

**IMPACT OF VEGETABLE SALES ON HOUSEHOLD INCOME OF HAWKERS IN THE
LIMPOPO PROVINCE OF SOUTH AFRICA**

by

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DEDICATION

This thesis is dedicated to my two lovely little sisters, Nyathela and Shiluva Mthombeni who always look up to me as a big sister. This one is for you girls.

DECLARATION

I, Mthombeni Danisile Leonah, declare that "IMPACT OF VEGETABLE SALES ON HOUSEHOLD INCOME OF HAWKERS IN THE LIMPOPO PROVINCE OF SOUTH AFRICA" is my own work and all the sources that I have used or quoted have been indicated and acknowledged by means of complete references.

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ABSTRACT

This study focused on the impact of vegetable sales on household income of hawkers in the Limpopo province. A stratified sampling technique was used. The population of hawkers was selected from the five district municipalities of the province. Three major towns from each district were randomly selected for 366 questionnaire administration. Multiple regression analysis (linear, semi-log and double-log) was used to determine the impact of vegetable sales on the household income of hawkers.

The outcome of the study revealed that, nine independent variables had a significant impact on the vegetable sales of hawkers when the linear regression model was applied. On application of the semi-log regression, 11 independent variables had a significant impact on the vegetable sales. Ten independent variables had a significant impact on vegetable sales when considering the double-log regression. The cross tabulation of total sales according to districts showed that an average of 1.6 respondents earned less than R200 which is close to, but lower than R174 which is the poverty line measure in South Africa.

The study showed the degree of significance of different variables that have an impact on hawkers' vegetable sales. Vegetable hawkers generate enough income from their sales to live above the poverty line. The recommendation was that the local municipalities should build new markets and improve the infrastructure of existing markets, and also provide proper sanitation and clean water to avoid unhygienic situations in hawkers' markets.

Key words: Hawkers, street vendors, informal traders and Limpopo province.

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LIST OF ACRONYMS

FAO	Food and Agricultural Organization
GDP	Gross Domestic Product
GHA	Gauteng Hawkers Association
ITMB	Informal Trade Management Board
KZN	KwaZulu-Natal
NGOs	Non-government Organizations
OLS	Ordinary Least Square
SA	South Africa
SEWA	Self-employed Woman Association
SPSS	Statistical Package for Social Sciences
UNDP	United Nation Development Program
WIEGO	Women in Informal Employment: Globalizing and Organizing

CHAPTER 1

INTRODUCTION

1.1 Background

Street hawking usually falls within the category of informal economic activities (Bromley, 2000; Mitullah, 2004; Bhowmik, 2005; Skinner, 2008; Muzaffar *et al.*, 2009). The urban poor are typically involved in street hawking activities and they contribute significantly to informal employment (Kebbed, 2004). It is impossible to talk about street hawking or vending without including the informal market or economy. According to Hodgson *et al.* (1997) hawking is an economic and physical reality. The face of cities has changed from formal urban to one where the formal and informal interact and need to co-exist in harmony. The informal food sector exists in all countries of the world and has continued to flourish even when the state opposed it and denied autonomy and income to a wide variety of families in economic difficulties. It is therefore unlikely to disappear. Many consumers appreciate the convenience of purchasing food from informal vendors or hawkers, including the urban poor, office workers and tourists (FAO, 2007). Street vendors or hawkers are part of the informal sector of the national economy which has grown rapidly because of the excessive increase in unemployment, low and decreasing incomes of the majority of the population and the lack of appropriate employment training programmes (Zetter, 2006).

According to Jhabvala *et al.* (2003), street hawkers are a category of informal workers that are difficult to monitor and measure, as they engage in selling without being registered. Bhatt (2006) stated that it is difficult to estimate the number of street

hawkers because they are mobile and driven by market needs. In the Limpopo province the proportion of informal employment is greater in the agricultural industry than in the non-agricultural industry. The largest category of hawkers are those selling agricultural products, 38.2 percent sell vegetables and fruit, compared to non-agricultural hawkers who sell products such as shoes, clothing and carpentry (Baloyi, 2010). The large number of agricultural hawkers can be attributed to high food prices in regular shops or supermarkets while hawkers sell food at lower prices (Andreassen & Tribhuwan, 2003). According to Kwabena and Kwame (2011), nearly 49 percent of the economically active people in Limpopo are unemployed, and 33 percent of the employed are in the informal sector which includes informal trading of agricultural products or hawking. Kwabena and Kwame (2011) further state that the main farming enterprise in Limpopo province is vegetable production, contributing an average of about 22 percent to the gross income. Agricultural hawkers are mainly found selling their vegetables at taxi ranks, railway stations, shopping malls, football stadia and even at busy intersections all across the province.

In this study, the terms “hawkers” and “street vendors” have the same meaning. Bhowmik (2005) uses these two terms interchangeably in his study of street vendors in Asia. A hawker is a person who sells any article in any public place or on any street, whether it is for human consumption or not. They normally converge in front of municipal markets, around schools, railway stations, hospitals and gardens, at traffic junctions and commercially congested areas (Andreassen & Tribhuwan, 2003). In a study of retail markets planning, Tracey-white (1995) defines hawking as a retail activity of undifferentiated open sales spaces by individuals in the street or roadside markets,

common in both rural and urban areas. She further states that the agricultural hawker's market is usually located at a critical point in the overall marketing, transport and passenger movement system. According to Bhowmik (2002) a hawker is a person who offers goods for sale to the public without a permanent built-up structure from which to sell. Hawkers may be stationary in the sense that they occupy space on pavements or other public spaces. They may be mobile in the sense that they move from place to place by transporting their wares on push carts or in baskets on their heads. Tissington (2009) further defines hawkers as people selling goods or services on the street, on pavements, or in public spaces. In rural areas and many urban areas hawking is considered as the main link between agricultural producers, hawkers and customers. Informal hawkers qualify as retailers, because they operate mainly from vehicles and also deliver to small retailers such as spazas (spazas are informal convenience shop business in South Africa, usually run from home) and to the end-consumers (Cant *et al.*, 2007).

Hawkers are found everywhere in cities, in small market places as well as in side streets. According to FAO (2001), hawkers' main characteristic is to set up temporary stalls in busy streets around public markets during certain times of the day. Hawkers usually operate at a fixed and regular location, mainly using portable equipment, umbrellas and tent-type stalls. Another characteristic is that they transport fresh vegetables in boxes from the wholesale markets to the street marketing areas using motorcycles, taxis, public transportations, private cars and vans. They shout at the top of their voices to attract customers to their selling points, some of them get creative with calls and rhyme them in a comical way. They are also characterized by limited

educational and professional training. Their business either involves walking or remaining stationary, and working for very long hours (Asiedu & Agyei-mensah, 2008). According to Motala (2008), the socio-economic characteristics of street hawkers are that they are generally between the ages of 25 and 49. A high proportion of street hawkers are women and the male hawkers tend to be younger than women. Other characteristics of street hawkers according to Jensen (2003) are that the hawkers lack skills and education necessary to find formal sector employment and that the hawking business is dominated by women. In a study of women street vendors, Muiruri (2010) states that a discussion of street hawkers or vendors cannot be exhaustive without reference to the informal economy. Muiruri (2010) also states that labour intensive, low fixed cost, non-payment of taxes and easy entrance and exit in the market are some characteristics of hawkers in the informal economy.

Many reasons contribute to vegetable street hawking in spite of the difficult working conditions. The need to meet financial obligations such as providing food, paying rent and school fees could be one of the reasons why people engage in street hawking or vending. Lack of formal employment could be another reason why people are forced to seek informal employment as street hawkers. The lack of skills could result in an inability to secure employment in the formal sector, hence people may resort to street hawking when there are no other means of earning a livelihood. Another characteristic of street hawkers is that they possess low educational skills (Renner & Pegler 1997; Jensen, 2003; Mitullah, 2004; Saha, 2011). However, Austin (1994) states that hawkers have a certain skill which involves an ability to negotiate transactions with customers.

The agricultural hawking market is dominated by women who are married and who support large families (Cummins & Harvey, 1996; Mitullah, 2003). The marketing of the vegetables differs according to gender in terms of the range of products they sell and the value of the products. Women handle over 30 different vegetables ranging from valued vegetables, such as carrots, beans and sweet peppers to lesser-valued items such as okra and seasoning. Male hawkers on the other hand, handle mostly fewer vegetable varieties (Cummins & Harvey, 1996). However, Bhowmik (2005) states that the income of women hawkers is lower than that of their male counterparts. This is because most of the women hawkers belong to families that were poorer than those of male street hawkers, so they had less to invest in their business. Another reason was because women hawkers could not spend as much time on their work as the male hawkers because they had to take care of their homes as well. Vegetables sold by agricultural hawkers in the province are many and varied. The common ones are potatoes, sweet potatoes, tomatoes, sweet corn, tomatoes, peas, beans, onions, cabbage, lettuce, spinach, and other indigenous vegetables such as okra found in the province. The vegetables offered for sale are definitely better priced than in stores and fresher. According to Bhowmik (2005) hawkers offer the same quality in nutrition and the same quantity of agricultural products any retail store can offer but at a lower price. Bhowmik (2002) stated that consumers benefit the most from street vendors or hawkers because consumers are able to get their daily necessities at reasonable prices and at convenient locations.

The profit margins of street hawkers depend on the size of their business, the location of their business, and the commodities they are selling (Mitullah, 2004). The main role

of agricultural hawkers' market is the delivery of products from the source to the end-consumer at an acceptable price. This requires taking the vegetables from the supplier who can also be a hawker or farmer to the ultimate user in a form and quality acceptable and demanded by consumers. In all these processes the hawker will be involved in several transactions and logistics involving purchase, movement of products, storage and distribution.

The hawking business holds the potential to alleviate poverty. Hawking activities need to be seen as a development process for individuals in entrepreneurship and support could be given to groom those groups of business operators to upgrade themselves (Kartik & Srikanta, 2007).

Consumers prefer hawkers because they provide services at convenient places. Hence a lot of time is saved in making purchases. They feel that hawkers near their homes and near the railway stations are most convenient for them. In fact, consumers from the middle-income groups find vendors near railway stations the most convenient because they can buy their necessities when returning home from their offices and this saves them time. People purchase vegetables, fruit and other items for home use while returning home from work (Austin, 1994; Bhowmik, 2002).

1.2 Motivation and problem statement

The Limpopo province is endowed with abundant agricultural resources, and it is one of the country's prime agricultural regions noted for the production of fruit and vegetables. The high agricultural production potential in the province leads to an apparent surplus,

especially of vegetables and fruit (Oni, *et al.*, 2003). Agricultural production in the province provides food to the province's population thus ensuring food security, and it also provides employment on commercial farms and agricultural trade sectors in the province.

Street hawkers provide services and goods to the middle and lower-middle class urban population. Therefore, efforts are being made to recognize street hawking as a job to earn a living (Singh *et al.*, 2010). Published studies on hawkers by Renner and Pegler (1997), Holness *et al.* (1999) and Chandle (2002) state that very little is known about the informal trading of South African hawkers, particularly those owned or run by black entrepreneurs in the traditionally black environment (economic, legal, political, social and cultural) in which they operate. Ngiba *et al.* (2009) state that the informal sector in South Africa plays an important role in the overall economy, but it is not well understood. However, Amenya (2007) states that the hawking of vegetables is one of the leading issues in economic development. Mitullah (2003) states that even economists lack adequate understanding of street hawking and coverage in economic measurement in the country. There may be legal rules which are not adhered to in hawkers' markets, such as municipal regulations. Hawkers are actively discouraged in many countries because they are hazardous to the traffic (FAO, 1989; Hodgson *et al.*, 1997; Chen *et al.*, 2004; FOA, 2007). Lack of trading or selling space is one of the problems affecting hawkers' sales (Hodgson *et al.*, 1997; Burnett, 2007; Parker & Sommer, 2011) because they are mainly removed from streets, and accused of not contributing much to the overall marketing system and the economy as a whole.

Table 1: Poverty shift by South African provinces

PROVINCES	HEAD COUNT RATE		POVERTY GAP RATIO	
	1995	2005	1995	2005
Western Cape	9.41%	9.46%	2.40%	2.80%
Eastern Cape	49.80%	28.98%	19.88%	8.53%
Northern Cape	33.93%	28.25%	11.32%	8.48%
Free State	45.32%	15.57%	19.16%	4.27%
Kwazulu-Natal	31.49%	33.13%	11.67%	11.41%
North West	40.48%	23.85%	15.27%	7.84%
Gauteng	6.52%	6.64%	2.02%	1.71%
Mpumalanga	34.17%	28.13%	11.71%	9.20%
Limpopo	40.52%	34.04%	16.42%	10.65%
Total	30.92%	22.68%	11.77%	7.15%

Source: www.Thepresidency.gov.za . [Accessed 13 June 2012]

Although they experience hard times with their markets hawkers still insist on selling even when they are discouraged. The sales of vegetables at hawkers' markets are assumed to be very low. Burnett (2007) states that hawkers rely on informal sources of credit or money-lenders to enable them to establish their hawking businesses and are charged exorbitant interest rates while their businesses rarely grow beyond subsistence level.

1.3 Aim of the study and objectives of the study

The aim of this study is to investigate whether the vegetable sales in hawkers' markets have an impact on household income generated at these markets. The study enables an understanding of how the agricultural hawkers' market and the marketing channels involved operate. It also determines whether the household income made from the sales of vegetables in the agricultural hawkers' market is above or below average and explores other socio-economic characteristics of the agricultural hawkers' market in the Limpopo province of South Africa.

1.4 Specific objectives

In order to achieve the aim of the study, the following objectives are set:

- (i) Investigate factors that contribute to vegetable sales by hawkers.
- (ii) Determine whether vegetable hawkers make enough from their sales to live above the poverty line.
- (iii) Propose different ways that vegetable sales could be enhanced to contribute to household income.

1.5 Limitations of the study

The investigation was limited regarding certain aspects for particular reasons. The primary source of data was based on answers and figures given by the vegetable

hawkers. Some of the vegetable hawkers were not willing to reveal the amount of money they received from their sales, and those who were willing were sometimes unable to give an accurate figure of their various costs because they did not keep records of sales. Hawkers approximated the average amount they made. It was difficult to administer the questionnaires in their sales areas (taxi ranks, railway stations and town streets), due to the high noise level in these areas. The interviewers often had to interrupt their interviews because of the volume of the noise which made the interviews last longer than expected. Most mobile hawkers were not interested to stop and complete the questionnaires. The questionnaires used to obtain results in this study have fewer mobile respondents than stationary respondents. The questionnaires were prepared in English and most of the street hawkers were illiterate; in most cases translations of the questions into their own languages was needed in order to complete the questions.

1.6 Outline of the study

Chapter 1 provides the background to the operation of street hawkers in the market. It also provides the motivation for the study. It further gives the limitations of the study and the research objectives of the study.

Chapter 2 focuses on the literature review of street hawking in international countries, African countries and South Africa. The chapter outlines the challenges vegetable hawkers meet in their day to day hawking activities together with the positive features of

hawking. The types of vegetable hawkers sell the growth of hawking as a business and the marketing strategies involved are also discussed.

Chapter 3 outlines a brief overview of the area in which the study took place. It outlines the research methodology, sampling methods and data collection methods employed. It further provides the econometric models used in the study.

Chapter 4 investigates the impact of vegetable sales on household income of hawkers. It also provides the results of the study in the form of descriptive statistics (tables) and discussions.

Chapter 5 summarizes, concludes and makes recommendations based on the findings of the study.

CHAPTER 2

LITERATURE REVIEW

Millions of people worldwide make a living selling goods on the street (Skinner, 2008).

2.1 Introduction

Hawkers are the main distribution channels for a large variety of products of daily consumption such as fruits and vegetables (Arora & Taore, 2010). The majority of street hawkers are illiterate and only few have primary education. This indicates that they tend to take up the hawking activity as a last resort to make a living (Arjun, 2008). Street hawkers survive not merely because hawking is an important source of employment, but because of the services it provides to the urban population (Bhowmik, 2005; Timalina, 2011).

This chapter explores literature on the topic of hawking. It looks at the growth of vegetable hawking activities in the economy worldwide, the types of hawkers in the market and the income generated through hawking activities. The marketing channels employed by vegetable hawkers, the credit accessibility and the challenges hawkers face in the market are also discussed.

2.2 Growth of vegetable hawking activities in the economy

The informal economy has experienced a rapid growth in developing countries and has consequently attracted increasing attention from academics, researchers, social development activists, and policy planners. It is generally believed that the rapid growth

of the sector has been influenced by increasing unemployment (Timalsina, 2011). Hawking is a way out for the unemployed, and many people take up hawking as a means of making a living (Simopoulos & Bhat, 2000). According to Lubell (1991) street hawking will continue to draw entrants as long as other sources of urban employment lag behind population and labour force increases. With the population in townships expanding due to natural growth and rural-to-urban migration the demand for fresh vegetables is on the rise. Producers respond by shifting their crops to vegetables that have a higher market value. Brimley (2000) states that street hawking is growing at a tremendous rate and that it reflects some structural change or defect in the economy as a whole. The rapid increase in street hawking is attributed to factors such as the economic crisis, mass unemployment and the growth of the informal sector.

Street hawking as an informal economic activity has attracted intense scholarly research in recent years and this interest is largely due to the significant increase in the number of street hawkers and the problems they pose to the public space (Asiedu & Agyei-mensah 2008). Manganga (2007) states that globally, millions of people earn their living by selling goods and services on the streets. In South Africa, the number of people working in informal enterprises has been on the increase. However, it is not possible to determine the exact number of hawkers (Mitullah, 2003; Skinner, 2008). Mitullah (2004) further states that estimating the number of street hawkers or vendors is not easy due to the nature of their operation. Their numbers vary depending on the time of day or the season of the year. Some hawkers work part-time, only selling in the morning, afternoon, or evening, while some sell only on weekends and others sell only during certain seasons. All these pose a challenge to estimating the number of hawkers

operating in the country. Muzaffar *et al.* (2009) give another reason why the exact number of street hawkers is unknown, namely that many street hawkers are itinerant, moving from one place to another. According to Banik (2011) almost four fifths of the total global population are informal workers which include street hawkers, but they are not regarded as “real” workers as an employer-employee relationship cannot be established. There is no systematic documentation on the number of street hawkers; they increase when jobs in the formal sector decline and unemployment rises (Bhowmik, 2002).

The street hawkers’ products play an important socio-economic role in terms of employment potential and income and they offer their products and services at prices affordable to the lower and middle-income groups (Muzaffar *et al.*, 2009; Singh *et al.*, 2010). Cohen *et al.* (2000) state that street hawking or vending is one of the readily accessible avenues of employment open to whoever needs to earn a living. They further state that hawking activities benefit low-income customers, as it is more cost-effective and time-effective for them to purchase vegetables and other products from the street hawkers. Hawking is an economic activity that depends on small local producers and numerous buyers from poor and middle income groups (Saha, 2011). According to Freudenberg *et al.* (2006) in their study on public health, hawking of fruit and vegetables is viewed as a good practice, because it enables different classes of people to have access to a variety of affordable nutritional food. Bhatt (2006) stated that the middle class enjoys buying fresh produce at low prices from hawkers. Though there is a good deal of competition among street traders and hawkers which may relieve a surplus, but not the satisfaction of the shops consider it as an encroachment on their legitimate trade

(Hermann, 2001). According to Saha (2011), most hawkers sell vegetables because the profit margins from vegetables selling are higher compared to those from other products, and it requires low investment compared to other activities.

Street hawking is a time-consuming and physically demanding occupation but helps poor and rural families to assemble a living wage (Lincoln, 2008). It has been argued that street hawking attracts those who have limited opportunities to obtain formal employment or prestigious businesses, but still, it is increasingly becoming an option for many citizens (Mitullah, 2003). The lack of gainful employment coupled with poverty in rural areas has pushed people out of their villages in search of better existence in the urban areas. Because these people lack skills they engage in informal businesses such as hawking of fruit and vegetables (Bhowmik, 2005). Most street hawkers start their trade because there is no other source of income and employment (Mitullah, 2003). According to Bhattacharyya (2001), hawking helps to make ends meet for the urban poor. It is also important to mass consumer goods companies as a means to dispose of products, often through cash or consignment sales from the stores. The people who start out as street hawkers or vendors do not do so with the idea of remaining on the street forever, but with the intention of moving at some point to markets away from the public thoroughfare in order to conduct their activities under better conditions (De Soto, 2002). Gibbon (1995) stated that hawkers do not make big profits, but are assured of some income at the end of the day. However, Austin (1994) states that most street hawkers are not worried about expanding the business; they are worried about simply staying in the business. Most agricultural hawkers who sell vegetables on the streets are farmers or market-gardeners acting as their own distributors, they either sell from a

shop or a stall in the retail market or by hawking produce from house to house (Hermann, 2001). Most of the sales of vegetable occur through street hawking, small shops and open-air markets and not through supermarkets, because most people do not have the transport required to travel to centralized outlets and therefore prefer to buy on their doorsteps from hawkers (Maxwell & Slater, 2004). The vegetable hawkers participate in all aspects of marketing, from sourcing of market information on products and prices, to preparing commodities for sale, negotiating, transacting of sales, transporting of produce to the market place, displaying, promoting and the actual selling. The hawkers' knowledge of the dynamics in the market provides them with the necessary tools to maximize their income, and gives them the information necessary for production planning (Cummins & Harvey, 1996). Although many hawker businesses operate at the lower end of the spectrum of economic activities, the income derived is crucial for providing in basic household needs, and also offers the best potential for creating and strengthening a solid base of dynamic hawker businesses. Lubell (1991) describes street hawkers as having residual occupations with marginal and sub-marginal income. Hawkers sell their products at low a cost to low and medium income consumers contributing to the viability of cities worldwide and also provide products in a timely manner and at convenient locations (Austin, 1994; Muiruri, 2010).

Hawkers operate in traditional public markets or on the streets, also known as wet markets due to the usual lack of infrastructure. The markets are often muddy and dirty, which raises questions about the safety of the produce sold in these markets (Shackleton *et al.*, 2009). In the traditional public market, demand and supply are continuously unmatched due to seasonal and uncoordinated production. The

relationship between the suppliers and hawkers are often temporary (Bezemer, 2006). With time and urbanization, many changes have gradually taken place. The development of technology has also impacted on the vegetable hawking system. Traditional hawking consisted of moving from place to place selling or exchanging goods or services, and was mainly practised in rural areas where hawkers moved from village to village selling their products. Modern hawkers carry out their business in one spot. They have become stationary using permanent stands on town pavements and in hawkers' markets and carry out their businesses in the urban metropolitan cities (Andreassen & Tribhuvan, 2003).

The income of street hawkers depends on the products they sell and at which location they sell (Saha, 2011). According to Bhowmik (2010) the hawker's income and the investment are low. Hawkers do not require special skills or training to carry out their business, and that is the reason why street hawking is the easiest form of earning a livelihood. Depending on their location, hawkers get their supply of vegetables from various sources, including fresh produce markets, fruit and vegetable wholesalers and farms. Hawkers are not loyal to particular suppliers, they go to whoever gives them the best deal, and they always move between suppliers in search of lower prices (Van Rooyen *et al.*, 1997). Hawkers purchase their products in loose form or packed in sacks or bags, and the products sold to the final consumers are generally bundled up.

Common places where hawkers' buy vegetables are farm gates, along the streets or at public gathering places (Shackleton *et al.*, 2009). According to Ngiba *et al.* (2009) street hawkers who buy produce directly from the farms do so in collaboration with each other. Typically they hire bakkies that will take them there and back, or use minibus taxi

services to travel to their suppliers. Ngiba *et al.* (2009) further add that hawkers prefer buying their stock from farmers since the purchasing value of the stock is low and the produce is fresh. Vegetable street hawkers are not only selling their products on the street, but are also gaining experience and insight. While they are busy selling their vegetables they observe what other products are sold. They see other, apparently more prosperous, hawkers working in the same location each day. They learn from more experienced hawkers and swap the experiences with others who have also just started and by doing so they discover that the street is the school where one learns what products are needed and the value attached to such products (De Soto, 2002).

In some countries, control over hawking is done by licensing restrictions which involves that a small trader is required to apply for a license. Hawkers selling from designated markets require a market-stall ticket only at the time they are trading and this licensing system is used to control the number of hawkers. Restricted hawking areas in a city can be an attempt to control the location of hawkers by defining areas from which they may or may not operate (Dewar & Watson, 1990). A study done in India by Arjun (2008) states that hawkers are imposed heavy fines and harsh punishment if found without licenses or contravening regulations.

Most of the street hawkers come from the rural areas in search of better paid jobs in the urban areas. They become street hawkers because hawking is one of the easiest means of earning a living as it requires minor financial input (Saha, 2011). Food hawkers are the main trade group and largely depend on non-shop outlets, and within this group fruit and vegetables play the most important part (Hermann, 2001). According to Bhowmik (2010) a large section of street vendors in urban areas are those with

limited skills, who have migrated to the larger cities from rural areas or townships in search of employment. In a published study of services provided for street-based traders Mayrhofer and Hendriks (2003) findings were that 98 percent of South Africans sample surveyed stated unemployment as the primary motivation for starting up hawking or informal businesses. Bromley (2000) states that street hawkers contribute directly to the overall level of economic activity and to the provision of goods and services even though the income distribution of street hawkers is highly skewed and only a few hawkers have high incomes. Skinner (2008) also states that individual incomes of hawkers are often low, but research demonstrates that cumulatively those activities are worth a lot of money. Budlender *et al.* (2001) estimate that the informal enterprises including hawking contributed between 8 and 10 percent of GDP (Growth Domestic Product) in South Africa.

The hawkers' markets consist of a mass of consumers who welcome their accessibility and inexpensive goods (Nirathron, 2006). As cities expand, residential areas are also important domains for street hawkers, particularly those selling daily needed products such as fruit and vegetables (Cohen *et al.*, 2000). According to Saha (2011), hawkers play a dynamic role in the economy, providing necessary items, which are largely both durable and cost-effective. Street hawking is seen as one of the options for supplementing a living in the face of increasing poverty (Bhowmik, 2005; Asiedu & Agyei-mensah, 2008; Simopoulos & Bhat, 2000). According to Simopoulos and Bhat (2000) hawking has become a major business activity due to its profits which can be ten times the region's minimum wage in some countries.

2.3 Hawkers' organizations and associations in South Africa

Street hawking is very common in South Africa and it falls under the informal employment sector. In 2000, it was estimated that there were up to 500 000 street hawkers nationwide. Over 70 percent deal in food and not fewer than 70 percent were women (Motala, 2008). Hawkers' organizations can be found in cities worldwide. Some hawkers are organized according to the urban space in which they sell their goods, such as a particular block, market or area. Other hawkers may be organized according to the products they sell (Motala, 2008). However, the majority of street hawkers do not belong to any street hawking organizations or associations, while others belong to several associations with no relationships. The majority of street hawkers work in isolation and have no knowledge of associations that address their hawking issues (Mitullah, 2004).

Most hawking organizations play different roles, such as assisting the hawkers in securing a space on the street to sell their goods, helping hawkers to access credit and savings mechanisms and upgrading their skills (Motala, 2008). In South Africa, KwaZulu-Natal (KZN) province has the highest number of hawkers, with 19 301 street hawkers operating in the Durban area alone (Skinner, 2008). Informal Trade Management Board (ITMB) was formed in Durban in 1995. Its objective was to create a united voice of street hawkers who would engage with local government authorities, to improve working conditions and address problems they experienced. Gauteng Hawkers' Association (GHA) was established in 1992. Its objectives were to empower hawkers by training them and opening opportunities for them to grow in their trade and to develop a

code of conduct that would enhance the image and confidence in the hawking industry (Motala, 2008).

According to Mitullah (2004), South Africa has a strong culture of workers' organizations. It is, however, difficult to organize street hawkers partly because most street hawkers earn just enough to feed their families, and are therefore reluctant to take time to attend meetings. Because many hawkers work long hours and generate little income, they find it difficult to devote time to their organizations. Some organizations struggle to build durable democratic institutions where everyone's voice can be heard (Motala, 2008).

2.4 Quality of the vegetables sold by hawkers

In developing countries, public markets and street hawkers are the main outlets for fresh vegetables. Hawkers offer wide varieties, qualities and prices on vegetables (Bezemer, 2006). Hawkers provide nutritious vegetables to their customers at affordable prices (Bhowmik, 2005; Muzaffar *et al.*, 2009). According to Jongen (2002), the quality of fresh vegetables needs to be taken into consideration before a hawker or any seller can put products on the market. Quality criteria include: appearance of the vegetables, which is the key factor for consumers when purchasing vegetables, the right size, shape and colour will enable consumers to make decisions about the degree of ripeness of the vegetables they prefer. Texture refers to the softness and hardness of the vegetables which can only be established or measured when the vegetables are eaten. Hawkers must ensure good storage for the vegetables to avoid wilting or shrivelling of their

vegetables. Other quality criteria are flavour and aroma. Total flavour can rarely be assessed by the consumer prior to purchase, but it is critical for subsequent purchases of a particular vegetable. Consumers can, to some extent, determine the aroma before purchasing the product, but it tends to be important as a positive factor only in highly aromatic vegetables, such as garlic.

Most of the hawkers' products are organic and come from the neighbouring villages because most of the hawkers are producers themselves (Vernooy, 2006). Hawkers must ensure the best quality of vegetables by growing them very well. This may be achieved by selecting the best varieties of vegetable seeds, fertilizers, pesticides and the right moisture and soil condition. Hawkers purchasing stock from other hawkers, retail stores or farmers must ensure that they get the best quality of products.

According to Simopoulos and Bhat (2000) hawking activities are unhygienic and can lead to pollution in town streets. They state that street vegetables are always exposed to dust, vehicle fumes, flies and insects, and few hawkers take precaution to protect their products by covering them. Simopoulos and Bhat (2000) further state that a study conducted in India revealed that no excessive amounts of filth, dirt or dust were observed in the street hawkers' vegetables. The hawkers' vegetables were also found satisfactory from an appearance, smell, taste, edibility and freshness point of view. However, Bezemer (2006) states that hawkers' vegetables were low in quality.

Processing of vegetables adds value to the produce and also extends its life allowing usage during offseason. The major processing techniques hawkers apply are sun-drying, slicing and bleaching. Bhattacharyya (2001) argues that apart from producing

and selling fruit and vegetables, agricultural hawkers do not do any further processing to their produce, except for basic water sprinkling, covering and cleaning to protect from dust, and removing fruit and vegetables spoils from the rest of the stock. Because most hawkers sell products that they produce themselves, there is no need for credit, but those who depend on suppliers to supply them with stock, sometimes require some means of credit and bulk discounts.

2.5 Types of hawkers in the agricultural market

From the business studies' perspective, it is convenient to divide street hawkers into various categories according to the observable variables of their working style. Hence, they may be categorized according to whether they have permanent or temporary stalls or whether they are itinerant workers. Other categories include the nature of goods or services they provide, and means of sourcing products (Walsh, 2010). Types of hawkers may vary depending on the location and the nature, composition and functions of the informal sector (Timalsina, 2011). Agricultural hawkers operate in a variety of locations, ranging from tables outside markets, the back of bakkies and trucks, down to small-scale street hawkers with a single box of produce to sell. Agricultural hawkers are categorized mainly by their selling activities which authors divide into three groups, namely mobile, stationary and part-time or seasonal hawkers. These hawkers also vary greatly in terms of scale, timing and location of their sales and remuneration (Bromley, 2000; Nirathron, 2006). Bhowmik (2010) classifies street hawkers based on their commodity into two categories. The first category of hawkers sells food items such as

vegetables. The second category of hawkers sells non-food items such as clothes, toys and shoes. Nirathron (2006) also classifies hawkers according to their selling location, for example the market or the street.

2.5.1 Mobile hawkers

Male hawkers are more likely to be mobile, selling their products from push-carts and bicycles (Bhatt, 2006). Saha (2011) defines mobile street hawkers or vendors as self-employed workers in the informal sector who offer and sell their products on the street without having any permanent built-up structure. The mobile hawkers are those hawkers using trolleys and trucks to deliver to their customers. In other words, they are hawkers without fixed location who move around selling their products. A mobile hawker is a street trader who pushes stalls on wheels or operates a stall from a cart, motor vehicle and goes door-to-door selling his products (Bromley, 2000; Wallace, 2001; Mitullah, 2004; Maheshwari *et al.*, 2007; Arora & Taore, 2010). Bhattacharyya (2001) describes a mobile hawker as a vendor who moves about from place to place in search of customers. Mobile street hawkers are the ones doing well in the hawking business, because they move around to find potential consumers (Lubell, 1991). By doing this they satisfy customers' needs because most potential customers feel that it is difficult for them to walk long distances to reach the hawkers. That is the reason why most customers prefer the mobile hawkers to bring their products where the customers are (Banik, 2011). Nirathron (2006) states that the advantage of a mobile hawker is the

accessibility to the buyers, and that they are less dependent on location. They can relocate their businesses from one place to another with little difficulty.

Mobile hawkers mostly sell goods that customers need on a daily basis, such as vegetables and fruit. They are characterized by not having a fixed permanent place to sell their products, and they are always moving delivering their products door-to-door. They require little capital to start their businesses. They provide daily fresh vegetables at reasonable prices to their customers, and they do not have fixed working or selling hours (Wallace, 2001; Maheshwari *et al.*, 2007). De Soto (2002) refers to mobile hawkers as the itinerants. This type of hawkers walks around the city offering goods to sell, without a fixed place from which to operate. Shah *et al.* (2010) also classify hawkers into mobile hawkers known as the itinerant retailers or mobile retailers. They also mention that this type of hawker has no fixed premises as they move from place to place selling goods. Asiedu & Agyei-mensah (2008) call the mobile hawkers the walking hawkers. Mobile hawkers usually carry small quantities of their produce in boxes or baskets. Wallace (2001) states that those hawkers who carry their stock on their backs or on their heads in containers or baskets are called peddle. Their income depends entirely on the skills they display while moving about in search of customers, since it is highly unlikely that customers will go in search of them (De Soto, 2002). According to Acho-Chi (2002) the mobile hawkers' service system depends on factors such as resources, market accessibility, location competitions, which are in turn depended on the growth and development of the basic sector of the urban area.

2.5.2 Stationary hawkers

A stationary hawker is a seller who sells from stalls in a fixed location throughout the day (Bhattacharyya, 2001; Mitullah, 2004). Most street hawkers are stationary. They sit on the sidewalk or on the ground and sell their goods to passing customers (Agnello & Moller 2004). The market traders and pavement sellers come under this category. Stationary hawkers are also known as non-mobile hawkers. They are always found in one place selling their products to the customers. According to Tracy-White (1995) hawkers are sellers who have a permanent space in the market, under a shed roof constructed by authorities, for which they pay rent. De Soto (2002) refers to them as fixed location hawkers because they do not move around in order to sell their vegetables. According to Unni and Rani (2000) stationary hawkers are those hawkers who use a fixed location usually found on street crossings or near the junction of the main roads and on street pavements selling their products to the passing customers. De Soto (2002) stated that a hawker can identify a location and give up itinerant hawking and operate as a fixed location hawker.

The hawker's choice of how to operate is mainly determined by the number of customers who may frequently pitch on any given day. This also determines whether the location is economically viable. According to Mitullah (2004) customer relations can develop when street hawkers operate their business from one spot for a long time because customers know where to always get the products they need. Bhowmik (2002) sub-divides stationary hawkers in to two categories. The static hawkers are those that sell their products at a given place for the whole day. The semi-static hawkers are those that carry out their businesses for some part of the day. They may sell their products for

few hours in the morning and a few hours again in the evening. The majority of hawkers are semi-static, their timing of operation is important as they have to sell when more customers are available. Huyer and Westholm (2007) also sub-divide the stationary hawkers into non-sedentary and semi-sedentary. Non-sedentary stationary hawkers are those who have a fixed place to sell their products in the street, but have to remove the goods at the end of the day. Semi-sedentary stationary hawkers are those with rudimentary fixed premises, and they leave their products at the selling spot.

2.5.3 Part-time hawkers

Hawkers occupy enough space to accommodate themselves and their stock. They typically sell only one or two kinds of seasonal vegetables. Their business is active when prices are low. They also have the advantage of immediate accessibility to fresh vegetables (Bhatt, 2006). According to Hermann (2001) vegetable hawkers are to some extent in part-time business. They come and go in certain seasons and with the climax of harvest they have their most prosperous periods. Part-time hawkers are also known as seasonal hawkers. Those can be hawkers who are occasional sellers. They bring their products to the market when there is a surplus from their fields or home gardens, or when they have cultivated a special crop to sell. Small-scale farmers who also act as hawkers produce and sell their products at their farm gates depending on the season. Part-time vegetable hawkers bring their products to the market in community buses or by carrying it on their heads, depending on the distance to the market and the quantity of products to be sold (Vernooy, 2006). Some hawkers only sell

in the mornings, afternoons, or evenings, while others sell only on weekends and others sell only during a certain season (Mitullah, 2004).

2.6 Selling or marketing strategies of hawkers

As in most businesses, location is very important when starting a hawking business. Hawkers prefer downtown locations where pedestrian traffic is high and sidewalks are wide (Cohen *et al.*, 2000; Kebbed, 2004; Manganga, 2007). Hawkers' marketing strategies depend on their selection of sales area. Different types of hawkers market their vegetable differently depending on the area in which they are selling, and they often establish their businesses in those areas of the city with the highest pedestrian traffic (Butcher & Verayutham, 2009). Bhowmik (2010) states that hawkers concentrate in areas of high residential density, high transportation transfer or near commercial centres where there is a flow of large numbers of people per day. Bhowmik (2010) also mentions that the distribution of the street hawkers varies according to the city's lay-out; it also depends on the type of commodity a hawker sells and the space available in the market.

According to Asiedu and Agyei-mensah, (2008), most of the hawkers locate themselves in strategic, easy to be seen spots that attract heavy human and vehicular traffic. Those spots are usually found along major roads and streets, shopping centres and public offices. Bromley (2000) also states that hawkers concentrate very heavily in a few locations, and those locations are typically the points with the highest levels of pedestrian and vehicular congestion. In turn, Bhattacharyya (2001) states that hawkers

logically sell in areas where people gather and where there is adequate demand for their products. Some of the hawkers prefer to sell their vegetables on the streets rather than at hawkers' markets. By doing this they gain a lot from their business, because they are easily noticed by buyers and they also have an opportunity to influence customers or market their vegetables to the customers (Banik, 2011). Tissington (2009) also states that location is an extremely important element in the hawking business. Hawkers choose their selling sites on the basis of potential customers, frequency of passers-by, proximity to where they live and affordability of rentals. Rengasamy (2002) further states that the build-up density of the neighbourhood is an important factor, which may reduce distance between the hawker and customers and save the hawkers' time and physical efforts to transport the products. Hawkers' earnings vary from location to location. Hawkers earn more in commercial areas compared to residential areas (Arjun, 2008). However, Cohen *et al.* (2000) state that hawkers operating in the middle and upper class neighbourhoods make fewer transactions, but their return is usually higher. According to Huyer and Westholm (2007) hawking is not only an urban phenomenon. Hawkers are particularly numerous along village crossroads. Many farmers practise road hawking or market hawking as a second or seasonal job.

The average income of hawkers differs according to the type of business they are involved in. Hawkers operating at private hawkers central shopping complexes obtain the highest average income. Areas characterised by higher income are not considered to be the best by vegetable hawkers, since the residents usually have servants who go to the retail markets for them. The peacefulness of the neighbourhood also makes it difficult for hawkers to go around attracting attention by shouting (Kartik & Srikanta,

2007). On the other hand in low-income areas, consumers mainly want to purchase on credit, so they usually avoid the hawkers to purchase at local retailers where they will be offered credit facilities (Rengasamy, 2002). Vegetable hawkers prefer mixed-income areas because of the support they get from the consumers. According to Tracey-white (1995), hawkers markets provide low-cost retail facilities based on small-scale operations and are typically found in the low and middle-income, higher density areas of cities, small towns and in the centres of villages in rural area. McCullough *et al.* (2008) observe that street hawkers in the higher-income neighbourhoods tend to sell their vegetables at slightly higher prices than the nearby supermarkets, and the quality of their vegetable tends to be substantially better than those in the supermarket. On the other hand, street hawkers in the lower-income neighbourhoods tend to sell their vegetables at significantly low prices than the nearby supermarket.

Street hawkers purchase vegetables on a daily basis from the markets, and sell them out of baskets or at street stands (Bezemer, 2006). Agnello and Moller (2004) state that hawkers start early in the morning by buying goods from the wholesalers, then travel to the selling place where they sell the whole day. Vegetable hawkers start working early in the morning, when they buy their wares from merchants in the wholesale markets. They often borrow from the merchants at a very high interest rate. Most of the vegetable hawkers support their livelihood together with vegetable growers, by setting up their own wholesale vegetable shop in the main wholesaler market place to link growers directly to street hawkers, thereby cutting out the exploitative middle men. As a result, both vegetable growers and hawkers obtain better prices for their produce (Parker & Sommer, 2011). The business of hawking is generally straightforward. Hawkers offer

regular customers a discount and try to establish some rapport with them, but that seems to be the limit of what they customarily aim to achieve to improve their profitability (Walsh, 2010).

Different hawkers selling different products are found in towns. Among those hawkers there are also vegetable hawkers who will be selling their products on town streets, at bus stops, near town halls and taxi ranks. They either work on their own, for profit, or on behalf of a dealer, for commission. Hawkers purchase goods from wholesalers or from local suppliers to sell to consumers (Wallace, 2001). Holness *et al.* (1999) state that hawkers working on a commission basis are generally unhappy with the commission they receive, and complain that owners took a large proportion of the profits. According to FAO (1989) hawkers constitute approximately 2 percent of the population in cities. Hawkers prefer middle- and low-income areas. Groups of vegetable hawkers are mainly found by road sides and in public intersections, giving the customers access to all items in the same place. They benefit lower-income consumers by selling low quality produce at low prices.

2.7 Credit accessibility for hawkers

The source of capital plays an important role in the financial accessibility for street hawkers. It depends on the type of supplier and the volume of the hawker's stock. The access to credit is an economic linkage that ties street hawking to the economy which affects the hawker's economic activities, profits, and potential business growth (Saha, 2011). According to Kebbed (2004) hawkers' dependence on credit is crucial, yet it is

not easily accessible to them. Street hawkers face problems of capital and the main problem facing street hawkers is a lack of access to credit for capital (Bhowmik, 2005). They depend mainly on loans from friends, families and money lenders to run their hawking business (Bhowmik, 2002; Kebbed, 2004; Arjun, 2008; Saha, 2011). The unavailability of credit is primarily because there is no legal status for hawkers in the informal economy (Becker, 2004). According to Bhattacharyya (2001) capital is an essential requirement to start any business. Capital invested in the hawking activity varies from hawker to hawker depending on factors such as the type of products they sell and the economic condition of a hawker. Muiruri (2010) also states that capital is the most important asset when starting a hawking business and it is noted that street trading or hawking does not require any special skills, and neither does it need expensive equipment. Many street hawkers have no access to formal credit and in reality a few financial and credit financial institutions are willing to provide financial and credit facilities to small enterprises, particularly street hawkers. The reason for this is that hawkers are perceived to be risky clients. Since they do not have permanent premises, secure tenure on location of their business or even collateral, it is not easy to follow them if they default loan servicing causing the banks to be reluctant to lend them money.

Personal savings, family or friends, money lenders, banks or co-operatives, organizations, retailers and wholesalers are the main credit sources for street hawkers. They are needed for initiating the business, and later, for running and expanding the business (Saha, 2011). According to Agnello and Moller (2004), a low level of capital investment is needed in the hawking business. Furthermore, Bhowmik (2002) states

that most street hawkers sell items that required little initial capital such as vegetables. Again, Shah *et al.* (2010) state that not much capital is required when starting a vegetable hawking business, because the majority of the hawking business is based on borrowing. The street hawkers or vegetable sellers require financial help from the money lenders. Hawkers lack collaterals to secure formal loan schemes from the financial system. Their limited funds available and retained earnings from their business operation are too small for rapid expansion. Short-term business crises could displace hawkers and place them into financial debts and consequently halt their operation (Kartik & Srikanta, 2007).

Money lenders contribute to the nurturing of the hawking sector by supplying the hawkers temporarily with money at very high interest rates. This may happen when hawkers establish their businesses or when they find themselves in a difficult financial situation. An example is when their goods are confiscated and they have to pay to get them back (Andreassen & Tribhuwan, 2003). In a study of street food vending in Guwahati India, Bhattacharyya (2001) found that about 8 percent of hawkers took loans from moneylenders at a high interest rate and that bank loans were not popular primarily because of complicated paperwork and procedures. Saha (2011), however, states that most of the street hawkers preferred to borrow from wholesalers than moneylenders, since they do not charge regular monthly interest rates. According to Agnello and Moller (2004) hawkers buy goods by paying half of the amount immediately and the other half after selling them, or on credit. This means that they pay higher prices for goods because they do not have sufficient capital to pay upfront. Furthermore, Agnello and Moller (2004) state that the level of poverty that hawkers live in is illustrated

by the fact that few are able to pay for their goods in cash in advance, as they do not have sufficient capital. In a study of informal trading of the inner city of Johannesburg, Tissington (2009) identified a lack of access to capital and business management skills as the challenges facing hawkers, with the lack of access to capital being more of a problem than the lack of business management skills. In his findings, no hawker had ever received a bank loan because hawkers were not allowed to access bank loans because they do not have the documents that the bank required in order for them to access the facilities. According to Acho-Chi (2002) hawkers have difficulties acquiring institutional loans. Banks do not finance the developing informal sector enterprises, since the small size of capital required will not cover the institutional procedural costs.

Hawkers' monetary problem is compounded by the fact that they have scarce resources for trade and need to obtain credit by borrowing (Arjun, 2008). In many countries, non-government organizations (NGOs) are introducing microfinance services, mostly working capital loans to street hawkers (Cohen *et al.*, 2000). Information on credit sources is not easily shared among street hawkers and even though some NGOs provide microcredit this is not widely known among street hawkers (Bhowmik, 2002). In a study of hawkers in India, Parker and Sommer (2011) state that a bank called SEWA bank provided vegetable hawkers with microcredit. The bank was owned by self-employed females who were the shareholders. Its role was to provide microcredit loans to female hawkers who were establishing their hawking businesses. Street hawkers are often seen to fall into a debt trap due to the high level of their indebtedness. They needed to obtain credit for their economic activities, but since they were part of the

informal sector, they had no access to credit from formal financial institutions (Bhowmik, 2002; Jhabvala *et al.*, 2003).

2.8 Pricing and displaying of the vegetables in the market

Street hawkers' prices of their products are lower than those sold in the established markets (Wallace, 2001; Arora & Taore, 2010). The prices of the street vegetables and food are low and the urban poor benefit from this (Bhowmik, 2005). Street hawkers sell their vegetables at a very low price at the end of the day when the sun starts to set. They are compelled to do this because of inadequate storage facilities. Hawkers do not want to carry back the remaining stock which was not bought and then have to come back with them the following day (Banik, 2011). The demand for vegetable street hawkers is viewed as a social phenomenon; they are there because they offer goods at cheaper prices compared to retailers in the formal sector (Zitter, 2007). There is no rule on pricing of the hawkers' vegetables. However, a hawker has to bear in mind that the consumers will be pleased if they can save a little when buying from them instead of in a retail store. Fruit and vegetable hawkers typically display the price list and they charge each consumer based on his or her willingness to pay (Mehta, 2006). Most of the time the hawkers negotiate the prices and quantity of the product sold. According to Kapila (2009), in the pricing process, hawkers extract as much consumer surplus as they can, rather than charging uniform and competitive prices. Cohen *et al.* (2000) state that hawkers often serve up to three times as many customers, turn over a comparable

quantity of goods, charge prices 10 to 30 percent less and offer flexible hours so that customers can be served at their convenience throughout the day.

The hawking business requires some basic tools such as baskets, knives, scales, and an umbrella to protect the hawker from the sun, and sometimes a table to display the goods and keep them above the muddy dirty floor of the market (Agnello and Moller 2004). Street hawkers use different methods and structures to display their commodities. Some pile their commodities such as onions and tomatoes and use measuring equipment in the form of plastic bags, tins and baskets. The structures used for displaying commodities include tables, racks, wheel burrows and handcarts. Other hawkers display their goods on the ground, on mats or bags, while others simply carry their commodities in their hands and on their shoulders. There are also those that hang their goods on a tree (Mitullah, 2004). It is very common to encounter situations where the hawkers display their vegetables on the ground on sheets of paper or fabric (Shackleton *et al.*, 2009). Due to the harassment that hawkers encounter from the police, they carry their goods in travelling bags and just display one or two samples on the stall or box (Manganga, 2007). Van Rooyen *et al.* (1997) state that while formal retail outlets use weight to price their vegetables, informal traders such as hawkers use numbers and size. This makes it difficult to compare prices asked by hawkers who sell similar products but most of the hawkers keep their prices constant so as to avoid misunderstandings with consumers. According to Lincoln (2008), street hawkers sell their products in plastic bags from their stands, which are usually set up on a corner.

2.9 Challenges hawkers face in the market

The challenges agricultural hawkers face in the market can be classified as physical, social and managerial. Physical problems involve insufficient space to conduct sales, inadequate site security and overnight storage facilities. The social and managerial problems include the high demand for space in the market, reflecting either uncontrolled use of space or relatively high profit margins (Tracey-white, 1995). Bhowmik (2002) stated that the street hawkers do not make much profit from their sales and they tend to move from one place to another to get better markets. Furthermore, Holness *et al.* (1999) state that vegetable and fruit hawkers are always concerned about low profit levels, particularly when they have to purchase their stock from expensive wholesalers.

Legal public markets in many countries have problems of insufficient space, poor storage facilities, poor hygiene and poor management (FAO, 2007). According to Mitullah (2004) there is intense competition among street hawkers, and it causes problems in the hawkers' market. Poor location of business, low purchasing power among customers and unreliability of customers who take goods on credit also affects the hawkers market.

2.9.1 Trading space

Trading space appears to be problematic among street hawkers. According to Burnett (2007) the greatest problem facing street hawkers is their right to trading space. Most of the spaces hawkers occupy are considered illegal since they have not been set aside for trade. Hawking activities have been known for creating havoc on the pavements of

streets in cities. Complaints made by residents, shop owners, tourists and politicians are that hawkers obstruct pedestrians and other activities; people cannot get out of their cars into the pavement and that hawkers block entrances to shops (Renner & Pegler, 1997; Hodgson *et al.*, 1999). Asiedu and Agyei-mensah, (2008) stated that street hawking involves negotiation for physical space, economic opportunity and power, ultimately resulting in constant conflict with law enforcement agencies and city authorities. Timalsina (2011) states that the urban authorities consider street hawking as an illegal activity and they treat street hawkers like criminals. Timalsina (2011) adds that street hawkers occupied the footpaths leaving no space for pedestrians. This has become a public concern because it creates problems for smooth vehicular and pedestrians' movement. The essence of the problems hawkers face lies within the legal system of the cities, which fails to provide any space for street hawking as an activity and does not recognize its significance in the retail trading (Arjun, 2008). According to Cummins and Harvey (1996), agricultural hawkers mainly complain that sales have plummeted due to the bad conditions in the market. Infrastructure problems at street markets make hawkers vulnerable to fall part to hoodlums. All these problems force many hawkers in the agricultural market to resort to selling on sidewalks. To prevent forced removal of hawkers from their selling points, a hawker must have been issued with permission to sell his or her products in specific locations, at a specific time by the local authorities.

2.9.2 Harassment and eviction

Hawkers have been a part of the market system for centuries. They are actively discouraged in many countries for being traffic hazards and not contributing much to the overall marketing system (FAO, 1989). The main challenge facing vegetable street hawkers is the routine harassment and eviction from their sites by authorities and traffic police (Parker & Sommer, 2011). According to Chen *et al.* (2004) street hawkers typically lack legal status and recognition, and may experience frequent harassment and eviction from their selling place by local authorities or competing shopkeepers. Street hawkers have to pay a sizeable part of their income in the form of bribes to the authorities, in order to keep selling in the streets (Bhowmik, 2005). According to Skinner (2008) violent confrontations between urban authorities and street vendors over the commercial use of public space are recurrent events in many African cities.

2.9.3 Unhygienic hawking

Hawking activities are unhygienic and lead to street pollution in urban areas (Arora & Taore, 2010). According to Soon *et al.* (2009) street hawking poses a major public health problem, because street hawkers lack proper equipment and amenities such as clean tap water. As a result, many do not observe good personal and food hygiene. Hawkers often leave behind vegetable waste and other litter on the roads and those invariably find their way into the waterways and streams. The accumulation of waste gives rise to the proliferation of vectors such as rats, flies and mosquitoes. According to

Henderson *et al.* (2011) congestion, litter and excessive touting for business can lead to problems related to the nutritional value of the street vegetables.

2.9.4 Traffic obstruction

Street hawkers cause traffic accidents and increase the levels of vehicle-generated air pollution, hawkers also generate a lot of noise with their announcements and they together with their customers often leave garbage on the streets (Bromley, 2000). The most evident health and safety risk or problem for street hawkers includes traffic accidents, inhaling vehicle exhaust fumes, fatigue due to long hours and potential exposure to crime. Hawkers are often poorly informed on the risks which they are exposed to and do not know how to reduce them. They often work in open spaces with heavy traffic with lack of access to sanitary installations, drinking water, electricity and garbage disposal. Cohen *et al.* (2000) also stated that street hawkers working long hours on the street are subjected to pollution from cars and motor bikes. Street hawkers are often viewed as a nuisance or obstruction to other commerce and the free flow of traffic. Arjun (2008) stated that street hawkers are considered a hindrance in the urban space by government officials as well as the urban vehicle owners, who believe that they clutter the urban space and prevent smooth flow of traffic. According to Walsh (2010) street hawker sector has largely treated as part of the indigent or beggar class and swept off the streets wherever possible.

2.9.5 Competition among street hawkers

There are many hawkers in the market and competition is strong with their number increasing every season due to easy entrance in the hawking business. As a result of the competition among hawkers, producers often escalate their prices and hawkers' profits decrease. Competition among hawkers is desirable for the health of a free-market economy, but it can also act as a constraint to hawkers. The freedom to enter into the business of hawking vegetables leads to congestion of hawkers competing for the same consumers, as a result, some hawkers fail to sell their goods and suffer losses due to spoilage. Kebbed (2004) states that hawkers face problems in the course of running their businesses. Every day poses a challenge to their survival because they do not have legal recognition. Some shopkeepers do not want hawkers to take up spots in front of their store for fear of competition.

2.9.6 Low income of hawkers

The easy entry to vegetable hawking is due to low start up and operating costs can lead to poor working conditions and remuneration (Henderson *et al.*, 2011). Kebbed (2004) states that street hawkers toil the whole day, but few are able to generate enough earning to meet their family's basic needs for food, shelter, and clothing. Street and head load hawkers are usually low income females for whom this job is often the only option to generate an income because of their inability to access farming assets, possible ill health or lack of skills to engage in better paid activities. They are likely to be affected by competition from the farmers' markets since even the smallest decline in

profits may push them out of business altogether. However, comparative advantage is the mobility, which allows them to reach their customers in their homes (Rengasamy, 2002). Cohen *et al.* (2000) state that street vendors or hawkers earn an income that is close to the poverty level and they encounter high cost of credit from the moneylenders once they have entered the business. Arjun (2008) states that hawkers' earnings are very low and vary from trade to trade and location to location.

2.9.7 Transport and storage problems

Van Rooyen *et al.* (1997) mention the lack of transport to the market place and the lack of storage facilities as challenges hawkers have to face. According to them transport problems include unavailability and costs. Hawkers' profits are eroded by the cost of transport. Vernooij (2006) also identifies transport deficiencies as a challenge to hawkers, because hawkers live and produce their vegetables in the rural areas and sell them to customers in urban areas. They have to take buses or hire taxis to transport vegetables to the spot where they set up their business and most of the time it is not easy because of the large stock they need to transport.

Vegetables are perishable goods and can easily spoil due to the lack of proper storage facilities. According to Ngiba *et al.* (2009) the lack of storage space makes it difficult for hawkers to buy their stock in bulk as it will require large funds to purchase, transport and store, which an ordinary street hawker would not have. Tissington (2009) also points out that the lack of storage facilities poses a problem to hawkers because they have to carry their stock to and from home every day. Hence they have to limit what and

how much stock to purchase and carry at a time. According to Ngiba *et al.* (2009) it is impractical for street hawkers to take stock home in the evening and bring it back in the morning. The neighbouring households provide overnight storage on a rental basis. Ngiba *et al.* (2009) further state that the challenges of storage problems introduce two major costs: a shrinkage cost because of theft and obsolescence cost due to rats damaging stock. The street hawkers use the storage service despite the problems because they have no other alternative.

2.10 Positive aspects of hawking

Street hawking is an occupation and economic activity (Bromley, 2000; Mitullah, 2004). Hawkers provide services and goods to the middle and lower-middle class urban population. Therefore, efforts are being made to recognize street hawking as a job to earn a living (Singh *et al.*, 2010). Markets provide employment to vendors or hawkers, market officials, suppliers and transporters while making an important contribution to food security. Hawkers are also attractive as tourist destinations, therefore contributing to local development (FOA, 2007). According to (FAO, 1995) hawking or street vending provides an important means of supplementary employment particularly for women. Gibbon (1995) states that the reasons there are more hawkers selling vegetables may be explained by the fact that there is a consistent demand for vegetables. Though hawkers do not make big profits, they are assured of some income at the end of the day, no matter how meagre it may be. However, Nirathron (2006) states that hawkers are able to accumulate capital, and some hawkers consider further expansion of their

hawking business. The hawkers provide household goods at reasonable rates, thereby saving the public money, labour and time. The hawking sector absorbs shocks and upheavals in the formal sector, if the formal sector fails in any way, its workers can turn to hawking, and this has saved many families. Also the hawking sector can absorb labour and reduce unemployment and it can also generate skills and create opportunities for people to get employment in the formal sector at a later stage (Andreassen & Tribhuvan, 2003).

2.10.1 Hawking as a source of income and employment

Hawking activity is a vital component of household livelihood, and is in fact the sole source of income for 70 percent of hawkers and their families (Holness *et al.*, 1997). People generally resort to informal activities such as vegetable hawking as a means to survive when the formal economy cannot absorb them in terms of formal employment (Ngiba *et al.*, 2009). A study done in South Africa by Skinner (2008) showed that hawking is the only source of income to 88 percent of hawkers. Mitullah (2004) also states that 75 percent of street hawkers were the sole breadwinners in South Africa and 33 percent had others jobs that supplemented their income. In situations where urban unemployment and underemployment are social problems and the tide of rural-urban inflow continues unabated, hawking often provides a viable occupation for many less skilled and educated people (Renner & Pegler, 1997). Street hawkers selling items such as vegetables require little initial capital to start their business (Bhowmik, 2002). Hawking plays a very dynamic role in the urban economy, providing necessary items,

which are largely durable and cost-effective to average income earning households at an affordable rate (Saha, 2011). Again, Manganga (2007) states that street hawking contributes to urban livelihoods offering the urban poor convenient goods and services in quantities and at prices they can afford. It is an important source of income for those who sell. Timalisina (2011) stated that street hawking is the largest source of employment in the informal sector. Hawking also contributes to the economic dynamics of many cities, by providing opportunities for employment and being an alternative outlet for the marketing of products. In times of recession, it can provide opportunities to people to sell simple products and home-cultivated vegetables. For some, it can be regarded as a survival activity to support their families (Hodgson *et al*, 1997; Bhowmik, 2002; Saha, 2011). According to Austin (1994) street hawking is an economically viable way of selling goods and of earning a living due to the following reasons: street hawkers are self-employed individuals who can increase their sales by maintaining long hours or by living in their working environment.

Hawkers are not the poorest of the poor (Anjaria, 2006). Hawkets' incomes are higher than most daily wage labourers. Hawking is lucrative and most people become hawkers after failing to find jobs elsewhere. According to Simopoulos and Bhat (2000) street hawkers are attracted to their occupation because of the possibility of earning a relative high income. In a study conducted in South Asia, Simopoulos and Bhat (2000) found that the average earnings of a street hawker was three to ten times more when compared to the wages of some skilled labourers employed in the formal sector. Again, Kebbed (2004) stated that it is wrong to assume that all informal activities such as street hawking consist of hand-to-mouth economic activities performed by urban residents.

Some incomes generated in the hawking businesses are high enough to provide a reasonably decent living, and some are higher than formal income. Huyer and Westholm (2007) also state that the street hawker's income is higher than the legal minimum wage. According to Saha (2011) the profit margin of the hawker who sells raw materials such as vegetables and fruit is impressive compared to other categories of hawkers. Asiedu and Agyei-mensah, (2008) stated that street hawking activities have provided opportunities for some people to make a living in difficult spatial and economic settings. Manganga (2007) also states that the money raised from hawking helps the hawkers to pay school fees for their children, groceries and other household requirements.

Hawkers interact with different segments of the urban population and have a specific role in urban society and space. The primary role of street hawking is that it provides a source of livelihood and employment to the poor classes. Thus, in a way, street hawking helps reduce unemployment and poverty by providing remunerative employment (Arjun, 2008). According to Ohiokpehai (2003) urban street vending or hawking provides employment and income to many people, and can provide economic support to small-scale farmers as an outlet for rural produce. Roadside stands provide opportunities for younger members of the families to develop business skills while earning money for present and future needs (Burton, 2009). Street food in developing countries plays an important role in the diet of many people, especially those of low income (Mwangi *et al.*, 2001). Karaan (1993) lists the following advantages of hawking in an informal market: hawking ensures food security in townships and rural areas, it absorbs labour in areas of high unemployment, it promotes the economy and monetary flow within the hawkers

markets and it provides a valuable source of income to hawkers. According to Ngiba et al (2009) hawking of fruit and vegetables is an easy accessible economic activity which does not require any special skills. Initial capital outlay for stock is extremely low and barriers to entry are also low. Thus as unemployment in the formal economy persists, there is an increase in the number of new entrants into the informal economy.

Street hawking can act as a buffer against instability and insecurity of work and income opportunities among the urban poor (Asiedu & Agyei-mensah, 2008). Street hawking is an important source of income for the urban poor (Mitullah, 2003; Bhowmik, 2005). Jenson (2003) also states that the income from street hawking is an important part of a hawker's family income. The earnings of street hawkers depend on the products they sell, and it deviates from trade to trade, location to location, the volume of trade and terms of trade (Arjun, 2008; Saha, 2011). In a study of informal trading in the inner city of Johannesburg, Tissington's (2009) findings were that people survived on their hawking businesses and that many street hawkers were the only source of income for both their immediate and extended families. Their major expenditures are: remitting money back to their homes and a large proportion of hawker's income is spent on rent, school fees and transport. Only a few hawkers have savings or bank accounts, but most of them invest their money by means of stokvels and burial schemes.

Simopoulos and Bhat (2000) stated that street hawkers in Bangladesh earn approximately 77 Taka (R9) a day. In India, Calcutta hawkers earn between Rs 1500 (R257) and Rs 4000 (R686) per month. In Indonesia hawkers earn 1700 to 3100 rupiah (R2 – R3) a day, and in Malaysia hawkers earn 16 Ringgit (R50) per day. A study done by Arjun (2008) in India revealed that a male hawker's average income is around Rs 70

(R12) per day, and female hawkers earn less than Rs 40 (R7). In the Southeast Asia, the average earnings of a street hawker may be three to ten times more than the minimum wage and often comparable to the wages of skilled labors employed in the formal sector (Simopoulos & Bhat 2000).

The findings in a study by Skinner (2008) were that fruits and vegetable hawkers in South Africa earn between R300 and R600 per month, and the average turnover of R1000 per month. Also, Tissington (2009) findings from his study were that hawkers earned between R800 to R1600 a month depending, according to them, on the weather. The income generated from street hawking activities was critical to the survival of street hawker's household. According to Bhattacharyya (2001) hawker's income is utilized primarily for feeding the family and on education of the children. However, a study conducted by Agnello and Mollor (2004) in Cambodia revealed that hawkers live at substantial level. In their study specific questions regarding how much hawkers earned and spent on daily activities connected to their business was asked, and the answers resulted in negative profits. This meant that, the hawkers were not sincere regarding their earnings or they did not know them since they do not keep written records, or, they simple spend more than they earn and find themselves continuously in need of taking loans.

2.10.2 Customer's benefits from hawkers

Lower income groups benefit from hawkers and spend a higher portion of their income on purchases from street hawkers, because the hawkers' goods are affordable.

However, the urban rich also benefit because hawkers provide them with daily requirements on their doorsteps (Saha, 2011). Amenya (2007) states that low-income consumers do not consume less, but consume goods and services which they obtain at a much lower price offered by hawkers. Bhowmik (2005) also states that street hawking provides food at low prices and middle-income groups benefit from it because of the affordable prices street hawkers offer. According to Muzaffar *et al.* (2009) street hawking has the ability to provide basic food needs to the urban dwellers at a reasonable price. The reason given by Austin (1994) on why hawkers' prices were low when compared to the prices in retail stores was that, hawkers do not pay rent or taxes and do not have other overhead costs. Consumers purchase the same products from hawkers that they may be able to find anywhere else.

A significant proportion of the demand for goods and services is not met by shops and supermarkets, but by hawkers and street vendors (Renner & Pegler, 1997). Hawking is the main distribution channels for a large variety of products of daily consumption such as fruit and vegetables (Arora& Taore, 2010). According to Dey and Dasugupta (2009) hawkers play an important role in the economy by acting as a bridge between the numerous small buyers and small producers by buying commodities in small quantities from small producers at a low price and selling the same goods to a buyer who has a limited purchasing power. According to Austin (1994) hawkers supply people with goods they want and need, contributing to maintaining their lifestyle. Hawkers are effective as final distributors of commodities such as vegetables and unprocessed foods (Renner & Pegler, 1997). Street hawkers cater to the daily needs of people of different incomes groups, of which the lower income group shows more dependency (Bhowmik, 2010).

Cohen *et al.* (2000) state that the reason low-income customers are dependent on hawkers is because hawkers sell their items in small or single quantities, for example one tomato or one potato, and two onions, by doing this their customers can afford the goods. Mahadevia (2008) states that hawking creates employment and hawkers have an economic role to play. They cater for the poor and the lower middle class with most of the daily necessities. This is a way to keep wages low even in the formal sector. In other words, if wages of workers in the organized and unorganized sectors are to be kept low so that the employees (of capital) can reap larger profits, the costs of living of workers has to be kept low.

2.11 Chapter summary

In this chapter a literature study was done which reveals that street hawking exists in African countries and in other parts of the world. The hawking activities fall under the informal sector and are growing tremendously due to the lack of employment. Another reason why street hawking activities are growing is the fact that it is easy to enter into the business, since it requires less capital to start up the business. It is very difficult to capture the exact number of street hawkers, since they do not have to register their hawking business, and some of them are part-time hawkers selling seasonally. Vegetable street hawkers are mostly found in busy intersections, railway stations, taxi ranks and along streets with many pedestrians and vehicle movements.

Vegetable hawkers face many challenges that need to be addressed. These challenges have a great impact on their sales. The literature reveals that many vegetable hawking

activities exist and that there are hawkers' organizations available in South Africa. The literature also discusses the quality of vegetables sold by hawkers, the type of hawkers in the hawkers' market and the channels they use to sell their products to customers. The chapter further outlines the credit accessibility of hawkers, their pricing and displaying methods in the market. The challenges vegetable hawkers meet in their day-to-day hawking activities together with the positive aspects of hawking are also covered. Since vegetables form part of the daily diet, it is necessary for citizens to have access to fresh produce and hawkers provide this to consumers. There are different types of hawkers in the informal vegetable market, namely mobile, stationary and part-time hawkers. They engage in the hawking business to make a living, and with the income they pay the school fees and help support their families. Hawkers prefer to set up their businesses in highly populated areas such as taxi ranks, schools and roads intersection. Their pricing system is easy to grasp even by the illiterate groups because it is based on size and numbers rather than weight. Fresh produce markets, wholesalers and farmers are important suppliers to hawkers.

CHAPTER 3

METHODOLOGY

3.1 Introduction

This chapter presents the research approaches used in the study. Various sections are covered, namely the study area, sampling procedure, data collection and analysis and the econometric modelling used in the study.

3.2 Study area

The study was carried out in the Limpopo province of South Africa which is in the northern part of the country. It covers an area of approximately 123 910 square kilometres with a population of 5.4 million, which makes 10.4 percent of 51.77 million population of South Africa (Census 2011 results). Limpopo province is the fifth largest of the country's nine provinces, occupying about 10 percent of South African's lands mass. Commercial agriculture is scattered throughout the province and subsistence agriculture is extensive throughout the communal lands. The population of Limpopo consists of several ethnic groups distinguished by culture, language and race. About 97.3 percent of the population is black, 2.4 percent white, 0.2 percent coloured and 0.1 percent Indian/Asian. Languages mainly spoken in Limpopo province are Northern Sotho (Sesotho sa Lebowa), Tsonga (Shangaan), Venda, Afrikaans and English.

The province has a total of 25 local municipalities and five district municipalities, namely Capricorn, Sekhukhune, Vhembe, Mopani and Waterberg districts (see figure 3.1 for the map of the study). Limpopo province has a wide climate variation. It is blessed with year-around sunshine and it can get hot in the summer months (October to March), averaging 27 degrees Celsius (www.sa-vanes.com). Winter is a sunny season of chilly mornings, warm mid-days, dry afternoons and cool to cold nights.

Farming enterprises in Limpopo province include vegetable production, contributing an average of about 22 percent to gross income. Agricultural hawkers selling their vegetables were mainly found in taxi ranks, commuter or mass transit terminals, shopping malls, football stadia and even on busy intersections.

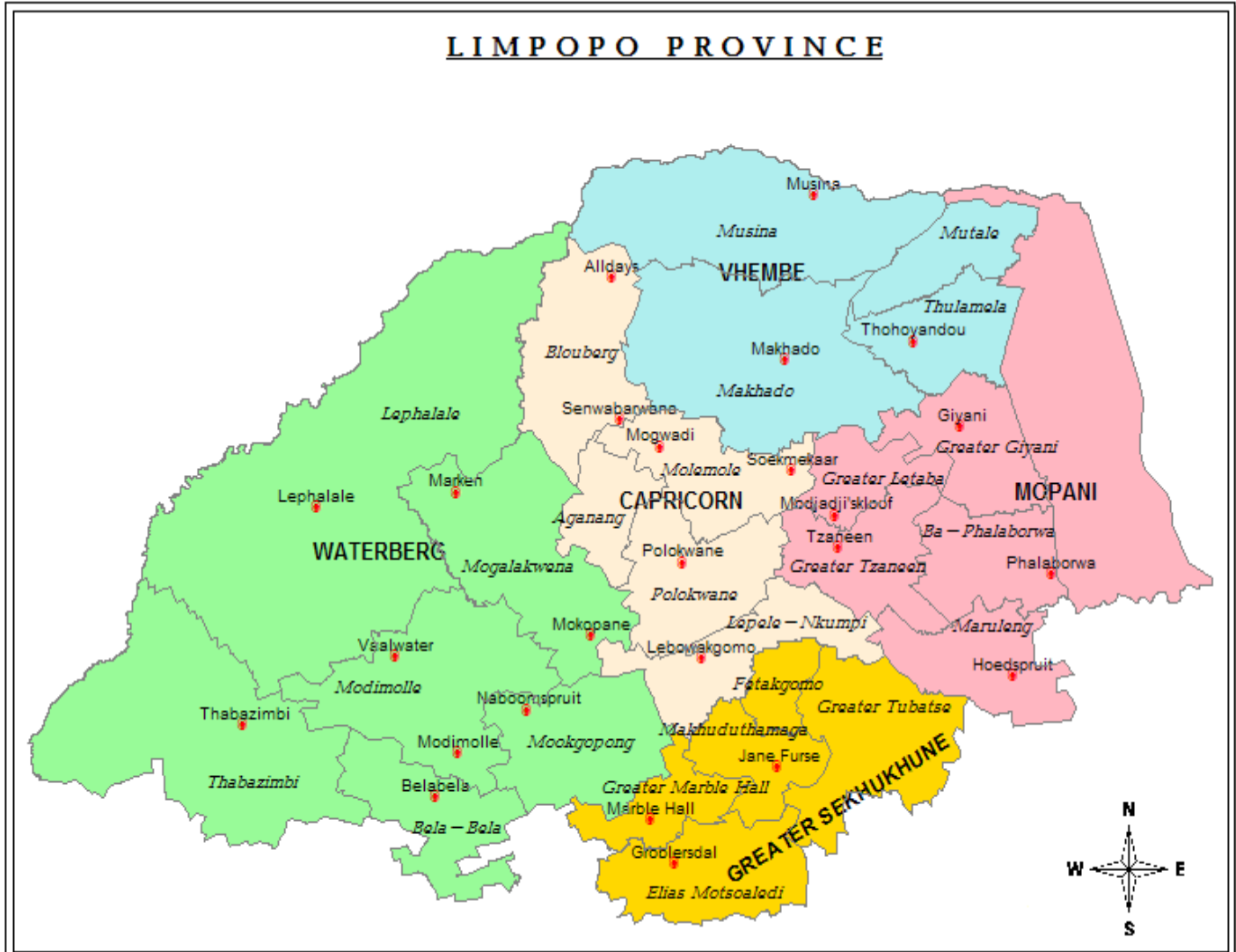


Figure 3.1: Map of a study area (source: <http://www.sa-venues.com>; (accessed on 24 August 2011))

3.3 Sampling procedure

The total number of hawkers in the whole of Limpopo province is unknown, since hawkers do not always have to register when becoming a hawker in the province. A stratified sampling technique was used. The population of hawkers was divided into the

five district municipalities of the province. Three major towns or shopping centres in each district were randomly selected for administering the questionnaire. Giyani, Tzaneen and Phalaborwa were selected from the Mopani district; Alldays, Polokwane and Lebowakgomo from the Capricorn district; Makhado, Thoyandou and Musina the Vhembe district; and Mokopane, Naboomspruit and Belabela from the Waterberg district. Groblersdal, Marble Hall and Jane Furse were selected from the Greater Sekhukhune district. From the population of vegetable hawkers in each town and shopping centre, hawkers were chosen randomly and entirely by chance to complete the questionnaires, such that each individual hawker had the same probability of being chosen at any stage during the sampling process. From the hawker population in each town market every fourth hawker was chosen to complete the questionnaire.

3.4 Data collection

Data were collected through face-to-face interviews with hawkers, where 366 questionnaires were administered in the study area. The questionnaires were prepared in English, because 42 percent of the respondents had at least primary schooling or no formal schooling, translation of the questionnaire into their own languages was sometimes needed. The questionnaire consisted of sections A, B and C, where section A was for general information such as district name and the date of the interview. Section B was for personal information such as home language, age group and level of education. The questionnaires were anonymous as no personal questions such as personal names, addresses and identity numbers were asked. Section C was for

marketing information. Hawkers were interviewed in their selling areas or places including town markets, taxi ranks and railway stations.

3.5 Econometric model

Multiple regressions (Linear, Semi-log and Double-log) analysis was used to determine the impact of vegetable sales on household income of hawkers. Multiple regression analysis is used to analyse the relationship between dependent variable and all the independent variables at the same time (Iversen and Gergen, 1997). A linear function of two or more independent variables can be used in a multiple regression to explain the variation in a dependent variable. Multiple regressions predict the observed values of the dependent variables using linear function of the observed values of the independent variables (Allen, 1997). According to Allison (1999) the kind of variables which can be used in a multiple regression are quantitative variables such as age, income and years of experience. In this study the binary of the dependent variable which is vegetable sales can either have an impact on the household income of hawkers or have no impact on the household income of hawkers, y (e.g. 1 = "has an impact" or 0 = "has no impact"). The logistic regressions used in this study involve three different functional forms (linear, semi-log and double-log). This is a mathematical modelling approach that can be used to describe the relationship of several independent variables. The typical regression model used is of the form:

$$Y = f(x_1, x_2, x_3, x_4, x_5, x_6, u) \dots \dots \dots (1)$$

The interpretation of the coefficient is different in alternative functional forms. In the following formulations y represents the dependent variable, β_0 is the intercept, β_1 - β_6 is the coefficient to be estimated, x_1 - x_6 represent all the independent variables, Log represent the natural logarithm of y and χ respectively, and U is an error term.

3.5.1 Linear form

The advantage of the linear form is that it is easier to apply and interpret. In the linear function the coefficients are easily expressed as a unit change in an attribute that causes the dependent variable to change (Huili, 2008)

$$Y = \beta_0 + \beta_1x_1 + \beta_2x_2 + \beta_3x_3 + \beta_4x_4 + \beta_5x_5 + \beta_6x_6 + U \dots\dots\dots (2)$$

β represents the change in y that will occur as χ changes one unit.

3.5.2 Semi-log form

In the semi-log form the linear dependent variable or the explanatory variable is transferred into logarithms. According to Huili (2008) the log-linear form (semi-log form) takes the natural logarithm of the depended variable before conducting a regression analysis. The semi-log form is more complicated to use and the results are more difficult to interpret if compared to the linear function. The two major advantages of the semi-log form as suggested by Woodridge (1999) are that when the dependent variable has a large range, transformation into logarithmic form can reduce the range significantly,

which makes the estimates less sensitive to the extreme values or outliers on the dependent variable. The other advantage is that the variance of the error term on the independent variable is not homogeneous, this is called heteroskedasticity and it is often present in the process of analysis.

$$\text{Log}Y = \beta_0 + \beta_1x_1 + \beta_2x_2 + \beta_3x_3 + \beta_4x_4 + \beta_5x_5 + \beta_6x_6 + U \dots \dots \dots (3)$$

In this functional form β is interpreted as follows: a one unit change in χ will cause a β (100%) change in y , for example, if the estimated coefficient is 0.05 that means that one unit increase in χ will generate a 5% increase in y .

3.5.3 Double-log form

When logarithms are used for both the independent and dependent variables, we get a double-log model or function. The advantage of the double-log as stated by Fesenmaier *et al.* (1996) was that the coefficients can be interpreted as having elasticity and relative low residual variance.

$$\text{Log}Y = \beta_0 + \beta_1\text{log}x_1 + \beta_2\text{log}x_2 + \beta_3\text{log}x_3 + \beta_4\text{log}x_4 + \beta_5\text{log}x_5 + \beta_6\text{log}x_6 + U \dots \dots (4)$$

In this functional form β is the elasticity coefficient. A one percent change in χ will cause a $\beta\%$ change in y , for example if the estimated coefficient is -2 it means that a 1 percent increase in χ will generate a -2 percent decrease in y .

3.6 Data analysis

Descriptive statistics compiled from the frequency tables were used as the first step of data analysis. The statistical package for social sciences (SPSS version 20 of 2012) was used to detect the existence of a relationship between variables in order to make a meaningful prediction. The 366 completed questionnaires were coded and data capturing was done through punching from each questionnaire to the SPSS. Results are in a table format showing the significant of variables in chapter 4.

3.7 Chapter summary

In this chapter the area in which the study took place is explained. This chapter also covers sample selection methods and the way in which data were collected and analysed. The study uses a multiple regression model (linear, semi-log and double-log) applied to primary data collected from the study area in the Limpopo province, where 366 vegetable hawkers were interviewed. Variables and the results of the study are further defined in detail in chapter 4.

CHAPTER 4

RESULTS AND DISCUSSIONS

4.1 Introduction

The hawkers' income from vegetable sales provides important functions in the hawkers households. As a result it holds a position of great importance. It is one of the agricultural informal trades with a significant potential for economic growth and development. The objective of this chapter is to compare the significance of the variables having an impact on vegetable sales in the hawkers market using the Linear, Semi-log and Double-log regression. The chapter summarizes the variables used in the study in the form of tables.

4.2 Results

4.2.1 Descriptive results

In this section, the descriptive statistics variables (dependent and independent variables) are presented in table 2. The table provides mean values, standard deviation and variance of the variable used in the logistic regression model. Table 3 presents the cross tabulation of the monthly income of hawkers according to districts. Table 4 presents results of the estimated models. The estimated models are in three different forms, namely linear, semi-log and double-log regression.

Table 2: Description of variables

Variables	Mean	Std. Dev.	Variance
<i>Dependent variable:</i>			
Vegetable sales (Y)			
Total vegetable sales per month (Rand per kg)	1009.84	468.529	219519.425
<i>Independent variables:</i>			
District (X ₁)			
1 = Waterberg; 2 = Mopani; 3 = Capricorn 4 = Vhembe; 5 = Sekhukhune	2.96	1.220	1.488
Household size (X ₂)			
Total number of people in the house	2.92	0.725	0.526
Gender (X ₃)			
1 = Female; 2 = Male	1.73	0.446	0.199
Home language (X ₄)			
1 = English; 2 = Xitsonga 3 = Afrikaans; 4 = Other	3.07	1.016	1.033
Income per month (Rand per month) (X ₅)			
1 = <R200; 2 = R200 – R699 3 = R700 – R1499; 4 > R1500	1.09	0.300	0.090
Stock price (Rand per month) (X ₆)			
1 < R500; 2 = R500 – R1000 3 = R1100 - R2000; 4 = > R2000	2.26	0.891	0.794
Transport used (X ₇)			
1 = Own vehicle; 2 = Hired vehicle 3 = Trolley; 4 = Other	2.33	0.966	0.933
Transport cost (Rand per month) (X ₈)			
1 <R500; 2 = R500 – R1000 3 = R1100 –R2000; 4 > R2000	1.46	0.684	0.468
Experience (X ₉)			
Total number of years in the business	3.08	0.832	0.691
Selling days per week (X ₁₀)			
Total number of selling days per week	3.44	0.679	0.461
Pricing of produce (X ₁₁)			
1 = Displayed; 2 = Negation; 3 = Other	1.42	0.567	0.322
Different kinds of vegetable products sold	2.64	0.737	0.543

N (List wise) = 366

4.2.1 Cross tabulation according to districts

The cross tabulation of the hawkers' monthly income according to districts was performed based on information collected from each hawker with the use of a questionnaire. An analysis of monthly income received by hawkers from the sale of vegetables was worked out and presented in the tables. The income figures were categorized into four categories, namely income less than R200 per month, income between R200 and R699 per month, income between R700 and R1499 per month and income exceeding R1500 per month.

Table 3 presents the vegetable sales of the five districts in the Limpopo province according to their selling amounts and percentages. Out of the 35 vegetable hawkers interviewed in Waterberg, no hawker received less than R200 per month. Only 28.6 percent of hawkers received between R200 and R699 per month and 31.4 percent of hawkers received between R700 and R1499 per month whereas 40 percent of hawkers received more than R1 500 per month.

The total number of vegetable hawkers interviewed in Mopani district was 123. No hawker received less than R200 per month. Only 2.4 percent of hawkers received between R200 and R699 per month, 31.7 percent of the hawkers received R700 to R1499 per month and 65.9 percent received more than R1 500 per month.

In the Capricorn district the total number of vegetables hawkers interviewed was 83. Out of those 83 vegetable hawkers 1.2 percent received less than R200 per month, 12 percent of the hawkers received between R200 and R699 per month, 54.2 percent of

hawkers received between R700 and R1499 per month and 32.5 percent of hawkers received more than R1 500 per month.

In Vhembe district, 73 vegetable hawkers were interviewed and 6.8 percent of the hawkers received less than R200 per month for their sale of vegetables. At least 21.9 percent hawkers received between R200 and R699 per month and 41.1 percent of the hawkers received between R700 and R1499 per month whereas 30.1 percent of the hawkers received more than R1 500 per month.

In Sekhukhune district, 52 vegetable hawkers were interviewed. There were no hawkers who received less than R200 per month from 52 hawkers who were interviewed. Only 7.7 percent of the hawkers received between R200 and R699 per month and 48.1 percent of hawkers received between R700 and R1499 per month whereas 44.2 percent of hawkers received more than R1 500 per month.

An average of 1.6 percent of the respondents earned less than R200 per month, which is close below the poverty line in South Africa which is set at R174 per month (UNDP, 2003). An average total of 11.7 percent earned between R200 and R699 per month. An average total of 41 percent earned between R700 and R1499 per month. The majority of the respondents had an average total of 52.6 percent who were earning more than R1500 per month. With this information, it can be concluded that vegetable hawkers make enough from their sales to live above the poverty line and contribute to their household income.

Table 3: Vegetable sale districts cross tabulation

Monthly Income	Districts					Total
	Waterberg N ₁ = 35	Mopani N ₂ = 123	Capricorn N ₃ = 83	Vhembe N ₄ =73	Sekhukhune N ₅ =52	
< R200	0.0%	0.0%	1.2%	6.8%	0.0%	1.6%
R200-R699	28.6%	2.4%	12.0%	21.9%	7.7%	11.7%
R700-R1499	31.4%	31.7%	54.2%	41.1%	48.1%	41.0%
>R1 500	40.0%	65.9%	32.5%	30.1%	44.2%	52.6%

$\chi^2 = 66.090$; df= 12; N=366

(i) Linear regression

The results of the estimated coefficient for the linear regression presented in table 4 show that nine out of twelve independent variables had a significant impact on the vegetables sales of hawkers. The impact of vegetable sales on hawkers' household income was significant when considering the hawkers' gender, home language, total income per month, stock price, and transportation used to transport goods to the market, transport costs, the hawkers' sales experience, selling days per week and the pricing of the vegetables.

Gender also had a significant impact ($p < 0.05$) on vegetable sales when the linear regression model was applied. Female hawkers dominated by 19 percent compared to male hawkers. This was because more female hawkers engaged in selling vegetables. The results showed that Xitsonga speaking hawkers dominated by 44 percent compared to the 1.4 percent English and 0.5 Afrikaans speaking hawkers and 54.1

percent for other languages such as Shona, Tshivenda and Sotho. The total income per month had a positive and significant impact ($p < 0.05$) on the vegetable sales when the linear regression model was applied. Hawkers with high income per month are the ones who are likely to have bigger selling markets and who are mostly mobile and who often sell to other hawkers. Stock price had a significant impact ($P < 0.01$) on the vegetable sales when the linear regression model was applied. Transportation used to the market place and in the market place had a significant impact ($P < 0.01$) on vegetable sales. Transport costs had a significant impact ($p < 0.05$) on the vegetable sales when the linear regression model was applied, from the results, 64.2 percent of hawkers spent less than R500 for transport per month. Experience had a positive and significant impact ($P < 0.01$) on vegetable sales when the linear regression model was applied. The results of the study showed that the number of selling days per week had a significant impact ($p < 0.05$) on vegetable sales when the linear regression model was applied, 64.4 percent of hawkers sold their vegetables 6 to 7 days per week. Pricing of the vegetables had a significant impact ($p < 0.05$) on vegetable sales when considering the linear regression model; 61.5 percent of hawkers preferred to display their selling prices on the vegetables rather than negotiating the price with customers.

(ii) Semi-log regression

The results of the estimated coefficient for the semi-log regression presented in table 4 showed that 11 out of 12 independent variables had a significant impact on the vegetable sales. The impact of vegetable sales on household income of hawkers was

significant when considering the hawker's household size, gender, home language; income per month, stock price, and transportation used to and in the market, transport costs, experience of the hawker, selling days per week, pricing of produce and different vegetable products sold by a hawker.

Household size had a significant impact ($p < 0.10$) on vegetable sales when considering the semi-log regression. At least 53.6 percent of hawkers had five to six members in their households, and these members in the household can always assist in the hawking activities. Gender had a significant ($p < 0.10$) effect on vegetable sales when using the semi-log regression. Female hawkers dominated by 19 percent compared to male hawkers, and this was because more female hawkers engaged in selling vegetables. The results showed that Xitsonga speaking hawkers dominated with 44 percent compared to the 1.4 percent English and 0.5 Afrikaans speaking hawkers and 54.1 percent for other languages such as Shona, Tshivenda and Sotho. The total income per month had a positive and significant impact ($p < 0.05$) on the vegetable sales when the semi-log regression model was used. Hawkers with a high income per month are the ones who are likely to have bigger selling markets and who are mostly mobile and often sell to other hawkers. Stock price had a significant impact ($P < 0.01$) on the vegetable sales when the semi-log regression model was applied. Transportation used to the market place and in the market place had a significant impact ($P < 0.01$) on vegetable sales. Transport costs had a significant impact on the vegetable sales when the semi-log regression model was applied. From the results 64.2 percent of hawkers spent less than R500 for transport per month. Experience had a positive and significant impact ($P < 0.01$) on vegetable sales when the semi-log regression model was applied.

The results of the study showed that the number of selling days per week had a significant impact ($P < 0.01$) on vegetable sales when double-log regression model was applied, 64.4 percent of hawkers sold their vegetables 6 to 7 days per week. Pricing of the vegetables had a significant impact ($p < 0.05$) on vegetable sales when considering the semi-log regression model, 61.5 percent of hawkers preferred to display their selling prices on the vegetables rather than negotiating the price with customers. Different vegetable products sold by hawkers had a significance impact ($p < 0.10$) on vegetable sales only when the semi-log regression was applied. The results of the study showed that 42.3 percent of hawkers sold three to four different vegetable products and 42.1 percent sold five to six different vegetable products.

(iii) Double-log regression

The estimated coefficient for the double-log regression presented in Table: 4 showed that 10 out of 12 independent variables had a significant impact on vegetable sales. The impact of vegetable sales on household income of hawkers was significant when considering the following independent variables: household size, home language, total income per month, stock price, transportation used to and in the market, transport cost, sales experience of the hawker, total selling days per week, pricing of produce and different vegetable products sold by the hawker.

Household size had a significant impact ($p < 0.10$) on vegetable sales when considering the double-log regression, 53.6 percent of hawkers had five to six members in their household who can always assist in the hawking activities. The results showed that

Xitsonga speaking hawkers dominate with 44 percent compared to the 1.4 percent English and 0.5 Afrikaans speaking hawkers and 54.1 percent for other languages such as Shona, Tshivenda and Sotho. The total income per month had a positive and significant impact ($p < 0.05$) on the vegetable sales when the double-log regression model was applied. Hawkers with a high income per month are the ones who are likely to have bigger selling markets and who are mostly mobile and often sell to other hawkers. Stock price had a significant impact ($P < 0.01$) on the vegetable sales when the double-log regression model was applied. Transportation used to the market place and in the market place had a significant impact ($P < 0.01$) on vegetable sales. Transport costs had a significant impact ($P < 0.01$) on the vegetable sales when the double-log regression model was applied. Based on the results, 64.2 percent of hawkers spent less than R500 on transport per month. Experience had a positive and significant impact ($P < 0.01$) on vegetable sales when the double-log model was applied. The results of the study showed that the number of selling days per week had a significant impact ($P < 0.01$) on vegetable sales when the double-log regression model was applied, 64.4 percent of hawkers sold their vegetables six to seven days per week. Pricing of the vegetables had a significant impact ($p < 0.05$) on vegetable sales when considering the double-log regression model; 61.5 percent of hawkers preferred to display their selling prices on the vegetables than negotiating the price with customers. Different vegetable products sold by hawkers had a significant impact ($p < 0.10$) on vegetable sales only when the double-log regression model was applied. The results of the study showed that 42.3 percent of hawkers sold three to four different vegetable products and 42.1 percent sold five to six different vegetable products.

Table 4: Estimated coefficients for regression equations

Variables	Linear	Semi-log	Double-log
<i>Dependent variable:</i>			
Vegetable sales (Y)	-	-	-
<i>Independent variables:</i>			
District (X1)	0.197 (-1,293)	0.299 (-1.039)	0.521 (-0.642)
Household size (X2)	0.101 (1,645)	0.079 (1.761)*	0.056 (1.914)*
Gender (X3)	0.031 (-2,161)**	0.076 (-1.782)*	0.275 (-1.094)
Home language (X4)	0.019 (2.365)**	0.056 (1.919)*	0.010 (2.587) **
Income per month (X5)	0.012 (-2.517)**	0.018 (-2.383) **	0.002 (-3.136) ***
Stock price (X6)	0.000 (6.968)***	0.000 (7.250) ***	0.000 (8.075) ***
Transport used (X7)	0.000 (-3.817)***	0.000 (-3.609) ***	0.001 (-3.446) ***
Transport cost (X8)	0.010 (2.602)**	0.002 (3.110) ***	0.006 (2.755) **
Experience (X9)	0.000 (3.835)***	0.000 (3.945) ***	0.002 (3.067) ***
Selling days per week (X10)	0.010 (2.606)**	0.003 (3.008) ***	0.000 (3.711) ***
Pricing of produce (X11)	0.014 (2.474) **	0.009 (2.620) **	0.047 (1.990)*
Different vegetable products (X12)	0.117 (-1.573)	0.063 (-1.865)*	0.009 (-2.610) **

*** P<0.01; **p<0.05; *p<0.10; Number of cases = 366; () = t-values

4.3 Discussions

Household *size* had a significant impact on vegetable sales when considering the semi-log and double-log regression. At least 53.6 percent of hawkers had five to six members in their households and some of them can always assist in the hawking activities. The findings in a study by Jensen (2003) showed that there was an average of 4.5 members in a hawker's household. Agnello and Moller (2004) also state that hawkers' household size tend to be large with usually more than one income earner. His findings show that 60 percent of the hawkers lived with five to ten family members.

Gender also had a significant impact on vegetable sales when the linear and semi-log regression was applied. Female hawkers dominated by 19 percent compared to male hawkers. This was because more female hawkers engaged in selling vegetables to supplement their partners' incomes. According to Jensen (2003) the dominance of females in the hawking business is one of the important characteristic. The findings in a study by Holness *et al.* (1999) showed that 75 percent of the responded hawkers were women. Their dominance is one of the socio-economic factors in a hawking business (Cummins & Harvey, 1996; Mitullah, 2003; Agnello & Moller, 2004; Manganga, 2007; Motala, 2008; Skinner, 2008). This study somehow does not agree with similar studies conducted in other parts of the world. Findings in a study by Bhowmik (2005) show that in India, male hawkers were more dominant than female hawkers. Other findings from a study by Saha (2011) conducted in Mumbai, India indicated that 59 percent of the street hawkers were male, and 41 percent female. The low number of female hawkers in the market is ascribed to the harsh treatment meted out to hawkers by the authorities (Arjun, 2008).

Home language had a significant impact when all the three regression models were applied. The predominant language in the Limpopo province is Sotho which is spoken by 52.1 percent of the population, Xitsonga spoken by 22.4 percent and Tshivenda spoken by 12.1 percent of the population (Census, 2001). The results show that Xitsonga speaking hawkers dominated by 44 percent compared to the 1.4 percent English and 0.5 Afrikaans speaking hawkers and 54.1 percent for other languages such as Shona, Tshivenda and Sotho.

Total income per month had a positive and significant impact on the vegetable sales when all the three regression models were applied. Hawkers with high income per month are the ones who are likely to have bigger selling markets and who are mostly mobile and they often sell to other hawkers. The findings in a study by Skinner (2008) were that fruit and vegetable hawkers in South Africa earn between R300 and R600 per month, and an average turnover of R1000 per month. Tissington's (2009) findings from his study were that hawkers earned between R800 to R1600 a month depending, according to them, on the weather. The income generated from street hawking activities was critical to the survival of street hawkers' households. According to Bhattacharyya (2001) a hawker's income is utilized primarily for feeding the family and for educating the children. However, a study conducted by Agnello and Moller (2004) in Cambodia revealed that hawkers live on a substantial level. In their study specific questions about how much hawkers earned and spent on daily activities connected to their business were asked, and the answers resulted in negative profits. This meant that the hawkers were not sincere about their earnings or they did not know what they were since they do

not keep written records, or, they simple spend more than they earn and find themselves continuously in need of taking loans.

Stock price had a significant impact on the vegetable sales when all the three regression models were applied. Stock price determines the pricing value which the hawker attach to the vegetables sold in the market.

The results showed that when all the three regression models were applied, the *transportation used* to the market place as well as within had a significant impact on vegetable sales. Transportation in the market determines the flexibility of the hawker. Mobile hawkers had more access to customers as they are the ones who move around in search of customers. The stationary hawkers, on the other hand, wait for the customers to approach them. Hawkers use transportation such as hired vehicles, trolleys and taxes to get to the market (Bromley, 2000; Wallace, 2001; Mitullah, 2004; Maheshwari *et al.*, 2007; Tissington, 2009; Arora & Taore, 2010).

Transport costs had a significant impact on the vegetable sales when all the three regression models were applied. From the results, 64.2 percent of hawkers spent less than R500 for transport per month, because hawkers mainly hire one vehicle to carry their stock to the market and share the transportation costs among them. Mitullah (2004) states that most street hawkers cannot afford the cost of transport, and therefore live within walking distance from their operation sites or near their residential areas. They do not spend a lot on transportation during the selling process because they are stationary and those who are mobile use trolleys or carry their products in baskets or boxes.

Experience had a positive and significant impact on vegetable sales when all the three regression models were applied. Old and experienced hawkers knew their way around customers. Also, customers prefer purchasing their vegetables from a familiar hawker they always see in the market. Ngiba *et al.* (2009) observe that the average year a hawker operates in the hawkers' market was 6.5 years, which indicated a considerable degree of stability. The results of the study show that the number of selling days per week had a significant impact on vegetable sales when all the three regression models were used. At least 64.4 percent of hawkers sold their vegetables on six to seven days per week. According to some authors (Renner & Pegler, 1997; Mitullah, 2002; Asiedu & Agyei-mensah, 2008; Muzaffar *et al.*, 2009) hawkers worked long irregular hours a day. In a study of hawkers, Bhowmik (2005) stated that most street hawkers operate an average of 25 days a month. Holness *et al.* (1999) also state that hawkers work very long hours, up to 12 hours a day and 7 day a week. The study by Jensen (2003) showed that hawkers worked on average 22 days per month. The findings of Agnello and Moller (2004) reveal that hawkers worked an average of between 8 and 13 hours seven days a week, unless they were sick or unable to buy the stock.

Pricing of the vegetables had a significant impact on vegetable sales when considering all the three regression models, 61.5 percent of hawkers preferred to display their selling prices on the vegetables than negotiating the price with customers. Different vegetable products sold by hawkers had a significant impact on vegetable sales only when using the semi-log and double-log regression. The results of the study show that 42.3 percent of hawkers sold three to four different vegetable products and 42.1 percent sold five to six different vegetable products. Cummins and Harvey (1996) observed

female hawkers handling over 30 different commodities, ranging from vegetable cash crops to indigenous vegetables such as okra.

4.4 Chapter summary

This chapter examined the impact of vegetable sales on the households of hawkers in the five municipality districts of the Limpopo province in South Africa. A total number of 366 questionnaires collected from vegetable street hawkers were analysed using the linear, semi-log and double-log regression models. The results from the selected models, which predicted the significance of the variables, showed that only 9 out of 12 independent variables had a significant impact on the vegetables sales sold by hawkers. The impact of vegetable sales on the household incomes of hawkers was significant when considering the hawker's gender, home language, total income per month, stock price, and transportation used to the market, transport cost, the hawker's sales experience, selling days per week and the pricing of the vegetables. The results of the estimated coefficient for the semi-log regression presented in table 4 show that 11 out of twelve independent variables had a significant impact on the vegetable sales. The impact of vegetable sales on household incomes of hawkers was significant when considering the hawker's household size, gender, home language; income per month, stock price, and transportation used to and in the market, transport costs, experience of the hawker, selling days per week, pricing of produce and different vegetable products sold by a hawker. The estimated coefficient for the double-log regression presented in table 4 indicates that ten out of 12 independent variables had a significant impact on

vegetable sales. The impact of vegetable sales on household incomes of hawkers was significant when considering the following independent variables: household size, home language, total income per month, stock price, transportation used to and in the market, transport cost, sales experience of the hawker, total selling days per week, pricing of produce and different vegetable products sold by the hawker. Table 3 presents the cross tabulation of total sales according to the districts. It shows that an average of 1.6 percent of respondents earned less than R200 which is close and below R174 which is the poverty line measure in South Africa.

CHAPTER 5

SUMMARY AND CONCLUSIONS

5.1 Introduction

The hawking activities in South Africa have a potential to contribute to household income of both urban and rural hawkers, and by doing so they contribute to the economic growth goals set by government. Vegetable hawking is most likely to improve household food security and can address poverty alleviation in developing areas of South Africa. The study was intended to investigate the impact of vegetable sales on household income of hawkers in the Limpopo province. The objectives of the study outlined in chapter 1 are to determine factors that contribute to vegetable sales by hawkers. The second objective was to suggest different ways to enhance vegetable sales to contribute to household income. The last objective was to determine whether vegetable hawkers make enough from their sales to live above the poverty line.

5.2 Summary

To accomplish the objectives of the study, a literature review was made of the hawking system in Africa and internationally. The literature review focused on the quality of the vegetables sold by hawkers, the types of hawkers found in the agricultural hawking markets and the hawkers marketing strategies. The literature review also focused on

how accessible credit is to hawkers, the ways hawkers' price and displays their vegetables in the market, the problems they face and the positive aspects of hawking. The study was conducted in three towns in each of the five district municipalities of the Limpopo province. Data were collected in the form of questionnaires where 366 vegetable hawkers were interviewed. Vegetable hawkers were interviewed in their selling points (hawkers markets, town streets, taxi ranks and commuter or mass transit terminals). The questionnaires were prepared in English, and in certain instances interpreted into the hawkers' language as most of the hawkers were illiterate. Multiple regressions involving three regression models (linear, semi-log and double-log) were used. The three regression models were used to identify the 12 independent variables which had a significant impact on vegetable sales (table 4).

5.2.1 Results summary

From the three regression models, the results indicated that the independent variables that had a significant impact on vegetable sales were gender, household size, home language, income per month, stock price, and transport used to the market, transport cost, sales experience of a hawker, selling days per week, the pricing of the vegetables and the different vegetable products sold by hawkers. Gender was significant only when considering the linear and semi-log regressions. In the area of study a high percentage (72.7%) of hawkers were female. Female responsiveness was also observed by Muiruri (2006) in his study of female street vendors in Nairobi. Scott *et al.* (1993) also observed the high percentage (98%) of female hawker responsiveness. Household size had

significant impact on vegetable sales when considering the semi-log and double log regression. A high percentage (53.6%) of hawkers' households had five to six members. However, Scott *et al.* (1993) observed that the average family of respondent hawkers were six to eight members.

Home language had a significant impact on vegetable sales when considering all the three regression models. The dominant language spoken by the respondents was Xitsonga with a percentage of 44. Xitsonga is the second largest spoken language in Limpopo province after Sotho (Census, 2001). Income per month had a significant impact on vegetable sales when considering all the three regression models, a high percentage (91%) of hawkers get less than R5000 per month. Stock price had a significant impact on the vegetable sales when considering the three regression models used. A percentage of 42.1 of hawkers' stock was worth between R600 to R1000. Transport used by hawkers to the market, and in the market had a significant impact when considering the three regression models used. A percentage of 44.5 of hawkers preferred to hire a vehicle and share the cost among them. Transport costs had a significant impact on vegetable sales when considering the three regression models used. A high percentage (64.2%) of hawkers spent less than R500 on transport per month. Hawkers spending very little on transport costs were also observed by Muiruri (2010) in his study of female street vendors in Nairobi. The reason for low or little transport costs was that a group of hawkers hire one vehicle to transport their products to the market and then share the costs among them. Experience also had a significant impact on vegetable sales when considering the three regression models. A percentage

of 38.5% of hawkers had sales experience of four to five years and 36.3 percent had sales experience of more than six years.

Selling days per week had a significant impact on vegetable sales when considering the three regression models. A percentage of 54.4 hawkers sold their vegetables on six to seven days a week. In terms of the pricing of vegetable, a high percentage (61.5%) of hawkers preferred to display the prices on the vegetables. Different vegetable products sold by hawkers in the market also had a significant impact on vegetable sales, a percentage of 42.3 hawkers sold three to four different vegetables and 42.1 percent sold five to eight different types of vegetable.

Table 3 in chapter 4 presents the cross tabulation of vegetable sales according to districts. The results show that a total of 1.6 percent of the respondents earned less than R200 per month, which is close and below the poverty line in South Africa set at R174 per month (UNDP, 2003). A total of 11.7 percent earned between R200 and R699 per month. A total of 41 percent earned between R700 and R1499 per month. The majority of the respondents (52.6%) were earning more than R1500 per month. With this information, it can be concluded that vegetable hawkers make enough from their sales to live above the poverty line and contribute to their household incomes.

5.3 Conclusion and recommendations

In table 4 the three regression models (linear, semi-log and double log) used in this study show the degree of significance of different variables which have an impact on vegetable sales by hawkers. In the Limpopo province hawking of mainly agricultural

products is viewed as a major form of employment in an informal sector. Many of the people in the province rely on hawking to support their families, pay school fees for their children and also supplement their partners' incomes. Table 3 shows the monthly income from vegetable sales according to district municipalities. It also addresses the objective of the study which aimed to determine whether vegetable hawkers make enough from their sales to live above the poverty line. An average total of 1.6 percent of the respondents earned less than R200 per month, which is close and below the poverty line in South Africa set at R174 per month (UNDP, 2003). From this it can be concluded that vegetable hawkers make enough from their sales to live above the poverty line.

The study recommends that the local municipalities should build hawkers' market and improve the infrastructure of the existing hawkers' markets, so that the existence of those markets will eliminate traffic congestion and prevent pavement blockings in town streets. This can also eliminate the harassment or harsh treatment hawkers get from the local authorities for hawking in restricted areas. There is a need for proper sanitation and clean water to avoid unhygienic situations in hawkers' markets. The government's health department should intervene and provide hawkers with proper hygienic facilities and proper waste management to avoid the litter produced from their rotten stock and unwanted vegetable peels polluting the environment. Developing more hawkers' markets can address the high population of hawkers in street towns and also eliminate traffic congestion in town roads.

Access to market information should be improved. This will alleviate the problem of high and fluctuating supplier prices so that hawkers will know the prices and gains before getting involved in the business of hawking.

Both the government and NGOs should intervene and help hawkers with credit for capital, funds and provide business skills. In this study the majority of the hawkers were female with a primary education. There is a great need for adult education and business skills training to help the hawkers grow their businesses, and for them to be able to keep records of their sales.

The study also recommends that hawkers should form active hawkers' organizations and associations among themselves. This will give them one voice to address the challenges they meet in the hawking business, and this will enable them to share the pricing information and other important aspects of the business, such as the funding sources. This will make the hawking business organized and professional.

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APPENDIX

SOCIO-ECONOMIC IMPACT OF AGRICULTURAL HAWKERS MARKET IN
LIMPOPO PROVINCE OF SOUTH AFRICA

QUESTIONNAIRE TO BE COMPLETED BY HAWKERS SELLING AGRICULTURAL
PRODUCTS IN LIMPOPO PROVINCE

ALL INFORMATION PROVIDED WILL BE TREATED AS STRICTLY CONFIDENTIAL

QUESTIONNAIRE REFERENCE NUMBER

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A. GENERAL INFORMATION

DATE OF INTERVIEW:.....

NAME OF RESPONDENT:.....

DISTRICT:.....

COMMENTS:.....

B. PERSONAL INFORMATION

1. How many people live in your house?

- 1 to 2 2 to 4 4 to 6 More than 6

2. What is your gender?

- Male Female

3. Which category describes your age (in years)

Less than 25 26 – 35 36-60 More than 60

4. What is your marital status?

Married Divorced/Separated
 Single Widowed

5. What is your home language?

English Xitsonga
 Afrikaans Other (Specify.....)

6. What is your highest level of education?

No formal School or Primary school High School University

7. What is your employment status?

Full time Part time Unemployed Student Retired

8. Which range will better describe your income/wages per month?

Less than R5.000 More than R5.000- R10.000
 More than R25.000 More than R10.000-25.000

9. Which of the following describe your best: I am

South African Citizen from outside Africa
 From the SADC region Other part of Africa

C. MARKETING INFORMATON

10. What kind of a hawker are you?

None mobile

Mobile

Small scale farmer

Other (Specify.....)

11. Where do you purchase your stock from?

Retail stores

Other hawkers

Farms

Other (Specify.....)

12. How much approximately do you spend on stock in general per month?

R500 or less

More than R500 - 1000

More than R1000 - 2000

More than R2000

13. Do your suppliers provide you with credit?

Yes

No

14. What type of transport do you use to the market place?

Own vehicle

Hired vehicle

Trolley

Other (Specify.....)

15. How much do you spend on transport?

Less than R500

More than R500 - R1000

More than R1000 - R2000

More than R2000

16. Where do you store your vegetables?

Market storage House storage Other (Specify.....)

17. Do you keep selling records?

Yes

No

18. What kind of records do you keep?

Receipts

Books

Others (Specify.....)

19. How long have you been selling?

Less than a year

2 – 3 years

4 – 5 years

More than 6 years

20. Approximately how much do you make from selling per month?

less R200

More than R200 – R600

More than R700 - R1400

More than R1400

21. How many days in a week do you usually sell?

less than 2 days

2-3 days

4-5 days

6-7 days

22. How many hours do you spend selling?

Less than 6 hours

7-8 hours

9-10 hours

More than 11 hours

23. Who are your main customers?

Low income Middle income
 High income Mixed

24. Do you process your produce?

Yes No

25. If yes from question 24, how

Frozen mixed vegetables Dried vegetables Other (Specify.....)

26. How do you price your products?

By display Negotiation Other (Specify.....)

27. How many agricultural different products are you selling?

1 - 2 3 - 4
 5 - 6 More than 7

28. What general problems are you experiencing?

Forced removal Customers do not pay Theft None Others
(Specify.....)

Thank you for participating!