centered around the effect of religion on food consumption (Ledwaba, 2002 and Van Wyk, 1970), who also developed a guide to the useful plants found amongst the black communities of South Africa.

Mmakola (1996) examined the effect of socio-economic factors on food consumption patterns among the Sepedi-speaking group in Mamelodi and Zebediela. Another study, this time carried out in Port Elizabeth, analyzed consumer behaviour and shopping patterns (Erweey, 1982). Tshabalala (2000) looked at the quality of the meat of South African indigenous goat and sheep breeds. In the United States, Senauer et al. (1991) looked at changing consumer behaviour and how this affects food consumption patterns. What has not been done, however, is to consider the factors affecting the food consumption patterns of the different ethnic groups found in one province. The relevant factors include religion, culture and how living in a rural or urban area affects food consumption. A need therefore exists for this kind of study to be carried out in Limpopo. The present study was also carried out at a time when three homelands had recently been merged into one province. Understanding food demand and food consumption patterns is critical for any business relating to agriculture - be it a business engaged in food processing, farming or retailing.

1.3 OBJECTIVES OF THE STUDY

The overall goal of this study is to determine the influence of cultural and religious factors on food consumption patterns in selected communities in Limpopo. The specific objectives are:

- To determine whether, in terms of rural and urban communities, the area of residence has an effect on consumption patterns.

- To determine whether religious affiliations have a noticeable effect on consumption patterns, for instance, where this relates to the prohibition and/or encouraging of the consumption of certain kinds of food.

- To determine whether ethnic/cultural groupings have common and/or unique food consumption patterns – particularly when comparing the three main groups, i.e. the Northern Sotho, Tshivenda and Xitsonga-speaking groups.

- To determine whether the location or the distance between residential areas and towns has an effect on the consumption patterns of urban and rural communities.

- To determine how certain practices, such as slaughtering, affect the consumption patterns of rural and urban communities.

1.4 OVERVIEW OF METHODS AND PROCEDURES

Questionnaires and personal interviews were used as the main method of data collection. Verification was done through discussions with key experts. In this study questionnaires were used to obtain the necessary data. Three hundred questionnaires were issued. Research assistants speaking the local languages were appointed for this purpose. Purposive sampling was used in order to establish different occupational categories and income brackets. After the questionnaires had been completed, the data was analyzed using the analysis of variance (ANOVA) and Chi-Square (cross-tabulation) techniques.

1.5 OUTLINE OF THE RESEARCH REPORT

This research report is divided into six chapters. Chapter Two contains a literature review regarding food consumption patterns. Chapter Three focuses on the study area, as well as research methods and procedures. Chapter Four provides a socio-economic profile of the respondents. Chapter Five concentrates on the analysis of food consumption patterns, including the factors influencing these patterns. Chapter Six presents a summary of the study and its conclusions.

CHAPTER 2

FOOD CONSUMPTION PATTERNS: A LITERATURE REVIEW

2.1 INTRODUCTION

The aim of this chapter is to review the literature pertaining to food consumption patterns. This serves to provide the context informing the research undertaken.

According to Hartog (1983), man in society decrees what is to be considered as food, what is not, what kind of food should be eaten, and what kind of food should be eaten on what occasion. Not only is food eaten for nourishment and to replenish energy, but also for pleasure. The pleasure derived from food through taste, odour, temperature, appearance, structure and texture is experienced through the senses.

Taste and appreciation differ from region to region and from culture to culture. Indians, for example, prefer highly spiced food. In certain communities, people classify food into three categories: food that satisfies one's hunger, such as rice, porridge or pap; food that satisfies the appetite, such as meat, vegetables and fruit; food that enhances taste, such as salt and pepper; and lastly food that provides sensory pleasure, e.g. cake, beer and sweets.

Hartog (1983) further identifies certain interrelated social functions with regard to food (e.g. gastronomic quality, cultural identity, political influence, and the religious or magic attributes of food) as an expression of income. Grunert (2003) mentions an important aspect of food consumption, i.e. that in the real world when we speak of consumption, we presuppose that the products have already been bought or acquired. Therefore it is important to note that studies dealing with taste investigate food consumption after the purchase or acquisition of food. There are, however, additional factors that influence the consumption patterns of different societies and cultural groups, and this

chapter will look at some of these factors, focusing particularly on religion, level of income, culture and place of residence, i.e. whether people live in rural or urban areas.

2.2 RELIGION

According to Hartog (1983), the role of religion in food consumption should be taken into account when we engage in nutritional education. One example he gives is the avoidance of pork in Islamic communities and the temporary avoidance of meat by Roman Catholics every Friday and during Lent. In Limpopo, east of Polokwane, where the Zionist Christian Church (ZCC) is strongly represented, pork is avoided, as it is perceived to be unclean. This phenomenon can be observed not only in this area, but also elsewhere in Southern Africa where there are ZCC members. During the pilgrimage meetings (i.e. in April and September), some shops in Polokwane sell pork-free foodstuffs specially produced to serve these religious affiliates. The food products concerned include products such as 'russians,' polony and chips that do not contain and have not been in contact with any pork products. Most Indians in Limpopo belong to the Islamic faith and therefore also avoid pork products. These people, however, constitute a very small percentage of the population of Limpopo and their impact on food consumption patterns is therefore minimal.

Muslim abstinence ranges from lacto-vegetarianism to eating halal-slaughtered beef only. Barker (1983) explains that in India adherents of the Hindu religion avoid the consumption of beef, which can be explained by the high ritual status of cattle. Thomas and Sheik (1994) agree with Barker concerning the Hindu group, which they describe as lacto-vegetarian. From these examples it can be seen that religion does in fact play a part in consumption patterns.

In Limpopo there are a number of different religious groups. According to Statistics South Africa (2001 Census), 3,6 million people were classified as belonging to Christian religious groups of one kind or another and 1,5 million

(28,5%) had no religious affiliation. About 42,5 % belonged to Zionist churches (ZCC, Apostolic or IamaNazaretha) and Ethiopian-type churches. About 15,8% belonged to the mainline churches, classified as Lutheran, Roman Catholic, Anglican, Methodist, Presbyterian and Orthodox. Pentecostal/Charismatic or "born-again" Christians made up 13,1%. According to Chidester (1992), within South Africa as a whole, these groups can be classified as follows: Roman Catholics, Methodists, Anglicans, Lutherans, Presbyterians, Baptists and members of other Pentecostal churches as well as African independent churches. A clear classification of churches in South Africa is given in an article by Hendricks and Erasmus (2002), in which they identify three main groups. These are: the African independent churches, e.g. the ZCC and Apostolic churches, the Charismatic or Pentecostal churches, e.g. the Apostolic Faith Mission, Baptist, Assemblies of God and Rhema churches, and lastly the mainline churches, e.g. the Lutheran, Presbyterian and Roman Catholic churches.

Since religion is a powerful tool in shaping people's beliefs and convictions and many people will do anything in the name of their religion, religion is a strong factor in determining the food consumption behaviour of individuals. For some religions belief implies abstinence from certain types of food and consequently has an impact on the regional demand for foodstuffs and influences food marketing decisions.

The African independent churches

In Limpopo the largest independent church is the Zionist Christian Church (ZCC), as previously stated. The members of the ZCC are distributed throughout the province (the former Lebowa, Venda and Gazankulu homelands) and there is a high concentration of ZCC members about 30 km east of Polokwane, where the headquarters of the church is situated at Moria. According to Chidester (1992), the ZCC is the largest Zionist church in South Africa. It was founded around 1910 by Ignatius Lekganyane. The ZCC became a pan-ethnic church that expanded dramatically under the leadership of Lekganyane's son and successor, Edward Lekganyane. From less than a

thousand followers in 1925, it grew to 30 000 in the 1940s and had increased 80 000 by the 1960s. By around 1990 it had grown to a membership of more than a million. It also has many members in South Africa's neighbouring states, such as Zimbabwe, Botswana, Lesotho, and Swaziland. The ZCC offers a haven of healing, personal integrity and spiritual power in a social world in which people feel increasingly disempowered.

Moria is known as the centre of this spiritual power. It is a sacred site of pilgrimage visited three times a year, but especially at the time of the annual Easter festival, when close on a million ZCC members journey to Moria for healing, worship and celebration.

To create a domain of purity and protection, ZCC members observe abstinence from pork, tobacco and alcohol. This is confirmed by Ledwaba (2000), who cites the case of one particular follower who has led a clean and disciplined life since joining the ZCC, and no longer smokes or consumes alcohol. ZCC members wear a badge made up of the Silver Star inscribed with the letters ZCC, attached to a piece of black cloth. This is done to maintain personal and communal purity in a defiling world. The ZCC initially attracted uneducated people, who then became lay preachers. At present the ZCC numbers many graduates and business people amongst its members. A further interesting factor, according to Chidester (1992), is that the ZCC members achieve considerable success in the world of work and are preferred by employers since they are known to be hardworking, disciplined, obedient and sober.

The other fast-growing independent church, according to Ledwaba (2000), is the International Pentecostal Church (IPC) of the late Reverend Frederick Modise. One of the reasons for its rapid growth is that it encourages polygamy, which, in contrast, is an unacceptable practice in the Christian churches. Its members are also distributed throughout Limpopo. In terms of consumption, the members of this church abstain from alcohol and tobacco.

Mainline churches

These churches, such as the Lutheran, Dutch Reformed, Roman Catholic and Presbyterian Church, also have members throughout the province, but their numbers are not as large as, for example, those of the ZCC. The mainline churches generally do not advocate abstinence from certain kinds of food and therefore do not have a marked effect on the marketing of agricultural products. According to Hendricks and Erasmus (2002), the mainline churches can be further subdivided into two groups, namely the Protestant churches, which include the Lutheran, Anglican and Presbyterian churches, and the Roman Catholic Church, which is a stand-alone.

World religions

Hindus, Muslims and Buddhists are classified as belonging to world religions. They are not dominant in Limpopo. Some Indians follow the Islamic religion, which is the largest of the world religions represented in Limpopo, but, as previously stated, they form a mere 0,1 % of the population of the province and therefore do not have a marked effect on the marketing of agricultural products. A study conducted in Saudi Arabia by Al-Khatini, El-din and Sofian (1995) from 1984 to 1994 on estimating preference changes in the demand for meat indicated an increase in the preference for fish and poultry. This was attributed to social and religious activities, Saudi Arabia being a fundamentalist Islamic country. This study would have been of interest if the effect of thechange on the marketing of meat for members of this religion had been studied.

Ancestral worship

Besides the ZCC followers, ancestral worshippers form the second largest percentage of the population of the province (included among the 28,5% having no religious affiliation). Ancestral worship mostly takes place amongst the rural poor who do not attend church services. At one time or another during the year animals are slaughtered and traditional beer is made to

worship the ancestors. They are often referred as the *non-converted,* as they do not go to church, while the *converted* are referred as *Majakane* in Northern Sotho (Sepedi).

As previously stated, most people involved in ancestral worship live in the rural areas of Venda, Gazankulu and Lebowa. Ancestral worship involves, amongst other things, the slaughtering of cattle and/or goats. This is a significant aspect, since some of the animals that are slaughtered are not accounted for in the animal records of the country. In other words, the number and kinds of animals slaughtered as part of ancestral worship are not reflected in the consumption records for red meat. In order to rectify this and gain more insight into these informal practices, it is necessary to conduct a separate research project.

Such a project could be of use to the National Department of Agriculture as well as the meat industry of the country in accounting for certain trends that exist regarding slaughtering practices and the movements of animals.

Many of the Africans practising ancestral worship believe in the practice of slaughtering for purposes such as a purification ceremony for protection against bad luck or attracting good fortune. A cleansing ceremony is recorded in the *Drum Magazine* (10 January, 2002) at Tafelkop near Groblersdal, where the Motsepe family consulted a traditional doctor, Dr. Tsiane, who prescribed that a cow was to be slaughtered for the occasion, and the neighbours were invited for the feast afterwards. Dr. Tsiane describes cleansing as a serious and crucial ritual for a family. It involves being purified and starting afresh on a new chapter of life. The other important reason given for the slaughtering of animals, according to Clarke and Sutherland (1988), is that a relationship between the dead and the living must be maintained, and that slaughtering is essential in this instance, since communication with the ancestors takes place through the act of slaughtering animals for the dead. Slaughtering animals also cleanses a person from witchcraft, which is important, because certain illnesses are perceived to be caused by witchcraft.

2.3 LEVEL OF INCOME

Van Zyl (1970) identifies the level of income as an important factor in food consumption, arguing that real consumption expenditure is a stable function of the absolute level of real income, which incidentally implies that the relationship is reversible over time. He also maintains that, as a rule and on average, people are disposed to increase their consumption as their income increases but not by as much as the actual increase in income. Erweey (1982) agrees and mentions that as income increases, the proportion of the annual consumer budget that is absorbed by basic necessities such as food and housing decreases, which leaves consumers more to spend on non-essential durable commodities. This means that as income rises the actual increase is not spent entirely on food consumption. One of the most interesting economic principles in this regard is Engels' law, which states that the share of food in total expenditure decreases as income increases.

The University of South Africa's Bureau of Market Research commissioned a study (Report 326) in 2003 to analyze the total household expenditure of South Africans based on income.

This study identified the following categories of annual income groups:

Group A: Over R80 570 ('rich people')
Group B: R37 113 - R80 500
Group C: R19 510 - R37 112
Group D: R10 460 - R19 509
Group E: Less than R10 460 ('poor people')

Based on the above, the following expenditure table emerged:

Table 2. 1: Household expenditure patterns by income group

Expenditure Items	Average expenditure (%)	Expenditure by poor people (%)	Expenditure by rich people (%)
Food	21,6	57,1	12,9
Housing and electricity	16,2	6,3	18,4
Transport	9,3	2,8	11,8
Income Tax	10,0		13,0
Insurance	4,1		6,0
Clothing and footwear	3,9	5,4	2,8
Furniture and equipment	3,1		Not specified
Other	31,8	13,8	23,1
Medical	3,8		4,8
Fuel and light (poor)		5,8	
Personal care		5,7	2,3
Washing and cleaning (poor)		3,0	
Savings (rich)			4,8

A significant finding of the study was that the poor spent 57% of their income on food. As income increases, less is spent on food and more is diverted to housing and electricity, as is shown by the fact that the rich spend only 12,9% of their income on food.

Other factors that have a bearing on food consumption are the socio-economic characteristics of the household (e.g. the lifestyle attained - how prosperous or how poor people are, the area of residence, level of education, number of children and number of wage earners in the household). While the average income influences the consumption pattern, it is found that, as a result of the above-mentioned factors, there are differences in consumption expenditure amongst individual families. Young, Abdalla and Hamdock (1994) in their research in Matebeleland in Zimbabwe discovered that with one additional child in the family, as income increases, the expenditure on

food will rise by about 2% and it will be spent on cereals and milk. This contradicts the law of Engels, explained above, and the reason for this trend is that these people are extremely poor. Again, if the level of income of the family remains the same, there will be a decrease in the quantity of meat and non-food items purchased. In agreeing with the above, Savadogo and Brandt (1988) state that income, education and household size and composition are important determinants in food and non-food consumption. They conducted a study in Burkina Faso and discovered that as income rises significantly, consumers respond by making larger purchases of imported cereals, while incremental changes in the income levels of low-income households lead to larger purchases of locally produced cereals. The more the income, the more non-food items people will buy. Hartog (1983) says that income spent on food is an expression of economic status, just as eating white bread in Europe was once considered the privilege of the rich, while the poor ate brown bread. In the South African context poorer people buy the “no-name brands” of food and the high-income groups buy well-known brands.

2.4 CULTURE (NORMS AND VALUES) AND RACE

According to Sobal (1998), culture plays a central role as far as food, eating and nutrition are concerned. Thus, a cultural comparison may well contribute to an increased understanding of cultural generality and uniqueness. He also explains culture as a complex whole, which includes knowledge, belief, art, morals, law, customs and any other capabilities and habits acquired by man as a member of a particular society. He further holds that language can be used to delineate a particular culture.

Rozin (1996) agrees with Sobal in arguing that culture provides the strongest determinant of food choice and reflects different dietary histories, which in turn will determine which foods and food qualities are acceptable in terms of people’s sensory properties. Birch (1990) also indicates that food, eating and nutrition are strongly shaped by culture, as hardly any innate taste preferences exist at birth; rather, children develop certain likes and dislikes for food as they are socialized into specific cultural cuisines. Added to this is the

fact that culture drives taste preferences in food, because taste in food in part reflects the consumer's social and cultural origins, their social ambitions and the cultural capital acquired, either as an implicit part of upbringing or as a result of more deliberate action (Wright, et al., 2001).

According to Mason (1981), individuals learn the values of their culture through the process of socialization and cannot avoid the cultural biases inherent in the groups and institutions they are part of, which transmit these values to them. This has already been touched on in Chapter One, where it was mentioned that the Vhavenda eat caterpillars known as *masohnzhe* and that they have a drink known as *makonde, made* of prickly pears. The North Sotho speaking people, for instance, eat a type of ant found after it has rained that is called a *dinhlwa*.

In addition to the general culture, people respond to the subcultures to which they belong or to which they relate. These can have a significant influence on individuals' beliefs and lifestyles. Mason indicates that subcultures are normally identified on the basis of nationality, religion, race or geographical location. Subcultures strive to maintain their separate existence by ensuring that individuals who are introduced into the group are taught and encouraged to adjust their broader cultural values and belief systems in order to conform to the prevailing sub-cultural norms. Primarily, a subculture is transmitted by the family to the individual and secondarily by the community to which the family belongs.

Williams (1981) states that culture is important as it lies at the root of product consumption. This is confirmed by Camporesi (1989) and Montanari (1994), who found that fundamental cultural values and themes determine the kinds of products that are preferred and consumed. Favourable social circumstances will provide the impetus for consumption and will motivate many people to adopt certain exceptional forms of consumer behaviour without fear of social condemnation. Therefore, traditional communities, particularly in rural areas, tend to look to the past for guidance. This idea is advanced by Mmakola (1996) and supported by Barker (1983), who maintains

that culture defines food choices and also the avoidance of certain foods - plants and animals – particularly where this is linked to maintaining ritual purity. He also states that the explicit use or avoidance of such foods often indicates ethnic and religious markers.

The influence of culture on consumption is further explained by what is known as the “Diderot effect“(McCracken, 1988). McCracken explains this as a coercive force that protects individuals from the intrusion of destabilizing factors into their lives, which contributes to the maintenance of cultural consistency as regards the material world and affects the self-experience and self-concept of individuals. This effect is further explained as a force that encourages individuals to maintain cultural consistency in selecting their complement of consumer goods. The concept is named after the French philosopher Denis Diderot, who lived during the period of the Enlightenment. Diderot propounded the idea that culture controls consumption.

Presscott et al. (2002) compare the consumption patterns and food choices prevailing in New Zealand, Japan, Taiwan and Malaysia. They found that consumers in these countries were similar in that quality and freshness were rated as highly important and that presentation and packaging were rated by all as being far less important. Consumers differed, however, in how much importance they attached to price, taste, wholesomeness, convenience, habit and the presence of additives. When comparing the United States and Germany, Prescott et al. (2002) discovered that American eating habits reflected attitudes focusing on both appearance and health, while German consumers focused more on their health. When comparing China, Malaysia, Taiwan and New Zealand, it was discovered that the first three countries agreed on certain important factors as regards food choice and consumption, the wholesomeness of food, the presence of natural ingredients in food, weight control and convenience. In New Zealand the most important factors noted were sensory appeal, price, wholesomeness and convenience. The authors further found that it is a Chinese tradition to regard food as medicine – both preventive and healing - and that in promoting the consumption of certain types of food in Japan, China, Malaysia and Taiwan, a good strategy would

therefore be to base the promotion on the food's natural content. Veeck (2003) mentions an important factor, namely that when the Chinese are faced with an excess of options in food choice brought about by rapid urbanization, they experience anxiety and have to develop coping strategies in order to make correct choices. In contrast to China, Japan and Malaysia, Biloukha and Utermohlen (2000) concluded from a study conducted in the Ukraine that consumers' perception of health had little influence on their food consumption.

Slaughtering as a cultural practice

An aspect of culture that appears to be important in the African context is that of slaughtering practices. Slaughtering as a practice goes back to factors such as ancestor worship, slaughtering for consumption and slaughtering for special occasions, e.g. funerals and weddings (Junod, 1927). Junod (1927) further states that slaughtering, especially of cattle, is also done as a sacrifice to induce rain and at other national gatherings, while goats are slaughtered for specifically religious purposes. Dr. Tsiane (*Drum Magazine*, 10 January 2002), a traditional doctor, performs cleansing rituals and ancestral worship ceremonies for communities in Limpopo, and Clarke and Sutherland (1988) agree that communication with the dead is important and can only be maintained through a form of slaughtering. Meyer (*Saturday Star*) states that as South African society diversifies and old, traditionally ''white'' suburbs take on a rainbow hue, ritual slaughter (cultural and religious) has become a problem, as people believe that communicating with the ancestors can only be done through slaughtering, which, however, is not acceptable in this context. He further says that according to Luazzi Mjiyako, the Zulu people slaughter goats to communicate with ancestors, while the Xhosa, Sotho and Tswana people prefer to slaughter sheep. He further states that the Meat Safety Act of 2000 has not been effective in dealing with these practices. In addition, some rural communities slaughter indigenous pigs for consumption during winter, as pigs are never slaughtered in connection with sacrifice and are generally regarded as unclean.

According to Junod (1962), chickens are slaughtered for a woman who has recently given birth. A hen is killed if she has given birth to a girl, while a cock is killed if a boy has been born. Some medicinal powder is also poured into the broth made from the meat and the mother then drinks this and eats part of the meat. This is done to help her to regain her strength sooner. According to Mr Ramaboe, a seller of cattle in the Botlokoa area, and Mr Ngoetsana, a seller of cattle in the Seshego and Moletji areas (personal communications), the demand for cattle is so high that the market cannot be exhausted; people want cattle for funerals and for occasions such as weddings and parties. In most villages more than one funeral takes place every weekend. According to Mr. Mahlase, Extension Officer of the Limpopo Department of Agriculture in Lebowakgomo (personal communication), it is difficult to trace the number of cattle slaughtered on these occasions except in areas where there is strict control of Foot and Mouth Disease, which raises a concern as regards the unrecorded and uncontrolled slaughtering of animals that urgently requires dedicated research. According to Dr Neetlling of the South African Red Meat Abattoirs Association (personal communication), 'bush slaughtering' is a significant problem in the rural communities of South Africa due to the unhygienic practices followed in some cases. To remedy the situation, the Secondary Agricultural SETA (Sectoral Education and Training Authority) has initiated projects whereby communities in KwaZulu-Natal are being taught hygienic methods of slaughtering. The idea is that such projects will be extended to other provinces in due course.

2.5 URBANIZATION AND DISTANCE FROM TOWNS

Another factor, which plays a major role in food consumption patterns according to Hartog (1983), is urbanization and the distance from urban centres. Tabi et al. (1991) conducted a study focusing on Sub-Saharan Africa to examine the relationship between food imports and urbanization and the relationship between food aid and urbanization. The results of this analysis show that urbanization is the cause of the increase in the total food imports in 13 of the 24 countries under study, and that the food imports are clearly linked

to the effects of urbanization. This was particularly the case in Ethiopia, Sudan and the Democratic Republic of Congo (DRC).

They noted that the first two countries had experienced long periods of drought and famine, while all three had suffered from civil war, a factor that also leads to increased urbanization. Food aid, for example, was a cause of urbanization in 16 countries out of 24, namely in Benin, Botswana, Burkina Faso, Burundi, Congo, Ethiopia, Ghana, Guinea, Ivory Coast, Kenya, Nigeria, Senegal, Somalia, Sudan, the DRC and Zimbabwe. Turnbull (1998) has developed an urban consumer theory that focuses on the spatial dimension of household work/residence decisions. He says that the traditional comparative properties of the demand for goods are systematically altered by the introduction of spatial considerations. Lancaster (1991) explains that changes in consumption behaviour are seen as a breaking away from tradition, because the traditionally consumed goods or types of food do not yield the same satisfaction that was obtained before the new type of food became known to the consumer, whereas the new, urban goods and foodstuffs possess characteristics that do.

Urbanization affects food habits and dietary patterns and, in contrast to the rural areas, in town all food has to be bought. The supply of local traditional commodities to urban people is often inadequate, and because urban life is more demanding as far as time is concerned, there is not always sufficient time for the lengthy food preparation that is part of traditional cooking. All these factors make urbanized people receptive to new foods that are quick and easy to prepare and attractively packaged, e.g. preserved and processed food. Urbanization also robs people of the seasonal food enjoyed by the rural people. Camporesi (1989) speaks of ‘city cooking’ and ‘country cooking,’ maintaining that country people frequently lack variety in their food and sometimes eat inferior food, although it is usually healthier than city food, which is cooked more quickly and often fried rather than boiled. On the other hand, rural people in Limpopo enjoy traditional beans, marula beer and traditional vegetables known as *morogo* in the rainy season. Their lifestyle is congruent with the seasons because they live closer to the land and what it

can provide. Rural people keep cattle and goats and do not have to buy milk as urban dwellers do. Myburgh (1995) speaks of the newly urbanized communities of the Cape Flats, where everything has to be bought. He also says that urbanization gives rise to new patterns of food purchasing behaviour. Veeck (2003) agrees with this and cites consumer responses in urban China, where urbanization brought about new consumption patterns and the availability of new types of food.

Finally, a study by Skeratt (1999) in three rural areas of Scotland, namely the Western Isles, Torridon and Thurso, revealed that 'place' has an impact on consumption patterns, as it determines what type of food is available, which in turn affects choice, and that this can be observed where rural people are able to produce vegetables and crops while urban people are not. In the three rural areas where the study was conducted there was a limited supply of fresh fruit and vegetables, as these were only available when in season. Secondly, the concept of eating a 'healthier diet' was out of touch with the realities of rural life, since the supply of fresh food in terms of fruit and vegetables was not possible in these remote areas. Skeratt's conclusion, therefore, was that there is a connection between geographical remoteness and isolation, and food availability, choice and options for healthy eating. 'Place' also has an effect upon day-to-day decisions and strategies connected with contemporary food choice and behaviour. This, in turn, has an impact on service provision, as suppliers and outlets seek to manage their response to these changing demands while taking into account the remoteness of such communities.

2.6 PATRIOTISM, GENDER, CHANGE IN LIFESTYLE, AND AGE AS FACTORS INFLUENCING FOOD CONSUMPTION

Factors such as patriotism, gender, change in life style and age also play an important role in determining food consumption patterns. In this study, these factors will be addressed only to a limited extent as they do not necessarily form part of the study objective.

After the September 11 attack on the United States of America, Harnett (2002) wrote an article investigating the implications of ethnic diversity and patriotism on the sale of different types of food. The research was done on black Americans, Hispanics and non-Hispanic whites. A wide variety of foodstuffs were used to investigate the relative loyalty displayed towards American-produced groceries and other products by these groups. The research results indicated that blacks (African Americans), Hispanics and non-Hispanic whites were more likely to spend money in a *patriotic way* than white consumers. The survey showed that 46% of the blacks and 35% of the Hispanics were more likely to buy domestically produced products than whites, whose percentage was low.

Furthermore, with the change in lifestyle where people have to cope with serious time constraints, there has been an increase in the sale of take-away meals, including pizzas, breakfast sandwiches, waffles and dinner entrées. De Boer et al. (2004) call this trend a convenience food lifestyle and mention that the following factors play a role: time-pressure, stress levels, breakdown of mealtime customs as a result of which family members eat their meals separately, eat-alone habits (where an individual does not enjoy cooking for himself/herself alone) and, lastly, individuality (where there are individual preferences within a family). This is one of the most important growth aspects of the food market.

Age also plays an important role in consumption in the sense that, as people grow older; they tend to make choices based on health, weight watching (dieting), etc. Pagliarini, Gabbiadini and Ratti (2004) conducted a study focusing on children of different age groups in Italy. They concluded that the preference for most dishes among younger children (7 years old) differed from those of the older ones (10 years old). Based on their data, they showed that, as they grow older, children become increasingly aware of their preferences and become more critical in their choices.

Lastly, gender plays a role in certain preferences for types of food. For example, females tend to have a sweet tooth and will eat chocolates more

than males do. Men tend to eat more meat than females. Females prefer vegetables, especially salads. To confirm this hypothesis, Biloukha and Utermohlen (2000) conducted a study on the effect of taste, health and cost perception on the frequency of consumption of 34 food items among 303 males and 616 females aged between 18 and 60 in the Ukraine. They found that thirteen of the food items under investigation were consumed more frequently by men than by women, while only four items were significantly more frequently consumed by women. Women tended to like the taste of fruit, vegetables and sweets more than men did, whereas men preferred the taste of fatty and processed meats, whole milk, lard, pasta and cola drinks. Women regarded whole milk, fatty and processed meats, starches and cola drinks as less healthy, whereas men perceived green vegetables, salads, apples, juices and cottage cheese as less healthy than women did. Lastly, women tended to consume sweets more frequently and to rate them higher on their list of preferences than men did.

2.7 SUMMARY

This chapter provided an understanding of specific objectives outlined in Chapter One according to the literature study carried out. The literature sheds light on all the different objectives, so that one can more clearly understand the issues being looked at in the coming chapters. It further confirms that the objectives outlined are not important for Limpopo only, but involve issues that are encountered all over the world. It is interesting to note the similarities and differences in the rankings regarding factors that are important or less important in food consumption patterns, the uniqueness of taste particular to different countries, as well as the wealth of knowledge that is available regarding different types of food.

CHAPTER 3

STUDY AREA, RESEARCH METHODS AND PROCEDURES

3.1 INTRODUCTION

This chapter provides information on the geographical area covered by the study, which is discussed in terms of its location, the agricultural activities taking place there and its classification in terms of rural and urban areas. It also provides information on the research methods used and links them to the objectives of the study.

3.2 STUDY AREA AND GEOGRAPHICAL LOCATIONS

The study involves three hundred (300) respondents from Limpopo, who are distributed throughout the former homelands of Lebowa, Gazankulu and Venda. The research focuses on both urban and rural communities of Sepedi, Xitsonga and Tshivenda-speaking groups and their respective geographical areas.

3.2.1 The former Lebowa

Seshego is an urban area situated 15 km northwest of Polokwane, where 49 respondents completed questionnaires. In the rural areas of the former Lebowa, the villages Thaba-Kgone, Viking, Moria and Ments were selected, where 45 respondents completed questionnaires. These four areas are located 30 km east of Polokwane and approximately 5 km from the University of the North (recently renamed the University of Limpopo). The areas are strongholds of the ZCC and a high percentage of the people in these areas are members of that church.

3.2.2 The former Gazankulu

In the Gazankulu area respondents were randomly selected from the Malamulele district. In Malamulele Township 42 respondents completed questionnaires, while in the rural areas surrounding the same township (within a 5 km radius), 64 respondents completed questionnaires. These areas are Merwe, Xigalo, Xitleni, Muchipisi, Madonsi, Plange, Ginja-Mandeni, Alten, Mininginisi, Mtititi, Jilango, Mapapila, Jerome, Muyexe, Xihosana, Mavambe, Green Farm, Dinga, Khakhala, and Nkobane.

3.2.3 The former Venda

In Venda 49 respondents from the Thohoyandou and Makwerela townships completed questionnaires, while in the rural areas (within a 10 km radius of Thohoyandou and Makwerela), 51 respondents completed questionnaires. The respondents in these areas were from Tswinga, Muledane, Lufile, Gaba, Nghovhela, Mashau, Tshifudi, Budeli, Tshivhulani, Khubvi, Mangondi, Tshivho, Tsianda, Ngenani and Maungani.

Table 3. 1: Respondents by geographical location

Area	Number	Percentage
Rural *Venda*	50	16,67
Urban *Venda*	50	16,67
Rural *Gazankulu*	65	21,67
Urban *Gazankulu*	41	13,67
Rural *Lebowa*	45	15,00
Urban *Lebowa*	49	16,33

In the research proposal it was envisaged that fifty respondents in each urban/rural and geographical area would be interviewed. Since some

questionnaires were not returned, however, there is a slightly unequal distribution.

3.3 RESEARCH METHODS AND PROCEDURES

3.3.1 Data and data sources

As mentioned before, for this research three dominant language/cultural groups residing in Limpopo were selected, namely the Sepedi-speaking group, found mainly in the former homeland of Lebowa, the Xitsonga-speaking group, found in the former homeland of Gazankulu, and the Tshivenda-speaking group, found in the former homeland of Venda.

3.3.2 Data collection

To obtain information on the social profiles, culture and food consumption patterns of the respondents, questionnaires were used to interview 300 respondents, and verification and validation were done through interviews with experts.

Questionnaires

According to Terreblanche and Durrheim (1999), questionnaires are one of the most common tools used in gathering data in the social sciences. After designing the questionnaires, a pilot project was run on this instrument in order determine whether the questions were clear and could be understood. This was done at the Department of Education in Pretoria, where Northern Sotho, Tshivenda and Xitsonga-speakers are employed. The questionnaire was subsequently adjusted according to the findings.

The next step was to identify and train research assistants. People speaking the local languages were used for this purpose.

Interviews

To validate the answers provided by the respondents a few key people (basically a reference panel or control group) with knowledge of the respective fields were identified and interviewed. These consisted of people working for the Department of Agriculture, the University of the North (faculty of Agriculture) and the Agricultural Research Council. Lastly, a few cattle sellers were interviewed regarding the aspect of slaughtering.

3.3.3 Data analysis

The data collected for the study were categorized and coded into a list of variables under socio-economic and demographic factors, the consumption of different foodstuffs for both rural and urban communities, and slaughtering practises. These data were then entered on an Excel spreadsheet in preparation for descriptive and statistical analysis. Lastly, the data were transferred into an SAS package in order to be analysed using the ANOVA technique and the Chi-Square technique for cross-tabulation. Chi-Square was used in analysing all of the objectives, namely for the data on urban versus rural consumption of different food types, food consumption patterns between different ethnic groups, the influence of religion on consumption patterns, the influence of slaughtering practices on consumption patterns, and lastly the data on how a community's distance from town affects its consumption patterns. ANOVA was used in checking the influence of the level of income on the amount spent on food by the respondents. Although the latter exercise did not form part of the formal objectives of the study, it was interesting to look at these two variables for the respondents in the study.

Chi-Square

According to Berenson and Levine (1996), Chi-Square is a hypothesis-testing method used in testing categorical data. Unlike ANOVA, which is used to test variables on a dependent variable, Chi-Square is used on independent samples. It is also known as a non-parametric test of statistical significance

for bivarate tabular analysis. According to the Chi-Square method, cross-tabulation tables are used as a basic technique to examine relationships among nominal or categorical variables.

The beauty of cross-tabulation tables is that they can be used descriptively to provide information other than information on inferential statistics testing, as well as to draw conclusions about relationships in the population, based on sample data. According to Healey (1990), when employing Chi-Square, in connection with the requirements for random sampling of the variables, *independence* is important.

The independence of the variables means that the classification of a case into a particular category of one variable has no effect on the probability of others. Chi-Square is also a *goodness-of-fit test* to see whether a variable is randomly distributed across a series of categories. The test is done through comparing the expected value with the observed value. With the Chi-Square technique the Null-hypothesis is proved to be either true or false by using the observed frequency (fo) compared to the expected frequency (fe). If the answer obtained is less than one, and thus close to zero, then the null hypothesis is true. If the answer is greater than one, however, the null hypothesis is false. The null hypothesis of the variables is always stated as independent. Of importance with the Chi-Square technique, is that the calculated value must be greater than the critical value (seen on the table of the chi-square distribution) in order to reject the null hypothesis.

When the statistical software SAS is used, PROC frequencies are employed to observe the fo and the fe, and a warning message is given whenever at least 5% of the cells have theoretical frequencies below 5.

In summary, the following are the requirements for using Chi-Square:

- The sample must be randomly drawn from the population.
- Data must be reported in raw frequencies (not percentages).

- Measured variables must be independent.
- Values/Categories on independent and dependent variables must be exclusive and exhaustive.
- The observed frequency cannot be too small.

Anova

According to Terreblanche and Durrheim (1999), ANOVA (analysis of variance) is a statistical method which can be used when more than two means on a dependent variable are compared. ANOVA attempts to determine the ratio of variance in the mean within and between groups. ANOVA is also called a univariate procedure because it is used to assess group differences on a single dependent variable.

According to Healey (1990) the null hypothesis of ANOVA is that the populations from which the samples are drawn are equal with respect to the characteristics of interest. When a statistical difference is found between the variance of one or more of the groups and that of the total sample, the hypothesis is proved false; it can then be proved that the sample sets were taken from different populations. Kgowedi (2002) states that certain assumptions are required for the correct application of this statistical technique, especially when dealing with dependent variables, e.g. that purchasing power depends on income.

According to Norusis (1990), ANOVA uses an F-statistic to assess the statistical difference between the means of the two groups on a single variable. The observed significance level is the probability of obtaining an F-statistic at least as large as the one calculated when all the group means are equal. When this probability is small enough, the hypothesis that all population means are equal is rejected.

3.3.4 Sampling methods

Babbie (1992) describes two methods of sampling, namely *probability sampling,* whereby a sample will be representative of the population from which it is selected if all members of the population have an equal chance of being selected. Sometimes this method is expensive, time-consuming and difficult to use. For this reason *non-probability sampling* is frequently used. Cohen and Manio (1980) also speak of *purposive sampling,* which was used in this study.

3.4 SUMMARY

This chapter provided an understanding of the study area, including the agricultural activities found in the area. It also provided information on the research methods used and gave a brief description of the problems encountered in order to furnish the reader with a clear understanding before the analysis is done.

CHAPTER 4

A SOCIO-ECONOMIC PROFILE OF RESPONDENTS

4.1 INTRODUCTION

This chapter provides a descriptive profile of respondents in terms of a number of socio-economic characteristics, including language, gender and age, level of education, occupation, income, religion and distance of residential area from the nearest town. It covers the three hundred respondents used in this survey, originating from the former homelands of Lebowa, Gazankulu and Venda.

4.2 GENDER, AGE AND HOME LANGUAGE OF RESPONDENTS

In this section, information on the age, home language and gender of the respondents will be provided.

4.2.1 Respondents' home language

Three home languages were found to be dominant amongst the respondents, with 30% speaking Northern Sotho, 34% speaking Tshivenda and 36% speaking Xitsonga.

Table 4. 1: Home language of respondents

Home language	Number	Percentage
Northern Sotho	91	30,3
Tshivenda	101	33,7
Xitsonga	107	35,7
IsiZulu	1	0,3
Total	**300**	**100**

4.2.2 Gender

As shown in the table below, the majority of the respondents, at 54%, are female.

This can be attributed to a number of factors. Amongst others, generally speaking, men are involved in migratory labour practices, whereas women normally remain at home. Statistics South Africa in the 2001 Census in Limpopo also showed that out of the total population 54% were females. Although a small sample in selected areas was used in this study, it therefore nevertheless corresponds with the statistics of the province as a whole.

Table 4. 2: Gender distribution

Gender	Number	Percentage
Male	137	46
Female	163	54

In terms of the marital status of the respondents, it was found that that 75% were married, 2% were divorced and 18% were single, while 5% were widowed. What is striking is the rather low percentage of those who are divorced compared to the much higher divorce rates in other areas, divorce being regarded as taboo in this area, especially in the rural parts.

4.2.3 Age

Of the 300 respondents, 297 indicated their age. It often happens that in the rural areas people do not know their exact age, especially the elderly ones. In order to get their pension, one respondent said, they go to the local chief or an induna accompanied by an elder brother or sister who knows their own age. A letter is then written to the Department of Home Affairs after allocating them an age estimated in comparison to that of the person accompanying them. This assists them in their application for an identity document, after

which they can then get their pension. In cases where people do not have a brother or a sister, their age is calculated by finding out with whom they went to initiation or cultural school, and based on this an estimated age is allocated. The age range of the respondents participating in the survey ranged from 18 to 78.

Most (38%) of the respondents were between 31 and 40 years of age, while 22% were between 41 and 50.

Table 4. 3: Age distribution

Age in years	Number	Percentage
Over 60	24	8
51- 60	45	15
41-50	65	21
31-40	112	38
16-30	51	18

4.3 EDUCATIONAL LEVEL AND OCCUPATION OF THE RESPONDENTS

4.3.1 Highest level of education

Only 294 respondents provided information on the highest level of education they had completed. As may be expected, people who are illiterate are embarrassed about supplying this information. A total of 204 or 69% of the respondents had had some school education. When this was further broken down, it was found that 25 respondents had had less than five years of schooling, another 75 had had between five and ten years of schooling, while the majority (104) had had more than ten years of schooling. This indicates that the general level of education is very low and that Adult Basic Education needs to be encouraged in this area. About 56 respondents had reached diploma level, and the majority of these were teachers. According to Statistics

South Africa (figures from 2001), the level of illiteracy in Limpopo is 33,4% among people who are 20 years old and older.

Table 4. 4: Level of education

Level of education	Number	Percentage
Grade 0 - 12	204	69
Diploma	56	19
First Degree	16	5
Honours Degree	13	4
Master's Degree	2	0,6
Doctoral Degree	0	0
Certificate	0	0
None (illiterate)	3	1

4.3.2 Occupations of the respondents

The majority of the respondents (25%) worked for the Department of Education, (69 were teachers, four were principals and one was an inspector), another 7% were office workers, while 19% of the respondents were unemployed. This figure includes people who had been retrenched, students and casual workers, and volunteers. Pensioners make up 8% of the respondents and domestic workers and manual labourers (builders, drivers, etc.) 5% and 10% respectively.

Of the respondents 6% are technical workers. These include shoe repairers, carpenters and mechanics. According to their verbal reports, these were mostly people who had decided to learn a skill to end the frustration of being unemployed. Amongst the technical workers in the group of respondents, however, there were also four qualified land surveyors and a civil engineer (based in Seshego). In the study, although civil engineers and land surveyors are at a much higher level than mechanics and carpenters, they have been grouped together on the basis of their technical skills.

3% of the respondents were in the health professions, namely seven nurses, one health inspector, one dental assistant and one traditional healer (based in Gazankulu).

The category of justice officials (5% of respondents) contains one magistrate, one correctional officer, five police officers, one soldier and six security guards. The agricultural sector was represented in the sample by 2% of the respondents, including two farmers and three extension officers. Considering the vastness of the rural community of the province and the emphasis on agriculture, this figure is rather low. In the business category, the 7% of correspondents included sellers of vegetables and fruits. The majority of the fruit and vegetable sellers is made up of women and children selling from door to door or on the street, and these numbers are particularly high in the area of Thohoyandou and its surrounding villages, as people harvest from their own yards and sell to tourists passing through Venda on their way to Punda Maria or elsewhere.

Table 4. 5: Occupational distribution

Occupation	Number	Percentage
Educators (teachers)	74	25
Health workers	10	3
Justice officials	14	5
Office officials	21	7
Business people	20	7
Technical workers	18	6
Domestic workers	15	5
Unemployed	58	19
Labour-intensive workers	30	10
Pensioners	26	9
Religious workers	6	2
Agriculture	5	2
Unknown	3	1

4.4 INCOME LEVEL OF RESPONDENTS

Naturally, the level of income has a huge impact on the standard of living and the food consumption patterns of the respondents. Given the rather informal economic occupations and unemployed status of most respondents, the information on monthly income is only indicative and probably not very accurate.

Table 4. 6: Income distribution per month

Income (monthly)	Number	Percentage
Under R200	6	2
R200 - R400	10	3
R400 - R600	27	9
R600 - R800	30	10
R800 - R1 000	22	7
R1 000 -R1 500	9	3
R1 500 - R2 000	29	10
R2 000 - R3 000	50	17
R3 000 - R4 000	48	16
Over R4 000	68	23

It must be remarked here that unemployed individuals, such as pensioners, also receive income in the form of social grants. Those that are retrenched receive benefits from the Unemployment Insurance Fund (UIF) for a certain period, which is known as ‘Blue Card’ money.

The figures in Table 4.6 do not really reflect the day-to-day reality in the province, since a large percentage of the respondent group are teachers and people working in offices and 23% of respondents earn an income of over R4 000. Amongst the respondents, 2% earn less than R200, 3% less than R400 and 10% earn between R600 and R800. This last group includes some

domestic workers. More than 42% of the respondents earn less than R2 000. With an average family of six this means that they can barely survive.

4.5 RELIGION OF RESPONDENTS

The total number of Christians in the sample is 212 (74%). It is important to note that this figure includes members of the Pentecostal churches ("born again" Christians) and the mainstream churches, such as the Lutheran Church, the Roman Catholic Church, the Presbyterian Church, the Dutch Reformed Church, etc.

Table 4. 7: Religious affiliation

Religion	Number	Percentage
Christians (Roman Catholic, Lutheran, Anglican, Dutch Reformed and Presbyterian, including "born again" churches)	212	70,6
Zionist Christian Church	51	18
Islam	1	,35
International Pentecostal Church (red jacket uniform)	1	,35
Apostolic Church (white uniform with green bands on arms and legs)	1	,35
Non-Christians	22	8
Total	**288**	**100**
Unclassified (Missing)	12	

The ZCC affiliates make up 18% of the respondents. However, if one were to consider the province as a whole, this figure is relatively high. Most of the ZCC-affiliated respondents come from the rural areas near Moria where the

headquarters of the ZCC is located, but some also come from other parts of the province.

Only one respondent is a member of the Apostolic Church (0,35%). In fact, this person is an affiliate of Shembe. One other respondent is a member of the Independent Pentecostal Church (also 0,35 %). Taking into account the high number of people in the province generally who belong to either of these two churches, the figures in the sample do not represent the reality in Limpopo. The reason for the bias in the sample lies in the specific areas chosen for the research.

4.6 DISTANCES FROM TOWNS: CONSUMERS IN RURAL AREAS VERSUS THOSE IN URBAN AREAS

Among the respondents 53% are urban and 47% are rural people scattered throughout the rural areas of Lebowa, Venda and Gazankulu.

Table 4. 8: Rural versus urban dwellers

Area	Number	Percentage	Cumulative frequency
Urban	160	53	160
Rural	140	47	300

The distance from the nearest town and the degree of urbanization have an important influence on the food that people consume, particularly as one of the defining factors is the availability of certain foodstuffs. Tabi, Howard and Phillips (1991) state that people go to cities and urban areas because a variety of foodstuffs are available there that are not available in the rural areas. They further state that in urban areas the so-called traditional foods are not available. Examples of the latter are the *morogo* and traditional beans found in the rural areas of Limpopo during the rainy season and, as regards meat, the indigenous pigs that are slaughtered during the winter. Cattle are

reserved for special occasions such as funerals, weddings and rituals relating to ancestral worship.

Montanari (1994) mentions that the food supply reaches the city first because of the accessibility of transportation, but also because city people control the transportation. He further states that legislation is imposed by city dwellers, since political leaders normally reside and have their offices in cities rather than in rural areas. Al-Khahtini, El-din and Sofian (1995) maintain that, as the nation becomes urbanized and more cosmopolitan, food preferences will change.

Another important factor is that in Limpopo, until quite recently, many rural areas did not have access to electricity.

Thus, food that was kept was prepared in such a way that no further preservation was necessary. In towns, where food can be stored in fridges, it is different. It follows that access to electricity plays a crucial role in the type of food that can be stored and consumed. Statistics South Africa's Census 1996 indicated that out of 940 000 households headed by Africans, 321 000 used electricity for lighting. In 2001, out of 1,1 million households, 715 000 used electricity for lighting. This represents an increase from 34, 5% to 62,7%, indicating a rise margin of 28,2%.

4.7 SUMMARY

This chapter provided a profile of the consumers studied in terms of various factors. Some of the factors discussed have a marked impact on consumption patterns and therefore provide a deeper insight into the consumption patterns of the different ethnic groups. It should, however, be understood that the percentages given cannot be generalized to cover the entire population of Limpopo.

CHAPTER 5

ANALYSIS OF FOOD CONSUMPTION PATTERNS AND THE FACTORS INFLUENCING THESE PATTERNS

5.1 INTRODUCTION

The purpose of this chapter is to describe the food consumption patterns of the respondents and to highlight the factors affecting these consumption patterns. This is done by presenting empirical data and by applying-cross tabulation techniques to categorical data. Chi-Square is the main statistical tool utilized, while ANOVA is used on a limited scale to check the influence of variables dependent on other variables. This chapter therefore aims to determine whether religion or religious affiliation, or ethnic differences, or even distance from towns, has any influence on the consumption patterns of the selected urban and rural communities.

The analysis reported in this chapter is based on the data gathered through the questionnaires. In the case of the Chi-Square technique, the calculated chi-square value is not interpretable directly, but compared to a table of chi-square distributions known as the critical value. The calculated value should be greater than the critical value to reject the null hypothesis. In this study the threshold of tolerance is at 1%. Therefore the p-value should be less than 0,01 to be significant. The other tolerance is where 25% of the cells would have expected counts of less than five.

5.2 FOOD CONSUMPTION PATTERNS OF URBAN VERSUS RURAL RESPONDENTS

The most common types of staple foods eaten by all respondents are maize meal, rice and sorghum. The trend emerging from the study is that living in a rural or urban area has an influence on the consumption of these types of

staple foods. It also emerged that the different ethnic groups use maize meal, rice and sorghum to different degrees. Below, we will consider the results for the three main types of staple foods, vegetables, bread and three meat types.

5.2.1 The staple foods

Maize meal

It was determined that 67% of rural households consume maize daily as compared to 48% of the urban respondents, while 27% of the urban respondents compared to 20% of the rural respondents consume maize three to four times per week. The calculated chi-square value of 27,01 at the 1% level with three degrees of freedom is greater than the critical value of 11,3. Therefore a significant relationship exists between the consumption patterns of maize for urban and rural respondents.

Rice

It was determined that 45% of urban respondents consumed rice at least once a week as compared to 44% of the rural respondents. Comparing respondents eating rice twice per week, it was found to be 29% for urban to 31% for rural respondents.

In analyzing the data on rice, the calculated chi-square value of 30,42 at the 1% level with three degrees of freedom is greater than the critical value of 11,3. Therefore a significant relationship exists between the consumption patterns of rice for urban as opposed to rural respondents.

Sorghum *(*Mabele*)*

The consumption of sorghum is particularly popular amongst the members of the ZCC. All of the ZCC respondents consume sorghum and are encouraged by the church to do so, as emerged through verbal communication. 10% of the ZCC respondents also indicated that they consumed sorghum at least

once a week. What came out of the analysis is that sorghum is also more popular with the rural than the urban respondents. Furthermore, 34% of the rural respondents consume sorghum once per week as compared to 25% of their urban counterparts.

In the analysis it proved that the calculated chi-square value of 12,18 at the 1% level with three degrees of freedom is greater than the critical value of 11,3. Therefore a significant relationship exists between the consumption patterns of sorghum for urban and rural respondents.

5.2.2 Vegetables

The most commonly consumed vegetables are tomatoes, cabbages, onions and potatoes, followed by spinach and beetroot, which are only occasionally eaten. Onions are normally used with tomatoes for gravy or in spinach. It emerged that 54% of the rural respondents use tomatoes every day as compared to 52% of their urban counterparts. Poor people tend to eat tomatoes as a side dish with mealie pap (*bogobe*). This serves as an alternative to meat for people who cannot afford to buy meat. The calculated chi-square value of 9,0 at the 1% level with three degrees of freedom is less than the critical value of 11,3. Therefore there is no relationship in respect of the consumption pattern of tomatoes between urban and rural respondents and we accept the null hypothesis.

The second most common vegetable after tomatoes is cabbage. Of the urban respondents, 17% consume cabbage once per week compared to 24% of the rural respondents, and 23% of the urban respondents consume it twice per week compared to 23% of the rural respondents. For those who cannot afford to buy meat, cabbage serves as a replacement as well.

In analyzing the consumption of potatoes, 22% of rural consumers compared to 17% of urban respondents consume potatoes once per week. The calculated chi-square value of 5,32 at the 1% level with three degrees of freedom is less than the critical value of 11,3. There is therefore no

relationship in respect of the consumption pattern of potatoes between urban and rural respondents and we accept the null hypothesis.

The last vegetable to be considered is spinach (*morogo)*. The consumption of *morogo* is common amongst all language groups. It can, however, only be collected during the rainy season. Even though *morogo* grows well during the summer, only about 15 % of the respondents consume it twice per week. 20% of the respondents consume *morogo* once a week.

5.2.3 Bread

Bread consumption is higher among urban respondents compared to their rural counterparts, as it emerged that 47% of the urban respondents consume bread daily as compared to 43% of the rural respondents. In analyzing the consumption of bread, the calculated chi-square value of 32,26 at the 1% level with seven degrees of freedom is greater than the critical value of 18,5. Therefore there is a significant relationship regarding the consumption pattern of bread between urban and rural respondents.

Table 5. 1: Summary of food consumption patterns of urban versus rural respondents

Food Item	Once per week %		Twice per week %		Thee to four times per week %		Five to six times per week %		Every day %	
	U	R	U	R	U	R	U	R	U	R
Maize	11,6	0	12,6	12,4	27,6	20,4	30,6	36,4	17,6	30,8
Rice	45	44,3	29	31,3	26	24,3	0	0	0	0
Sorghum	25,4	33,6	19,4	15,6	22,4	26,6	19,4	12,6	13,4	11,6
Tomatoes	11,8	19,2	12.,8	10,2	22,8	17,2	17,8	22,8	34,8	31,2
Onions	11,2	9,8	12,2	21,8	22,2	18,8	22,2	16,8	32,2	32,8
Cabbage	17,4	23,6	23,4	22,6	27,4	22,6	15,4	15,6	16,4	15,6
Potatoes	17,4	21,6	24,4	19,6	28,4	26,4	14,4	15,6	15,4	16,6
Bread	9,6	12,4	11,6	13,4	18,6	14,4	13,6	16,4	466	43,4

[1] Note: U represents urban areas and R represents rural areas

5.2.4 Meat

The most common types of meat consumed are beef and chicken. Pork is also eaten but not by all, since some abstain from eating pork for religious reasons. Of interest is the consumption of *mopani* worms and of *offal*, the latter being the offal of beef, chicken, and sheep, by both rural and urban communities.

Beef

Of the respondents 36% (rural) and 35% (urban) eat beef twice a week, while 30% (urban) and 29% (rural) consume beef at least once per week. In the analysis the calculated chi-square value of 14,49 at the 1% level with two degrees of freedom is greater than the critical value of 9,2. Therefore there is a significant relationship between the consumption patterns of beef for urban as opposed to rural respondents.

Chicken

At least 32% (urban) and 25% (rural) of the population consume chicken once per week. Even though there is this difference, as will emerge below, there is no difference when comparing the bigger population of the urban communities with the smaller rural communities. In the analysis, the calculated chi-square value of 11,16 at the 1% level with three degrees of freedom is equal to the critical value of 11,3. Therefore there is no significant relationship between the consumption patterns of chicken for urban as opposed to rural respondents.

Mutton

Mutton is consumed by some of the respondents, though it is found to be expensive as compared to other meats. In analyzing the consumption of mutton, the calculated chi-square value of 7,43 at the 1% level with two degrees of freedom is less than the critical value of 9,2. Therefore there is no

relationship between the consumption patterns of mutton for urban as opposed to rural respondents.

On the other hand, respondents from all the ethnic groupings studied consume *offal (tripe)* and, to be more precise, 29% of all respondents consume *offal;* this includes the consumption of chicken heads and feet, which are especially found in shops in the rural areas.

Other types of meat that are consumed, albeit to a lesser degree, are goat and venison, depending on their availability. Goat is normally reserved for ancestral worship and is therefore not popular as an item of consumption among the respondents in the study.

Table 5. 2: Summary of meat consumption patterns of urban and rural respondents (% of respondents)

Food Item	Once per week		Twice per week		Three to four times per week		Five to six times per week		Every day	
	U	R	U	R	U	R	U	R	U	R
Chicken	32	25	30	33	22	24	16	18	0	0
Beef	30	29	35	36	18	21	17	14	0	0
Mutton	39	42	24	30	10	14	27	14	0	0

Note: U represents urban areas and R represents rural areas

To summarize, there are no differences in food consumption between urban as opposed to rural communities with regard to vegetables. There are moreover no differences between the consumption patterns of rural and urban respondents as regards the consumption of meat (mutton and chicken), apart from beef. There are, however, different consumption patterns for bread, maize and rice.

5.3 FOOD CONSUMPTION PATTERNS OF THE DIFFERENT ETHNIC GROUPS

From the study conducted, it is clear that the ethnicity of the respondents affects the frequency of consumption of different food items. It also emerged that there are differences in the degree of consumption of common food items among the different ethnic groups. Below we will consider the results for three staple foods, two vegetables, bread, and three types of meat. This section also considers whether it is feasible to make generalizations in terms of the larger population with regard to food items.

5.3.1 Staple foods

Maize

The maize consumption among Xitsonga-speakers is 37%, compared to 28% among Sepedi-speakers and 31% among Tshivenda-speakers, and it is eaten at least five to six times per week. The chi-squire value of 19,56 at the 1% level with six degrees of freedom of the calculated statistical value is greater than the critical value of 16,8. Therefore we can reject the null hypothesis and conclude that there is a significant relationship regarding maize consumption between the different ethnic groups.

Rice

Rice consumption among Tshivenda-speakers is 46%, compared to 40% among Sepedi-speakers and 34% among Xitsonga-speakers, once per week. The chi-squire value of 35,18 at the 1% level with 6 degrees of freedom of the calculated statistical value is greater than the critical value of 16,8. Therefore we can reject the null hypothesis and conclude that there is a significant relationship regarding rice consumption between the different ethnic groups.

Sorghum

When looking at sorghum consumption at the rate of once per week, the Sepedi-speakers have the highest consumption at 43%, with the Xitsonga-speakers standing at 39% and the Tshivenda-speakers at 26%. The chi-squire value of 38,33 at the 1% level with six degrees of freedom of the calculated statistical value is greater than the critical value of 16,8. We can therefore reject the null hypothesis and conclude that there is a significant relationship regarding sorghum consumption between the different ethnic groups.

5.3.2 Vegetables

Tomatoes

The overall tomato consumption is higher for Tshivenda-speakers (62%) and Sepedi-speakers (52%), and lower for Xitsonga-speakers, when looking at daily tomato consumption. The chi-square value of 136,56 at the 1% level with six degrees of freedom of the calculated statistical value is greater than the critical value of 16,8. We can therefore reject the null hypothesis and conclude that there is a significant relationship regarding tomato consumption between the different ethnic groups.

Potatoes

The overall daily potato consumption is highest for Sepedi-speakers at 37%, followed by Xitsonga-speakers at 34% and Tshivenda-speakers at 30%. The chi-squire value of 19,60 at the 1% level with six degrees of freedom of the calculated statistical value is greater than the critical value of 16,8. We can therefore reject the null hypothesis and conclude that there is a significant relationship regarding potato consumption between the different ethnic groups.

5.3.3 Bread

The daily bread consumption among Tshivenda-speakers is 39%, compared to 38% among Xitsonga-speakers and 33% among Sepedi-speakers. The chi-square value of 34,18 at the 1% level with 14 degrees of freedom of the calculated statistical value is greater than the critical value. We can therefore reject the null hypothesis and conclude that there is a significant relationship regarding bread consumption between the different ethnic groups.

5.3.4 Meat

Chicken

The overall once-per-week chicken consumption is highest for Xitsonga-speakers (30%), followed by Tshivenda-speakers (27%), and lowest among the Sepedi-speakers at 19%.

The chi-square value of 37,39 at the 1% level with six degrees of freedom is greater than the critical value of 16,8. We can therefore reject the null hypothesis and conclude that there is a significant relationship regarding chicken consumption between the different ethnic groups.

Beef

The consumption of beef is higher among the Tshivenda-speakers (30%) than among the Xitsonga-speakers (24%), and lowest among the Sepedi-speakers (22%), at the rate of once per week. The chi-square value of 50,30 at the 1% level with four degrees of freedom is greater than the critical value of 13,3. We can therefore reject the null hypothesis and conclude that there is a significant relationship regarding beef consumption between the different ethnic groups.

Mutton

It emerged above that Tshivenda-speakers eat a lot of beef, and the overall percentage of respondents consuming mutton is also highest for Tshivenda-speakers (41%), followed by Xitsonga-speakers at 39% and lastly Sepedi-speakers at 32%. The chi-square value of 32,57 at the 1% level with four degrees of freedom is greater than the critical value of 13,3. We can therefore reject the null hypothesis and conclude that there is a significant relationship regarding mutton consumption between the different ethnic groups.

Table 5.3 provides a summary of the differences in terms of consumption between the three main ethnic groups, namely Xitsonga, Sepedi and Tshivenda-speakers.

5.4 EFFECT OF RELIGION ON FOOD CONSUMPTION PATTERNS

The influence of religion on food consumption patterns is found in two forms, namely either the encouragement or the prohibition of certain food types. In the study, prohibition was mainly observed in the case of the ZCC and IPC affiliates, who are prohibited from eating pork and pork products. In addition, a small percentage also abstains from beef consumption. In terms of encouraging certain food types, the ZCC and the IPC are encouraged to eat sorghum meal (mabele), which is regarded as being healthier than white maize meal. They are also encouraged to eat vegetables and drink milk, and to drink a particular ZCC-brand of tea and coffee, which supposedly “gives them energy and prevents diseases”. Below we consider the results of the prohibition in terms of the consumption of pork and pork products, as well as beef and chicken. The last aspect that will be analysed is that of the consumption of alcohol and tobacco.

Table 5. 3: Summary of food consumption patters for the different ethnic groups

Food item	Once per week %			Twice per week %			Three to four times per week%			Five to six times per week %			Every day %		
Group	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3
Maize	0,4	15	0,3	16,2	15	17,7	22,5	21	27	37,4	28	31	23,5	21	24
Rice	34	40	46	34	32	29	32	28	25	0	0	0	0	0	0
Sorghum	39	43	26	34	27	28	27	30	46	0	0	0	0	0	0
Tomato	13	15	13	15	15	12	28	18	13	26	22	16	18	30	46
Onions	14	16	12	17	16	10	29	19	25	25	21	12	15	28	41
Cabbage	29	16	17	22	23	19	18	24	28	15	18	17	16	19	19
Potato	22	17	18	20	17	27	24	29	25	15	19	14	19	18	16
Bread	14	15	13	14	16	15	18	16	19	16	20	14	38	33	39
Chicken	30	19	27	28	28	29	42	31	27	0	22	17	0	0	0
Beef	24	22	30	35	23	27	24	24	24	17	19	19	0	12	0
Mutton	39	32	41	34	25	30	27	24	29	0	19	0	0	0	0

Note: 1= Xitsonga-speakers, 2=Sepedi-speakers and 3=Tshivenda-speakers

5.4.1 Pork and pork products

Pork

The calculated chi-square value of 98,77 at one degree of freedom is far greater than the critical value at 6,6. Therefore there is a significant relationship between the consumption of pork and religion, in this case among the ZCC and IPC members as compared to other religious groups.

Pork products

The calculated chi-square value of 150,61 at one degree of freedom is far greater than the critical value at 6,6. Therefore there is a significant relationship between the consumption of pork products and religion, and in this case among the ZCC and IPC members as compared to other religious groups.

5.4.2 Beef

The calculated chi-square value at 0,2 is less than the critical value of 6,6 and therefore we accept the null hypothesis that there is no relationship between the consumption of beef and religion.

5.4.3 Chicken

The calculated chi-square value at 1,22 is less than the critical value of 6,6 and therefore we accept the null hypothesis that there is no relationship between the consumption of chicken and religion.

5.4.4 Tobacco

The calculated chi-square value of 12,51 at one degree of freedom is far greater than the critical value at 6,6. Therefore there is a significant relationship between the consumption of tobacco and religion. This also

indicates that the relationship does not exist as regards the ZCC and IPC affiliates only, but also among the members of other religious groups.

5.4.5 Alcohol

The calculated chi-square of 34,32 at one degree of freedom is greater than the critical value at 6,6. Therefore there is a significant relationship between the consumption of alcohol and religion.

Table 5. 4: Food consumption patterns and religion

Item	% of respondents in religious groups prohibited from eating certain food items			
	ZCC	IPC	Ancestral	Other churches
Pork	100	100	3	None
Fish	0,3	0,3	None	None
Red meat	20	None	3	None
Chicken	2	None	None	None
Pork products	52	52	3	None
Alcohol	100	100	3	46
Tobacco	100	100	3	41

As can be seen from the table, all the ZCC and IPC respondents indicated that they were prohibited from eating pork, thus accounting for 28% of the total respondents. Some respondents who engaged in ancestral worship were also prohibited from eating pork. Only 3% of these respondents were prohibited from eating red meat as well as pork. One respondent actually said that as a result of his/her adherence to ancestral worship, he/she could not eat any kind of four-footed animal. A mere 0,33% of the respondents refused to eat fish for religious reasons and 2% refused to eat chicken. With regard to tobacco, 206 respondents (69%) were prohibited from using tobacco. This applies to 100% of the affiliates of the ZCC, the IPC and the Pentecostal churches (“born again” believers), as well as

some members of other main-line churches, such as the Roman Catholic and Lutheran Churches.

5.5 THE EFFECT OF DISTANCE ON CONSUMPTION PATTERNS

The distance between villages and the nearest town often lead to respondents eating what is locally produced. After all, the greater the distance, the more money and time are needed for transport if one wishes to buy goods and food in town. Also, when the transport system is poor, people will not go to town but will prefer to consume what is available in their rural area. This problem is compounded in situations where there is no electricity available to preserve the food.

In the areas under study, the distances between villages and towns have no bearing on the frequency of buying staple foods (nor on the consumption pattern), as most people prefer to buy once a month. It can therefore be concluded that there is no relationship between the distance that has to be travelled to buy food and food consumption patterns. The reason for this is that the shopping malls that have been built in certain of the areas being studied (i.e. Malamulele, Thohoyandou and Seshego) play an important role as far as accessibility is concerned. What does make a difference is the distance from the main shopping centre and the mode of transport that is available. This is confirmed by the analysis, which determined that the chi-square value of 36,65 at the 1% level with two degrees of freedom of the calculated statistical value is greater than the critical value of 9,2. The null hypothesis can therefore be rejected and it can be concluded that there is a significant relationship regarding the distance travelled and the mode of transport used to places where staple food is bought.

5.6 EFFECT OF SLAUGHTERING PRACTICES ON CONSUMPTION PATTERNS

In interviews with respondents the issue of slaughtering emerged as being significant. Some respondents believe in slaughtering chickens for Sunday

dinner, some slaughter to celebrate special occasions, others slaughter in order to share the animal with other people and some respondents slaughter specific animals for funerals or weddings. The slaughtering of chickens is the most common practice and from the statistical analysis it emerged that the chi-square value of 42,03 at the 1% level with two degrees of freedom is greater than the critical value of 9,2. We can therefore reject the null hypothesis and conclude that there is a significant relationship between slaughtering practices and the consumption of chickens for rural as well as urban respondents.

In the case of cattle the frequency of slaughtering is usually around one head of cattle per month. The survey data show that seven respondents slaughter one head of cattle per month, while only one respondent indicated that he slaughtered four heads of cattle per month, but this is due to the fact that he operates an informal butchery. These data do not, however, reflect the slaughtering practices for funerals and weddings.

Table 5. 5: Frequency of animal slaughtering

Animal type	Once per month	Twice	Three times	Four times	Eight times
Chickens	34	12	7	42	4
Sheep	10	None	None	None	None
Goats	8	None	None	1	None
Cattle	1	None	None	7	None

Table 5.5 shows that 34 respondents (22%) slaughter one chicken per month, while 12 (8%) respondents slaughter two chickens per month, seven (5%) slaughter three chickens per month, etc. Out of the total number of respondents, 42 slaughter one chicken four times per month. This implies that every Sunday 42 (27%) respondents eat chicken, as they verbally confirmed. Moreover, the fact that 34 people (34%) slaughter one chicken per month might be attributed to the fact that they are dependent on grants, such as a pension, as some of them verbally confirmed. Table 5.5 indicates that eight

people slaughter at least one goat per month, while one respondent slaughters four goats per month. It should, however, be noted that goats are primarily used for ancestral worship and are not sold in retail butcheries. The practice of slaughtering goats was found mostly in the Malamulele area.

5.7 CONSUMPTION OF TRADITIONAL FOODS AMONGST THE DIFFERENT LANGUAGE AND ETHNIC/CULTURAL GROUPS

The aim of this section is to demonstrate the different names used for similar food items by different ethnic groups. It also mentions some of the food items, especially those obtained from the veld, that are consumed by the different ethnic groups.

Different cultural groups eat food that is unique to a particular culture, as well food that is common in other cultural groups. In certain cases similar food is eaten, but the names used for the food differ.

Some rural areas reflect more types of traditional food that are unique to a particular cultural/ethnic/language group, but this depends on where the area is situated. For example, many kinds of traditional food were found in Malamulele (Gazankulu), indicating that this is a more rural area than the areas where the Northern Sotho and Tshivenda-speaking groups reside.

Table 5. 6: Names of common traditional food products

Indigenous name			Description
Sepedi	Xitsonga	Tshivenda	
1. Kgodu	Tshopi	Thopi	Melon meal made out of melon mixed with mealie meal, salt and sugar
2. Dikgobe	Tihove	Mathuthu	Samp mixed with cowpeas and jugo beans
3. Dinyebu	Dinyuwa	Dzinawa	Green cow peas boiled in their leaves and eaten
4. Maraka	Marhanga	Maranga	Calabash fruit
5. Mageu	Madleke	Mahewu/ Mabundu	Fermented mealie and malt beverage
6. Mafela	Xifaki	Tshikoli	Maize cobs boiled and seasoned with salt
7. Ditotse	Tenwembe	Dzithanga	Pumpkin/Watermelon and melon seed snack eaten after frying
8.Dinhlwa	Tintswa	Ntwa	Large termites, found especially during the rainy season (male reddish and female large and black)
9. Magapu	Khalavatla	Mahabu	Water melon
10. Bjala	Byalwa	Halwa	Traditional African beer made from malt. This term also refers to alcohol.
11. Dinawa	Tinyawa	Nawa	Cow peas (traditional beans)
12. Dinyoba	Matimba	Mphwe	A thin sugar cane planted with summer crops that is chewed for its sugar content
13. Morogo	Muroho	Muroho	Indigenous green leafy vegetable consisting of various kinds of leaves, e.g. pumpkin leaves
14.Sekgotho	Xiedlahivhumo	Tshidzimba	Mealies and dried beans mixed with ground peanuts
15. Ditloo	Tindluwa	Phondla	African ground nut (jugo bean)
16. Ting	Dini	Muthuku	Fermented sorghum porridge – usually eaten hard
17. Mabele	Mavele	Makhaha	Soft sorghum porridge, usually eaten for breakfast
18. Masotja	Maxonja	Mashonza	Mopani worms
19. Ditsie	Tinjiya	Ndzie	Locusts, especially the big ones
20. Mateng	Marhumbu/ Malusi	Mukuvha/ Mala	Offal (intestines, tripe and lungs) of cattle, sheep, goats and poultry
21. Morula	Vukanyi	Mukumbi	Juice or beer made from marulas

Table 5. 7: Traditional foods uniue to the Northern Sotho (Sepedi) speaking group

Name	Description
1. Kgakgaripane	A kind of insect the size of a cockroach, found on acacia trees
2. Letlametlo	A large green frog that appears in summer

Table 5. 8: Traditional foods unique to the Xitsonga-speaking group

Name	Description
1. Xigugu	A type of peanut butter paste eaten as a snack
2. Ximbundzwa	A mixture of flour and mealie meal (dumplings)
3. Xingwimbi	Pumpkin mixed with mealie meal and ground peanuts – a delicacy
4. Xityatyani	A delicacy prepared from immature maize
5. Guxe	An type of indigenous leafy vegetable (morogo) which is slippery and very tasty
6. Xidlamutana	Millet porridge

Table 5. 9: Traditional foods unique to the Tshivenda-speaking group

Name	Description
1. Delele	An indigenous leafy green vegetable (*morogo*) that is smooth and slippery
2. Dovhi	A gravy made from peanuts

The different ethnic groups also gather a number of unique foods from the veld, as can be seen in Table 5.10. Most of the food mentioned in this table was found in Malamulele, and Van Wyk and Nigel (2000) provide useful descriptions, which were used in the above tables. The reason for the large number of wild foods found here is that this area has more forests than the other regions covered by the study. Most of the gathered food is found during the summer. *Makua* as a fruit is only mentioned by Xitsonga-speaking respondents from Malamulele and not by other respondents. It proved to be

virtually impossible to find out the names for this fruit in the remaining two languages.

Table 5. 10: Foods gathered from the veld unique to the Northern Sotho (Sepedi), Xitsonga and Tshivenda-speaking areas

Indigenous Name			Description
Sepedi	**Xitsonga**	**Tshivenda**	
1. Mabilo	Tintoma	Mazwilo	A small pear-shaped wild fruit that becomes brownish when ripe
2. Ditoro	Midoria	Madoro	Prickly pear
3. Marula	Vukanyi	Mafula	Marula
4.	Matswila		Oval-shaped wild fruit that turns brownish to orange when ripe
5.	Makuwa		Fruit of the wild fig tree
6.	Masala		A wild fruit (spiny monkey orange), size of an orange, with small edible seeds, green, turning orange when ripe
7.	Makwakwa		Fruit from black monkey orange
8.	Tinyiri		Bird plume fruit. A tiny sweet fruit, yellow in colour
9.	Tintsengele		Fruit from a small sour plum
10.	Tichuguru		Black-brown fruit from the simple-spined carisa thorn tree

5.8 THE IMPACT OF THE LEVEL OF INCOME ON THE AMOUNT SPENT ON FOOD AND THE FREQUENCY OF FOOD PURCHASING BY RESPONDENTS

In order to find an emerging trend, the relationship between the amount spent on food and the level of income of the respondents was compared. To facilitate analysis, levels of income were re-grouped as the initial grouping's

margin was small, and the same was done in the case of frequency of purchase, therefore no manipulation of figures was necessary. The Chi-Square and ANOVA techniques were used for this purpose.

In the analysis it emerged that the chi-square value of 45,99 at the 1 % level with four degrees of freedom of the calculated statistical value was greater than the critical value of 13,3. The null hypothesis was therefore rejected and it was concluded that there is a significant relationship between the level of income and the amount spent on food.

It was found, using the ANOVA technique, that the P-value for the level of income became less than 0,01, while the frequency of purchasing of food was far less. This means that there is a significant relationship between the amount spent on food and the level of income. There is, however, no significant relationship between the amount spent on food and the frequency of purchase. Both Chi-Square and ANOVA produced the same results.

However, this does not mean that the more money is earned, the more frequently food will be purchased. Furthermore, emanating from the questionnaire, new groupings were created in terms of levels of income, namely Group 1, ranging from R0 to R1 000; Group 2, ranging from R1 001 to R4 000; and Group 3 = >R4 000, and the following emerged:

Table 5. 11: Monthly expenditure on food

Income per month	Average amount spent on food	Percentages
R 200-R1 000	R503	50,3%
R1 001-R4 000	R890	22 %
R4 000-R6 000	R1 071	17,5%

It was found that, on average R503, R890 and R1 071, was spent on food per month by the different income groups. In comparing the three groups, the P value is < 0,01. This means that it was statistically proven that different

income groups spent different amounts on food, i.e. that the level of income will affect the consumption pattern. It also shows that as income rises, more money is spent on food and that, on the other hand, as the income becomes higher, the percentage spent on food becomes smaller and this income is diverted to other items, such as housing, transport and entertainment. The economic interpretation of this is that food is a basic necessity. This confirms existing theory and empirical evidence.

In the analysis of the data on income and the amount spent on food it was found that the level of income is linked with frequency of purchase, as shown in Table 5.12.

Table 5. 12: Classification of income groups in terms of frequency of purchase

Income per month	Average days for major shopping per month	Percentages
R 200 - R1 000	20 - 25	66%
R1 001 - R4 000	5 – 7	16%
R4 000 - R6 000	2 – 3	6%

The levels of income were grouped into three separate groups, as indicated above, and the frequency of purchase was regrouped as Group 1 = daily or once per week or three to four times per week or every second week; and Group two as once per month.

In analyzing the level of income according to the frequency of purchase, the P-value was less than 0,01, making this a highly significant relationship. This means that the higher the level of income of respondents the less often they go shopping for food, as can be seen in Table 5.12.

The highest income group, that is, people earning more than R4 000 per month, prefers buying groceries in bulk once per month in bulk, while the lowest income group shops frequently during the month, sometimes even

daily, as they realize that certain commodities are finished, e.g. sugar (in small quantities), depending on how much money they have available at the particular time. They spend money on what is most important and what is left has to serve to buy other things.

5.9 SUMMARY

This chapter has shown that consumption patterns are affected by various factors and that urban and rural respondents differ as regards their consumption patterns. The role of religion is important in determining consumption patterns and should not be underestimated. For instance, if you want to run a business successfully, you have to know whether you will have ZCC and IPC members as customers, and which food products to stock and what food is grown on the farms.

A similar situation exists with regard to Muslims living in Indian communities, where halal food is eaten. Also, although slaughtering practices have been covered and seem not to affect all animals to the same extent, it is important to be aware of these practices. Moreover, the HIV/AIDS pandemic has led to the increased slaughtering of animals for funerals.

Distance has been found not to have an influence on consumption patterns, but the mode of transport to places where food can be purchased on a large scale does have an influence. It must be recognized that distance could have played a role if there were no shopping malls, but it has been found that malls have been built in Seshego, Malamulele and Venda, so that even in rural areas people are within reach of them.

CHAPTER 6

SUMMARY AND CONCLUSIONS

6.1 INTRODUCTION

This chapter provides a summary of the study and presented its conclusion, as well as making recommendations in terms of further research. In the summary, the objectives of the study are interrogated as to whether they have been achieved. In the case of the non-achievement of specific objectives, reasons are provided.

6.2 SUMMARY

The study was based on the responses of three hundred respondents of the Sepedi, Xitsonga and Tshivenda-speaking ethnic groups, making up the majority of the population of Limpopo. The respondents were further categorized in terms of area of residence (rural and urban). Questionnaires were used to gather information on factors influencing the food consumption patterns of the respondents, followed up by a limited number of interviews with experts for verification purposes. The specific objectives of the study and its findings are summarized as follows:

- To determine whether, in terms of rural and urban communities, the area of residence has an effect on consumption patterns

  The empirical data provided by the study confirmed that there are differences in the consumption patterns of rural and urban communities. This was particularly true in the case of the staple foods (maize, rice and sorghum) as well as bread. However, there was no difference between the rural and urban communities as regards the consumption of vegetables.

- To determine whether religious affiliation has a noticeable effect on consumption patterns, for instance, where this relates to the prohibition and/or encouragement of the consumption of certain kinds of food

  The empirical data confirmed that religion does have an effect on consumption patterns and in the study this was seen to be particularly true in the case of pork, pork products and alcohol. However, religion did not affect the consumption of chicken and beef amongst the different religious groups. The study identified that the ZCC and the International Pentecostal Church have some effect on consumption patterns through the prohibition and/or encouragement of the eating of certain foodstuffs. The traditional African practices, such as ancestral worship, also have an effect, especially on slaughtering practices.

- To determine whether ethnic/cultural groupings have common and/or unique food consumption patterns – particularly when the three main groups, i.e. the Northern Sotho, Tshivenda and Xitsonga-speaking groups, are compared

  The empirical data showed that there were differences in the frequency of consumption of staple foods, i.e. vegetables and meat, among different ethnic groups. The Tshivenda-speaking respondents had the highest consumption of beef and mutton. The reason for this is not known, nor is it known why there are differences in the frequency of the consumption of certain vegetables. One can only assume that the differences in climatic conditions and the availability of food items in these areas account for the difference.

- To determine whether the location of the residential areas with respect to the distance from towns has an effect on the consumption patterns of urban and rural communities

Even though the literature review indicated that the distance from towns does have an effect on consumption, the empirical data showed no differences in the area studied. The reason for this is that the electrification of the rural areas and the building of accessible shopping malls have brought about a change in rural shopping patterns.

- To determine how certain practices, such as slaughtering, affect the consumption patterns of rural and urban communities:

  As regards the issue of slaughtering, the empirical data only confirms the differences in respect of chicken and those between rural areas and urban communities.

  As cattle, sheep and goats are not slaughtered regularly, the differences could not be confirmed. However, the issue of slaughtering needs to be further looked into, especially with regard to slaughtering for funerals and other traditional festivities, such as weddings.

  One more thing that emerged from the data is that income also affects the consumption patterns of both the rural and the urban communities studied.

6.3 CONCLUSIONS AND RECOMMENDATIONS

In conclusion, the issues outlined in the objectives identified at the start of the study have been examined and some insight has also been provided into factors affecting the food consumption patterns of the three main ethnic groups in Limpopo.

Although the study highlighted food consumption patterns, there are other areas that require further research. These are the following:

- *The issue of slaughtering practices:*

  As it emerged from the study that this practice is a reality, further research is recommended on slaughtering, particularly to gather information and facilitate tracing. The reason for this is that sometimes people transport animals from one rural area to another and this could lead to the spreading of infectious diseases, e.g. foot-and-mouth disease.

- *Religion, especially the influence of the ZCC on consumption patterns:*

  It emerged from the study that religion and religious affiliation play an important role in consumption patterns, especially in the case of the ZCC. Further research is therefore needed to look at how the ZCC influences agricultural practices, e.g. the choice of farming practices. For instance, it would be difficult to promote pig farming for poverty alleviation among communities around the ZCC's strongholds. Coupled with this issue, one could perhaps look at how religion influences the adoption of new technologies.

- *The issue of African traditional practices and indigenous foods*

  Even though the issue of slaughtering practices has been highlighted above, it is necessary to establish whether there are other traditional practices that may affect agriculture. The preference for certain indigenous food items, such as cow peas and Mopani worms, needs further research. Even though the Agricultural Research Council has begun to look at the issue of indigenous food, more could be done in terms of the improvement of seeds and the development of cultivars. The introduction of Mopani trees could, for instance, be considered in order to increase the supply of Mopani worms, as could the processing of Xigugu, a snack eaten by the Xitsonga-speaking group,

REFERENCES

AL-KHAHTINI, H., EL-DIN, B., & SOFIAN, E. (1995). Estimating Preference Change in Demand in Saudi Arabia. *Agricultural Economics*, 12:91-98.

BABBIE, E. (1992). *The Practise of Social Research*. (6th Ed). Wadsworth Publishing Company, Belmont, California.

BARKER, R.F. (1983). *Marketing Research*. Reston Publishing Company, Reston, Virginia

BERENSON, M.L. & LEVINE, D.M. (1996). *Basic Business Statistics: Concepts and Applications*. Prentice Hall, Englewood New Jersey.

BILOUKHA, O.O & UTERMOHLEN, V. (2000). Correlates of Food Consumption and Perceptions of Foods in an Educated Population in Ukraine. *Food Quality and Preference*, 11:475-485.

BIRCH, L.L. (1990). Development of Food Acceptance Patterns. *Development Psychology*, 26(4):515-519.

CAMPORESI, P. (1989). *The Magic Harvest (Food, Folklore and Society).* Arnoldo Mondadori Publishers, Spain.

CHIDESTER, D. (1992). *Religions of South Africa.* Routledge, Chapman and Hall, London.

CLARKE, P. & SUTHERLAND, S. (1988). *The World's Religions (The Study of Religion, Traditional and New Religion)*, Routledge Company London, United Kingdom.

COHEN, L. & MANION, L. (1980). *Research Methods in Education* (4th Ed). Routledge, London United Kingdom.

CREMO, A. & GOSWAMI, M. (1955). *Divine nature*. Bhakitivendanta Booktrust, United Kingdom.

DE BOER, M., MCCARTHY, M., COWAN, C. & RYAN, I. (2004). *The Influence of Lifestyle Characteristics and Beliefs about Convenience Food on the Demand for Convenience Foods in the Irish Markets*. *Food Quality and Preferences*, 15:155-165.

DRUM MAGAZINE, 10 January 2002 no 488. Traditional Cleansing for Luck pages 84-85.

EDWARDS, D.R. (1996). *Religion and Power*. Oxford University Press, New York, United States of America.

ERWEEY, J.A. (1982), *Consumer Behavior and Shopping Patterns of Black Households in Port Elizabeth: A Re-appraisal*. Port Elizabeth University (Institute of Planning Research), Port Elizabeth.

GRUNERT, K.G. (2003). Purchase and Consumption: The Interdisciplinary Nature of Analysing Food Choice. *Food Quality and Preferences,* 14:39-40.

HARNETT, M. (2002). Ethnic Diversity Impacts Category Sales*. Frozen Food Age*, 50(10):40-45.

HARTOG, A.P. (1983). *Manual for Social Surveys on Food Habits and Consumption in Developing Countries*. Pudoc, Wageningen, the Netherlands

HEALEY, J.F. (1990*). Statistics: A Tool for Social Research*. Wadsworth Inc. Belmont.

JUNOD, H.A. (1927). The Life of a South African Tribe. *Mental Life,* Vol ii. Macmillan, London.

JUNOD, H.A. (1962). The life of a South African Tribe. Social life, Vol i. Macmillan, London.

KGOWEDI, M.J. (2002). Informal Financial Service in a Peri-urban setting. A Case study of Moletjie District in the Northern Province. Masters thesis. University of Pretoria, Pretoria.

KRIEL, J.D. & HARTMAN, J.B. (1991). *The Cultural Heritage and Development of the Shangana-Tsonga,* Promedia printers (Pty) Ltd, Silverton.

LANCASTER, C. (1991). *Strategic Marketing Planning and Valuation*. Kegan London, United Kingdom.

LEDWABA, M.J. (2000). The Exodus from the Mainline Churches to the African Independent Churches. Masters Thesis. University of Pretoria, Pretoria.

LUBBE, A.J. (1979). An Audience Analysis with Regard to Nutrition guidance Programme: Results of a Base-line Survey in the Ciskei, Human Science Research Council, Pretoria.

MASON, R.S. (1981), *Conspicuous Consumption: A Study of Exceptional Consumer Behavior*. Gower Publishing Company, United Kingdom.

MCCRACKEN, G.D. (1988). *Culture and Consumption: New Approaches to the Symbolic Characteristics of Consumer Goods and Activities.* Bloomington Indiana University Press, Indiana.

MMAKOLA, D.J. (1996). Food Consumption Patterns: The Socio-Economic Change. Masters Thesis. University of Pretoria, Pretoria.

MONTANARI, M. (1994). *The History and Culture of Food.* Blackwell Publishers, Oxford.

MYBURGH, A.S. (1995). Consumer Behaviour of Newly Urbanised Low Income Communities of the Cape Flats. *Agrekon*, Vol 34(4): 260-264.

NORUSIS, M.J. (1990). *SPPS Introductory Statistics Student Guide*. SPSS, Chicago.

PAGLIARINI, E., GABBIADINI, N. & RATTI, S. (2004). Consumer Testing with Children on Food Combination for School Lunch. *Food Quality and Preference*, 15:1-8.

PRESSCOTT, J., YOUNG, O., O' NEILL, L., YAU, N.J.N. & STEVENS, R. (2002). Motives for Food Choice: A Comparison of Consumers from Japan, Taiwan, Malaysia and New Zealand. *Food Quality and Preference*, 13:489-495.

REPORT 326. (2003). Bureau of Market Research, University of South Africa.

ROZIN, P. (1996). The Socio-cultural Context of Eating and Food Choice. In H. Meiselman, and H.J.H. MacFie (Eds), *Food choice, Acceptance and Consumption*. Blackie, London.

SATURDAY STAR, 09 August 2003. Ritual Slaughter at Home to be Legally Controlled, pages 18-19.

SAVADOGO, K. & BRANDT J.A. (1988). Household Food Demand in Burkino Faso: Implications for Food Policy. *Agricultural Economics*, 2:345-364.

SENAUER, B., ASP, E. & KINSEY, J. (1991). Food Trends and Changing Consumer. Eagan Press, Minnesota, USA.

SKERATT, S. (1999). Food Availability and Choice in Rural Scotland: The impact of 'Place". *British Food Journal*, 101(7):537-544.

SOBAL, J. (1998). Cultural Comparison Research Design in Food, Eating and Nutrition. *Food Quality and Preference*, 9(6):385-392.

STAYT A. H. (1968). *The Bavenda*. Frank Cass & Co, London.

STATISTICS SOUTH AFRICA (1996). Publication of Government of South Africa. Government Printers, Pretoria.

STATISTICS SOUTH AFRICA (2001). Publication of Government of South Africa. Government Printers, Pretoria.

TABI, J., HOWARD, W.H. & PHILLIPS, T. (1991). Urbanization and Food Imports in Sub-Saharan Africa. *Agricultural Economics,* 6:177-183.

TERREBLANCHE, M. & DURRHEIM, K. (1999). *Research in Practice: Applied Methods for the Social Sciences*. University of Cape Town Press, Cape Town, South Africa.

THOMAS, J. & SHEIK, N. (1994). Factors Influencing Food Choice among Ethnic Minority Adolescents. *Nutrition and Food Science*, Vol 5: 29-35.

TSHABALALA, P. (2000). Meat Quality of South African Indigenous Goat and Sheep Breeds. Masters Thesis. University of Pretoria

TURNBULL, G.K. (1998). *Urban Consumer Theory*. Adershot Publishers, Avebruiry.

VAN WYK, B & NIGEL, N. (2000). *People's Plants: A Guide to Useful Plants of Southern Africa*. Briza Publications, Pretoria, South Africa.

VAN ZYL, J.C. (1970). An Econometric Analysis of the Consumption Function in South Africa. Doctorate Thesis. University of Pretoria, Pretoria

VAN ZYL, J. (1986). A Statistical Analysis of the Demand for Maize in South Africa. *Agrekon,* 25(3):45-51.

VEECK, A. (2003). Consumer Response to Changing Food Systems in Urban China. *Advances In: Consumer Response,* 30:142-143.

WILLIAMS, T.G. (1981). *Consumer Behaviour: Fundamentals and Strategies*, West Publishing Co., St. Paul.

WRIGHT, L.T., NANCARROW, C. & KWOK, P. (2001). Food Taste Preferences and Cultural Influences on Consumption. *British Food Journal*, 103(5):348-357.

YOUNG, T., ABDALLA, A. & HAMDOCK, H. (1994). Effects of Household Size and Consumption in Rural Households in Matebeleland, South, Zimbabwe. *Agricultural Economics Journal*, 11:335-343.

ANNEXURE A: QUESTIONNAIRE

THE INFLUENCE OF CULTURAL FACTORS ON CONSUMPTION PATTERNS IN THE RURAL AND URBAN COMMUNITIES OF LIMPOPO PROVINCE

A	Respondent	V1		1
B	Area	V2		4

*Please answer the questions by drawing a **circle** (O) around the appropriate number **in a shaded block** or by **writing** your answer in the **shaded space** provided.*

1. PERSONAL PARTICULARS AND DEMOGRAPHIC FACTORS:

1.1 Name:

1.2 Residence:

1.3 Gender:

Male	**1**	V3		6
Female	**2**			

1.4 Age:

V4 | | | 7

1.5 Highest educational standard attained:

V5 | | | 9

1.6 Occupation:

V6 | | | 11

1.7 Marital status:

V7 | | | 13

1.8 Is the **Head of the Household** male or female?

Male	**1**
Female	**2**

V8 | | 15

1.9 Number of household members **usually** living at home and eating from the same pot.

V9 | | | 16

1.10 Area the household lives in

Rural	1	V10		18
Urban	2			

1.11 What is your home language?

Xitsonga	1	V11		19
N.Sotho	2			
Tsjvenda	3			
Other (specify)				

2. LEVEL OF INCOME AND EXPENDITURE ON FOOD

2.1 What is your monthly income?

Under R200	1	V12			20
R200 - R400	2				
R400 - R600	3				
R600 - R800	4				
R800 - R1 000	5				
R1 000 - R1 500	6				
R1 500 - R2 000	7				
R2 000 - R3 000	8				
R3 000 - R4 000	9				
Over R4 000	10				

2.2 How much is spent on food **per month**?

		V13			22

2.3 Who does the food purchasing for the household?

Male	**1**	V14		28
Female	**2**			
Both male and female	**3**			

2.4 Number of Adults with **full-time, permanent** jobs. (Indicate number of Males and Females)

	V15		29
	V16		31

2.5 Number of Adults with **full-time temporary** jobs. (Indicate number of Males and Females)

	V17		33
	V18		35

2.6 Number of Adults with **part-time permanent** jobs. (Indicate number of Males and Females)

	V19		37
	V20		39

2.7 Number of Adults with **part-time temporary** jobs. (Indicate number of Males and Females)

	V21		41
	V22		43

2.8 Number of Adults **without** jobs. (Indicate number of Males and Females)

	V23			45
	V24			47

2.9 Number of Adults **retrenched.** (Indicate number of Males and Females)

	V25			49
	V26			51

2.10 Pension/Child allowance. (Indicate number of Males and Females)

	V27			53
	V28			55

2.11 Amount of money spent per month on food **before** retrenchment, if applicable.

	V29			57

2.12 Amount of money spent per month on food **after** retrenchment, if applicable.

	V30			63

2.13 Where do you buy **most** of your food? (Mark only **one**)

Hypermarket	**1**	V31			69
Supermarket	**2**				
Local shop	**3**				
Spaza shop	**4**				
Café	**5**				
The market	**6**				
A hawker	**7**				
Other (specify)					

2.14 Distance to where **most** of your food can be purchased in kilometres.

0 – 2	**1**	V32	71
3 – 5	**2**		
6 – 8	**3**		
Over 8	**4**		

2.15 Mode of transport to the place where **most** of your food is purchased.

On foot	**1**	V33	72
Animal-drawn vehicle	**2**		
Bus	**3**		
Taxi	**4**		
Own motor car	**5**		

2.16 Frequency of purchasing of **most** of your food.

Every day	**1**	V34	73
Once a week	**2**		
Three to four times a week	**3**		
Every second week	**4**		
Once a month	**5**		

2.17 Who decides what food to buy? (Mark only **one**)

I decide (the person preparing food)	**1**	V35	74
Spouse decides	**2**		
The whole family decides	**3**		
Others (specify)			

2.18 In your choice whether to buy or not, what is your motive of choice? (Mark only **one** column per row)

Product	Quality	Price	Both			
Bread	**1**	**2**	**3**	V36		75
Fresh vegetables	**1**	**2**	**3**	V37		76
Fruit	**1**	**2**	**3**	V38		77
Canned vegetables	**1**	**2**	**3**	V39		78
Frozen vegetables	**1**	**2**	**3**	V40		79

2.19 How often do you eat at a restaurant? (Mark only **one**)

Never	**1**	V41		80
Once per month	**2**			
One to three times monthly	**3**			
More than three times monthly	**4**			

3. URBAN VERSUS RURAL RESIDENCE

3.1 Consumption patterns

Food	Frequency of Consumption		Acquisition				
	Per week	Per month	Self-produced	Bought at store	Bought elsewhere	Brought from **Urban** Area (by migration)	Brought from **Rural** Area (by migration)
Maize meal			**1**	**2**	**3**	**4**	**5**
Rice			**1**	**2**	**3**	**4**	**5**
Sorghum			**1**	**2**	**3**	**4**	**5**
Bread			**1**	**2**	**3**	**4**	**5**

Eggs			1	2	3	4	5
Milk			1	2	3	4	5
Cake			1	2	3	4	5
Dinawa			1	2	3	4	5
Ditloo (groundnuts)			1	2	3	4	5
Dimake (peanuts)			1	2	3	4	5
Canned food			1	2	3	4	5
"Morogo"			1	2	3	4	5
Pumpkins			1	2	3	4	5
Watermelons			1	2	3	4	5
Potatoes			1	2	3	4	5
Tomatoes			1	2	3	4	5
Onions			1	2	3	4	5
Cabbages			1	2	3	4	5
Sweet potatoes			1	2	3	4	5
Beetroot			1	2	3	4	5
Spinach			1	2	3	4	5
Traditional beer			1	2	3	4	5
Samp			1	2	3	4	5

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		V42:81				V43:83								V44-48:86-90
		V49:91				V50:93								V51-55:96-100
		V56:101				V57:103								V58-62:106-110
		V63:111				V64:113								V65-69:116-120
		V70:121				V71:123								V72-76:126-130
		V77:131				V78:133								V79-83:136-140
		V84:141				V85:143								V86-90:146-150
		V91:151				V92:153								V93-97:156-160
		V98:161				V99:163								V100-104:166-170
		V105:171				V106:173								V107-111:176-180
		V112:181				V113:183								V114-118:186-190

		V119:191				V120:193								V121-125:196-200
		V126:201				V127:203								V128-132:206-210
		V133:211				V134:213								V135-139:216-220
		V140:221				V141:223								V142-146:226-230
		V147:231				V148:233								V149-153:236-240
		V154:241				V155:243								V156-V160:246-250
		V161:251				V162:253								V163-167:256-260
		V168:261				V169:263								V170-174:266-270
		V175:271				V176:273								V177-181:276-280
		V182:281				V183:283								V184-188:286-290
		V189:291				V190:293								V191-195:296-300
		V196:301				V197:303								V198-202:306-310

3.2 Do you have livestock? (Animals)

Yes	**1**	V203		311
No	**2**			

If **No**, proceed to **Question 3.7**

3.3 If you have livestock, do you use them for food?

Yes	**1**	V204		312
No	**2**			

If **No**, proceed to **Question 3.7**

3.4 If **Yes**, which do use as food? (You may mark more than one)

Cattle	**1**	V205		313
Chickens	**2**	V206		314
Goats	**3**	V207		315
Pigs	**4**	V208 V209		316
Sheep	**5**	V210	317	

Other (specify)		318

3.5 How often do you use them for food? (Mark opposite each item how often used)

Livestock	Once per week	More than once per week	Once per month	More than once per month	Only on special occasions			
Cattle	**1**	**2**	**3**	**4**	**5**	V211		319
Chickens	**1**	**2**	**3**	**4**	**5**	V212		320
Goats	**1**	**2**	**3**	**4**	**5**	V213		321
Pigs	**1**	**2**	**3**	**4**	**5**	V214		322
Sheep	**1**	**2**	**3**	**4**	**5**	V215		323

3.6 If you have indicated **"only for special occasions"**, explain for which occasions.

Livestock	Explanation of **"special occasions"**			
Cattle		V216		324
Chickens		V217		326
Goats		V218		328
Pigs		V219		330
Sheep		V220		332

3.7 Do you gather food from the veld?

Yes	**1**	V221		334

No	**2**

3.8 If **Yes**, What do you gather? (Name the food you gather and the season in which you gather the food).

Food	Spring	Summer	Autumn	Winter
	1	**2**	**3**	**4**
	1	**2**	**3**	**4**
	1	**2**	**3**	**4**
	1	**2**	**3**	**4**
	1	**2**	**3**	**4**

V222 335
V223 337
V227 341
V228 343
V232 347
V233 349
V237 353
V238 355
V242 359
V243 361

3.9 What **generally** influences your choice of food?

Availability	**1**
Time of preparation	**2**

V247 365

4. RELIGIOUS AND OR CULTURAL AFFILIATIONS

4.1 Foods **frequently** consumed that are unique to your culture. (Name them)

	V248 366
	V249 368
	V250 370
	V251 372
	V252 374

	V253			376

4.2 Frequency of eating **unique** food, if applicable. (Mark only **one**)

Daily	**1**	V254	378
Weekly	**2**		
Monthly	**3**		
Seasonally	**4**		

4.3 Reasons for eating these foods (Mark only **one**)

Not applicable	**1**	V255	379
Availability	**2**		
Strength/Medicinal	**3**		
Culturally enforced	**4**		
Other (specify)			

4.4 Church affiliation (Mark only **one**)

Christian	**1**	V256	380
ZCC	**2**		
Muslim	**3**		
Other (specify)			

4.5 Meat **prohibited** from eating (Mark where applicable)

Pork	**1**	V257	381
Red Meat	**2**	V258	382
Fish	**3**	V259	383

Chicken	**4**	V260		384
Other (specify)		V261		385

4.6 Food or other products **prohibited** from eating or partaking of (Mark where applicable)

Pork products	**1**	V262		386
Tobacco	**2**	V263		387
Traditional beer	**3**	V264		388
Other beer	**4**	V265		389
Other (specify)		V266		390

4.7 Food **encouraged** or prescribed to eat (name them)

	V267		391
	V268		393
	V269		395
	V270		397

4.8 What foods and drinks **may not be consumed** during religious festivals or on other special occasions?

	V271		399
	V272		401
	V273		403
	V274		405
	V275		407
	V276		409

4.9 What kinds of food and drink **are used** or **suitable** for religious and other special occasions? Name and state the frequency of these occasions yearly.

	V277			411
	V278			413
	V279			416
	V280			418
	V281			421
	V282			423
	V283			426
	V284			428
	V285			431
	V286			433

4.10 Please indicate what **meat**, **poultry** and/or **fish** you eat by completing the table below as fully as possible.

Meat	Frequency of Consumption		Acquisition				
	Per week	Per month	Self produced	Bought at store	Bought elsewhere	Brought from **Urban** Area (by migration)	Brought from **Rural** Area (by migration)
Beef			**1**	**2**	**3**	**4**	**5**
Beef offal			**1**	**2**	**3**	**4**	**5**
Cooked beef			**1**	**2**	**3**	**4**	**5**
Mutton			**1**	**2**	**3**	**4**	**5**
Mutton offal			**1**	**2**	**3**	**4**	**5**
Cooked mutton			**1**	**2**	**3**	**4**	**5**
Venison			**1**	**2**	**3**	**4**	**5**
Goat			**1**	**2**	**3**	**4**	**5**
Pork			**1**	**2**	**3**	**4**	**5**
Polony			**1**	**2**	**3**	**4**	**5**
Viennas			**1**	**2**	**3**	**4**	**5**

Russians			1	2	3	4	5
Mopani worms			1	2	3	4	5
Cooked Meat			1	2	3	4	5
Chicken			1	2	3	4	5
Chicken heads and feet			1	2	3	4	5
Chicken offal			1	2	3	4	5
Cooked chicken			1	2	3	4	5
Poultry			1	2	3	4	5
Cooked poultry			1	2	3	4	5
Fresh fish			1	2	3	4	5
Tinned fish			1	2	3	4	5
Cooked fish			1	2	3	4	5
Other (specify)			1	2	3	4	5
Other (specify)			1	2	3	4	5
Other (specify)			1	2	3	4	5

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V287:436	V288:438	V289-293:441-445							
V294:446	V295:448	V296-300:451-455							
V301:456	V302:458	V303-307:461-465							
V308:466	V309:468	V310-314:471-475							
V315:476	V316:478	V317-321:481-485							
V322:486	V323:488	V324-328:491-495							
V329:496	V330:498	V331-335:501-505							
V336:506	V337:508	V338-342:511-515							
V343:516	V344:518	V345-349:521-525							
V350:526	V351:528	V352-356:531-535							
V357:536	V358:538	V359-363:541-545							
V364:546	V365:548	V366-370:551-555							
V371:556	V372:558	V373-377:561-565							
V378:566	V379:568	V380-384:571-575							
V385:576	V386:578	V387-391:581-585							
V392:586	V393:588	V394-398:591-595							
V399:596	V400:598	V401-405:601-605							
V406:606	V407:608	V408-412:611-615							
V413:616	V414:618	V415-419:621-625							
V420:626	V421:628	V422-426:631-635							
V427:636	V428:638	V429-433:641-645							
V434:646	V435:648	V436-440:651-655							
V441:656	V442:658	V443-447:661-665							
V448:666									
V449:668	V450:670	V451-455:673-677							
V456:678									
V457:680	V458:682	V459-463:685-689							
V464:690									
V465:692	V466:694	V467-471:697-701							

4.11 Do you practise self-slaughtering of animals for meat?

Yes	**1**	V472		702
No	**2**			

4.12 If you have answered "**Yes**" to **Question 4.11** above, which of the following do you slaughter and where do you acquire them?

Self-slaughtered meat	Frequency of Consumption		Acquisition				
	Per week	Per month	Self-produced	Bought at store	Bought elsewhere	Brought from **Urban** Area (by migration)	Brought from **Rural** Area (by migration)
Cattle			**1**	**2**	**3**	**4**	**5**
Sheep			**1**	**2**	**3**	**4**	**5**
Pig			**1**	**2**	**3**	**4**	**5**
Goat			**1**	**2**	**3**	**4**	**5**
Chicken			**1**	**2**	**3**	**4**	**5**
Other (specify)			**1**	**2**	**3**	**4**	**5**
Other (specify)			**1**	**2**	**3**	**4**	**5**
Other (specify)			**1**	**2**	**3**	**4**	**5**

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		V473:703				V474:705								V475-479:708-712
		V480:713				V481:715								V482-486:718-722
		V487:723				V488:725								V489-493:728-732
		V494:733				V495:735								V496-500:738-742
		V501:743				V502:745								V503-507:748-752
		V508:753												
		V509:755				V510:757								V511-515:760-764
		V516:765												
		V517:767				V518:769								V519-523:772-776
		V524:777												
		V525:779				V526:781								V527-531:784-788

4.13 Are animals that are slaughtered (except chickens) registered with the local Department of Agriculture?

Yes	**1**	V532		789
No	**2**			
Not sure	**3**			

Thank you for your participation in this study